



## **MSD-SHEETS**

LONESTAR INDUSTRIES, LLC.

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Lonestar Industries, LLC.

**ALUMINUM**



# Hohmann & Barnard, Inc.

## Material Safety Data Sheet

### \*\*\* Aluminum \*\*\*

Hohmann & Barnard, Inc.  
30 Rasons Court  
Hauppauge, NY 11788

#### SECTION 1 - IDENTITY

Common Name (used on label) (Trade name & synonyms):	ALUMINUM SHEET, COIL
Cas no.:	N/A
Chemical name:	COATED ALUMINUM SHEET, COIL
Chemical family:	ALUMINUM
Formula:	Al

#### SECTION 2 - HAZARDOUS INGREDIENTS

Contains organic baked resins and may contain one or more of the following: (for bare aluminum, refer to colored metals, inc. Material Safety Data Sheet covering specific alloy)	
CHEMICAL AND COMMON NAME(S)	THRESHOLD LIMIT VALUE MG/M <sup>3</sup>
TITANIUM DIOXIDE	10.0
LEAD CHROMATE	.2
CHROMIUM	.15
LEAD MOLYBDATE	.5
ANTIMONY	.5
LEAD	.05
NICKEL	1.0
STRONTIUM CHROMATE	.1
ZINC CHROMATE	.1
COBALT	.1
COPPER	1.0
IRON	5
CARBON BLACK	3.5
SILICA-AMORPHOUS	6.0

#### SECTION 3 - PHYSICAL & CHEMICAL CHARACTERISTICS (FIRE & EXPLOSION DATA)

Boiling Point: N/A	Specific Gravity (H <sub>2</sub> O=1): 2.7	Vapor Pressure (mm Hg): N/A
Percent Volatile by Volume: 0%	Vapor Density (Air = 1): N/A	Evaporation Rate: N/A
Solubility in Water: INSOLUBLE	Reactivity in Water: NONE IN SOLID STATE	
Appearance and Odor: SILVERY, DUCTILE METAL (SOLID) COATED WITH VARIATIONS OF COLORS, ODOR: - NONE.		
Flash Point: N/A	Flammable Limits in Air % by Volume: N/A	
Extinguisher Media: DOES NOT BURN	Auto-Ignition Temperature: N/A	
Special Fire Fighting Procedures: IN SHEET, OR COIL FORM, MATERIAL DOES NOT BURN. IN POWDER OR CHIP FORM, USE DRY POWDER OR SAND. DO NOT USE WATER OR HALOGEN EXTINGUISHING AGENT.		
Unusual Fire and Explosion Hazards: WATER, OXIDIZERS AND MANY OTHER CHEMICALS REACT EXPLOSIVELY IN CONTACT WITH MOLTEN ALUMINUM. FINE CHIPS, TURNINGS, AND DUSTS IN AIR MAY EXPLODE IF IGNITION SOURCE IS PRESENT.		

#### SECTION 4 - PHYSICAL HAZARDS

Stability:	Unstable		Stable	X
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Conditions to Avoid: COATED ALUMINUM SHEET, OR COIL IS A STABLE MATERIAL.			
Incompatibility (Materials to Avoid): FINELY DIVIDED ALUMINUM MAY REACT WITH WATER, STRONG OXIDIZERS, ACIDS, ALKALIES AND HALOGENATED COMPOUNDS -- RESULTS IN HYDROGEN EVOLUTION			
Hazardous Decomposition Products: NONE IN SOLID STATE			
Hazardous Polymerization:	May Occur	Will Not Occur	X
Conditions to Avoid: POLYMERIZATION WILL NOT OCCUR			

**SECTION 5 - HEALTH HAZARDS**

Threshold Limit Value: PLEASE NOTE SECTION 2			
Signs and Symptoms of Exposure:			
1. Acute Overexposure: SHORTNESS OF BREATH FROM INHALATION OF ALUMINUM DUST.			
2. Chronic Overexposure: MAY AGGRAVATE BRONCHIAL CONDITIONS.			
Medical Conditions Generally Aggravated by Exposure: RESPIRATORY ILLNESS.			
Chemical Listed as Carcinogen or Potential Carcinogen: NO			
National Toxicity Program	Yes	No	X
I.A.R.C. Monographs	Yes	No	X
OSHA:	Yes	No	X
OSHA Permissible Exposure Limit: SEE SECTION 2	ACGIH Threshold Limit Value: SEE SECTION 2		
Other Exposure Limit Used:			
Emergency and First Aid Procedures:			
1. Inhalation: Fumes/Dust - REMOVE TO FRESH AIR. GET MEDICAL ATTENTION.			
2. Eyes: Fumes/Dust - FLUSH WITH WATER. GET MEDICAL ATTENTION.			
3. Skin: Molten State - USE COPIUS AMOUNTS OF POTABLE WATER ON EXPOSED AREAS.			
4. Ingestion: N/A			

**SECTION 6 - SPECIAL PROTECTION INFORMATION**

Respiratory Protection (Specify Type): NONE FOR SOLID STATE. IF DUST, FUMES, FINES, TURNINGS OR POWDER ARE PRESENT, USE NIOSH APPROVED RESPIRATOR.
Ventilation: AS REQUIRED FOR DUST/FUME PRODUCING OPERATIONS.
Protective Gloves: USE STRONG INDUSTRIAL GLOVES TO AVOID LIMB INJURIES.
Eye Protection: USE SAFETY GLASSES IN ALL INDUSTRIAL OPERATIONS.
Other Protective Clothing or Equipment: SPECIAL CLOTHING REQUIRED WHEN HANDLING MOLTEN ALUMINUM. (SEE SECTION 7)

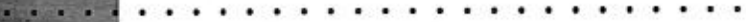
**SECTION 7 - SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES**

Precautions to be Taken in Handling and Storage: HANDLE MOLTEN ALUMINUM ACCORDING TO ALUMINUM ASSOCIATION'S "GUIDELINES FOR HANDLING MOLTEN ALUMINUM."
Other Precautions: STORE DROSS IN A DRY PLACE. A METHANE AND AMMONIA MAY BE FORMED IN A WET ATMOSPHERE. OZONE AND METAL FUME IS FORMED IN WELDING.
Steps to be Taken in Case Material is Released or Spilled: COATED ALUMINUM IN SOLID STATE CANNOT SPILL. USE STRONG INDUSTRIAL GLOVES TO RETRIEVE SIDE TRIM, DUST, ETC. COATING MAY BURN IF EXPOSED TO HIGH TEMPERATURE.
Waste Disposal Methods: COLLECT SCRAP FOR REMELTING.



Lonestar Industries, LLC.

**BITUMINOUS DAMPPROOFING**





**HYDROCIDE® 600, 700, 700B**

Version 1.7

06/27/2006

**1. PRODUCT AND COMPANY INFORMATION**

Company : **BASF Building Systems, Inc.**  
 889 Valley Park Drive  
 Shakopee, MN 55379

Telephone : 952-496-6000

Emergency telephone number : (800) 424-9300  
 (703) 527-3887 (Outside Continental US)

Product name : HYDROCIDE® 600, 700, 700B

MSDS ID No. : 10583

TSCA Inventory : All components of this product are included, or are exempt from inclusion, in the EPA Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

Canadian DSL : All components of this product are included, or are exempt from inclusion, in the Canadian Domestic Substance List (DSL).

Product Use Description : Coating

**2. HAZARDOUS INGREDIENTS**

<u>Chemical</u>	<u>CAS No.</u>	<u>TLV</u>	<u>STEL</u>	<u>PEL</u>	<u>CEIL</u>	<u>Weight %</u>
ASPHALT PETROLEUM	8052-42-4	0.5 mg/m <sup>3</sup>	N.E.	N.E.	N.E.	30.00 - 60.00 %

**3. HAZARDS IDENTIFICATION**

HMIS® Rating	HEALTH	FLAMMABILITY	PHYSICAL HAZARD
	1	1	0

WHMIS Class : D2B

Primary Routes of Entry : Inhalation  
 Ingestion

**Effects of Overexposure**

Inhalation : Can cause slight irritation.

Skin : Can cause slight irritation.

Eyes : Can cause slight irritation.

Ingestion : Can cause slight irritation.

Chronic exposure : No known information available.

**Carcinogenicity**

**HYDROCID® 600, 700, 700B**

Version 1.7

06/27/2006

	ACGIH	IARC	NTP	OSHA
ASPHALT PETROLEUM	Not classifiable as a human carcinogen.	Possible carcinogen.	N.E.	N.E.

**4. FIRST AID MEASURES**

- Eye contact : Flush eyes with water, lifting upper and lower lids occasionally for 15 minutes. Seek medical attention.
- Skin contact : Remove contaminated clothing. Wash thoroughly with soap and water. If irritation persists seek medical attention. Wash contaminated clothing before reuse.
- Ingestion : Do not induce vomiting without medical advice. If conscious, drink plenty of water. If a person feels unwell or symptoms of skin irritation appear, consult a physician. If a person vomits, place him/her in the recovery position. Never give anything by mouth to an unconscious person.
- Inhalation : Remove victim from exposure. If difficulty with breathing, administer oxygen. If breathing has stopped administer artificial respiration, preferably mouth-to-mouth. Seek immediate medical attention.

**5. FIRE-FIGHTING MEASURES**

- Flash point : > 450.00 °F (232.22 °C)
- Autoignition temperature : no data available
- Lower explosion limit : no data available
- Upper explosion limit : no data available
- Suitable extinguishing media : carbon dioxide (CO2)  
foam  
dry chemical  
water fog
- Fire and Explosion Hazards : Containers can build up pressure if exposed to heat (fire). Cool closed containers exposed to fire with water spray.
- Special Fire-fighting Procedures : As in any fire, wear pressure demand self-contained breathing apparatus (NIOSH approved or equivalent) and full protective gear.

**6. ACCIDENTAL RELEASE MEASURES**

- Methods for cleaning up : Wear appropriate protective equipment (refer to section 8). Take action to eliminate source of leak; prevent from entry into open streams or sewers; contain spill by diking; vacuum up liquid or use absorbent media; remove to storage for disposal and rinse residual stain with water.

**7. HANDLING AND STORAGE**

## HYDROCIDE® 600, 700, 700B

Version 1.7

06/27/2006

Handling : Keep out of reach of children. For personal protection see section 8.

Storage : Keep tightly closed.

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### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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Eye protection : Wear as appropriate:  
safety glasses with side-shields  
goggles  
face-shield

Hand protection : Wear as appropriate:  
impervious gloves

Body Protection : Wear as appropriate:  
impervious clothing  
preventive skin protection

Respiratory protection : In case of insufficient ventilation wear suitable respiratory equipment. When workers are facing concentrations above the exposure limit they must use NIOSH approved respirators.

Hygienic Practices : Avoid contact with skin, eyes and clothing. Ensure adequate ventilation, especially in confined areas. Wash hands before breaks and at the end of workday. When using, do not eat, drink or smoke. Handle in accordance with good industrial hygiene and safety practice.

Engineering Controls : Local exhaust ventilation can be necessary to control any air contaminants to within their TLVs during the use of this product.

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### 9. PHYSICAL AND CHEMICAL PROPERTIES

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Color : brown

Physical State : liquid

Odor : hydrocarbon-like

pH : 5 - 7

Odor Threshold : no data available

Vapor Pressure : 60 mm/Hg at 100.00 °F (37.78 °C)

Vapor Density : no data available

Boiling point/range : 212 °F (100 °C)

Freeze Point : no data available

Water solubility : partly miscible

Specific Gravity : 1.1 - 1.2

**HYDROCIDE® 600, 700, 700B**

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Viscosity : 100,000 cps  
 Evaporation rate : Slower than Butyl acetate  
 Partition coefficient (n-octanol/water) : no data available  
 VOC Concentration as applied (less water and exempt solvents) : 24 g/l

**10. STABILITY AND REACTIVITY**

Stability : Stable under recommended storage conditions.  
 Conditions to avoid : Prolonged exposure to high temperatures  
 Materials to avoid : strong oxidizing agents  
 Hazardous decomposition products : Oxides of carbon  
 Hazardous polymerization : Will not occur under normal conditions.

**11. TOXICOLOGICAL INFORMATION**

**Acute inhalation toxicity**

<u>Product</u>	<u>Type</u>	<u>Value</u>	<u>Species</u>	<u>Exposure time</u>
	LC50	no data available		
<u>Component</u>				
ASPHALT PETROLEUM	LC50	no data available		

**Acute oral toxicity**

<u>Product</u>	<u>Type</u>	<u>Value</u>	<u>Species</u>
	LD50 (Oral)	no data available	
<u>Component</u>			
ASPHALT PETROLEUM	LD50 (Oral)	no data available	

**Acute dermal toxicity**

<u>Type</u>	<u>Value</u>	<u>Species</u>
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**HYDROCIDE® 600, 700, 700B**

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Product LD50 (Dermal) no data available

Component

ASPHALT PETROLEUM LD50 (Dermal) no data available

**12. ECOLOGICAL INFORMATION**

Ecotoxicological Information : There is no data available for this product.

**13. DISPOSAL CONSIDERATIONS**

Recommendations: Use excess product in an alternate beneficial application. Handle disposal of waste material in manner which complies with local, state, province and federal regulation.

**14. TRANSPORT INFORMATION**

DOT	: Proper shipping name	Not regulated
IATA	: Proper shipping name	Not regulated

**15. REGULATORY INFORMATION**

**SARA 311/312 (RTK)**

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendments and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE (ACUTE) HEALTH HAZARD

**SARA 313**

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

<u>Weight %</u>	<u>CAS No.</u>	<u>Chemical Name</u>
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This product contains no chemicals subject to the SARA 313 supplier notification requirements.

**CERCLA**

CERCLA section 103(a) specifically requires the person in charge of a vessel or facility to report immediately to the National Response Center (NRC) a release of a hazardous substance whose amount equals or exceeds the assigned RQ. The following hazardous substances are contained in this product.

<u>RQ</u>	<u>CAS No.</u>	<u>Chemical Name</u>
100 lbs	8052-42-4	ASPHALT PETROLEUM

**TSCA Section 12(b) Export Notification**

# Material Safety Data Sheet



The Chemical Company

## HYDROCIDE® 600, 700, 700B

Version 1.7

06/27/2006

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(b) if exported from the United States:

<u>CAS No.</u>	<u>Chemical Name</u>
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There are no TSCA 12(b) Chemicals in this product.

### California Proposition 65

The chemical(s) noted below and contained in this product, are known to the state of California to cause cancer, birth defects or other reproductive harm. Unless otherwise specified in Section 2 of this MSDS, these chemicals are present at < 0.1%:

<u>CAS No.</u>	<u>Chemical Name</u>
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There are no Proposition 65 chemicals known to exist in this product.

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## 16. OTHER INFORMATION

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Legend : N.E. - Not Established  
TLV - Threshold Limit Value  
STEL - Short Term Exposure Limit  
PEL - Permissible Exposure Limit  
CEIL - Ceiling

Prepared By : Environment, Health and Safety Department

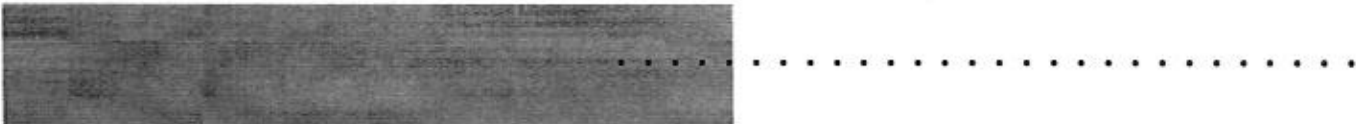
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End of MSDS.



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**Lonestar Industries, LLC.**

**CONCRETE MASONRY UNITS**



ACME BRICK COMPANY  
3101 S. BRYANT IRVIN RD.  
FORT WORTH, TEXAS 76109

For additional information contact:  
Our Industrial Hygenist (817) 332-4101

**BLOCK MATERIAL SAFETY DATA SHEET**

Date Prepared: 09-01-91  
Latest Revision: 05-01-06

**SECTION I - PRODUCT IDENTIFICATION**

Product Name: Concrete Block  
Chemical Family: Mixed aggregate of sand and cement  
Formula: Complex calcium silicate

**SECTION II - HAZARDOUS INGREDIENTS**

Ingredients	CAS #	% Weight	Exposure Limits	
			OSHA PEL mg/m <sup>3</sup>	ACGIH TLV mg/m <sup>3</sup>
Portland Cement	65997-15-1	Varies	15	10
*Quartz (Crystalline Silica)	14808-60-7	Varies	.1 (TWA) (respirable)	.025 (TWA) (respirable)
Chromium Compunds	Various	0-1	1	1
Fly Ash	Various	0-5	Not established	Not established
Iron Compounds	Various	0-5	10	10
Calcium Carbonate	471-34-1	0-10	15	10

\* ACGIH RECOMMENDS A MAXIMUM PERMISSIBLE CONCENTRATION OF 0.025 mg/m<sup>3</sup> OF RESPIRABLE CRYSTALLINE SILICA AS DETERMINED BY A FULL-SHIFT SAMPLE UP TO 10 HOURS WORKING DAY, 40 HOUR WORK WEEK.

**SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS**

Appearance and Odor: Shaped solid, odorless. Blocks come in a wide range of body and surface colors.  
Boiling Point: NA Evaporation Rate (T=Ethyl Ether = 1) Specific Gravity: H20=1: 2.6 (Approximate)  
Percent Volatile: NA pH: NA  
Vapor Pressure: NA Vapor Density: NA Solubility in Water: Negligible

**SECTION IV - FIRE AND EXPLOSION HAZARD DATA**

Flash Point: NA Flammable limits (% By Volume in Air): LEL- NA / UEL- NA  
Fire Extinguishing Media: NA Fire and Explosion Hazards: NA  
Special Fire Fighting Procedures: NA

**SECTION V - REACTIVITY**

Reactivity: NA

**SECTION VI - HEALTH HAZARD DATA**

Concrete blocks as shipped, do not present an inhalation or ingestion hazard. A contact hazard does exist from flying chips or particles, sharp edges, crushed toes, etc. However, operations such as sawing and grinding may release particulates of chips that could have the following adverse effect.

**ACUTE EFFECTS OF OVEREXPOSURE:**

Eye: May cause mild to severe irritation by abrasion with dust or chips.  
Skin: Concrete block dust or chips may cause allergic reactions. Excessive exposure may result in abrasions.  
Inhalation: Concrete block dust or chips may cause congestion and irritation in nasal and respiratory passages.  
Ingestion: No known acute effects.

**CHRONIC EFFECTS OF OVEREXPOSURE:**

Excessive exposures to respirable block dust created by sawing, drilling, grinding or crushing of blocks, or created by the cleanup and disposal of block dusts and waste may over an extended period of time, result in the development of permanent and irreversible lung diseases, such as silicosis, tuberculosis, or lung cancer. The higher the crystalline silica content of the dust, the greater the health risk. Breathing block dust may be associated with the development of scleroderma and kidney lesions and may aggravate existing respiratory conditions such as asthma, bronchitis and emphysema.

**CARCINOGENICITY:****BLOCK MATERIAL SAFETY DATA SHEET  
PAGE 2 REVISED 05/01/06**

The following carcinogenicity classifications for crystalline silica have been established by the following agencies:

**OSHA:** Non-regulated  
**IARC:** Carcinogenic  
**NTP:** Carcinogenic

**WARNING:** Concrete block dust contains crystalline silica, a chemical that has been determined by IARC and NTP to cause cancer. Inhalation of concrete block dust above established or recommended exposure levels should be avoided by use of wet sawing and/or use of a NIOSH and/or MSHA approved respirator.

**SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE**

**Respiratory Protection:** Provide adequate ventilation to maintain exposures below the components listed in Section II with established PEL's or TLV's.

**Other Protective Equipment:** For airborne concentration exceeding the OSHA PEL or ACGIH TLV use a NIOSH and/or MSHA approved respirator.

**Other controls:** Eye and Face: Face shields should be used when sawing blocks. Safety glasses with side shields may be required when chipping or breaking block with a tool, grinding block or other activities that release flying particulate.  
Skin: Use gloves and/or protective clothing if cuts, abrasions or allergic reactions are experienced.  
Other: Use of steel toe shoes is recommended when handling block.

**SECTION VIII - CONTROL MEASURES**

Use of wet sawing methods is recommended anytime that blocks must be cut. Always stack and store blocks in a stable manner to avoid falling hazards

**SECTION IX - FIRST AID AND MEDICAL**

**Skin:** Wash with soap and water. If an allergic reaction causes a rash that does not heal within a few days consult a physician. Treat abrasions as any other scrape or cut with disinfectants and bandages.

**Eye:** Flush with running water. Obtain medical assistance if irritation continues.

**SECTION X - OTHER REGULATIONS**

**RCRA/SARA:** Disposal must be in accordance with federal, state & local regulations.

Block in solid form is typically considered a non-hazardous waste for disposal, but local regulation may vary, therefore, all waste must be disposed/recycled/reclaimed in accordance with federal, state, and local environmental control regulations. Water containing block solids, such as from wet sawing operations, should be disposed of in accordance with federal, state and local environmental regulations. Block waste should not be used as an abrasive blasting agent.

**DOT:** Blocks, as shipped, are not a Section 313 (Form R) reportable product.

**SECTION XI - OTHER INFORMATION**

Acme Brick Company considers our product an "article" as defined in 29CFR 1910.1200(b)(6)(V) and 1920.1200(c).

This MSDS was prepared with information believed accurate at the time of preparation and was prepared and provided in good faith. However, Acme Brick Company assumes no responsibility as to the accuracy of such information and no warranty expressed or implied is made.

TEXAS BUILDING PRODUCTS, INC.  
3261 Highway 108  
Strawn, TX 76475

MATERIAL SAFETY DATA SHEET

Identity: Concrete Masonry Products (Block, Lintels, Pavers, etc.)

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SECTION I

MANUFACTURER: Texas Building Products  
3261 Highway 108  
Strawn, TX 76475

TELEPHONE: (254) 672-5262

EMERGENCY TELEPHONE: (254) 672-5262

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SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components: Silica, Crystalline Quartz (respirable)  
Specific Chemical Identity: Silicon Dioxide SiO<sub>2</sub> (CAS 14808-60-7)  
Common Names: Silica, Flint, Sand, Crystalline Free Silica, Quartz, Ground Silica,  
Silica Flour

OSHA PEL: Exposure to airborne crystalline silica shall not exceed an 8-hour time-weighted average limit as stated in 29 CFR 1910.1000 Table Z-1-A, Air Contaminants, specifically:

Silica, Crystalline Quartz (respirable Dust) 0.1 mg/M<sup>3</sup>

ACGIH TLV: Crystalline Quartz  
TLV - TWA = 0.1 mg/M<sup>3</sup> (respirable Dust)  
See Threshold Limit Value and Biological Exposure Indices for 1991-1992  
American Conference of Governmental Industrial Hygienists

Other Limits Recommended: National Institute for Occupational Safety and Health (NIOSH). Recommended standard maximum permissible concentration = 0.05 mg/M<sup>3</sup> (respirable free silica) as determined by a full-shift sample up to a 10-hour work day, 40-hour work week. See NIOSH Criteria for a Recommended Standard Occupational Exposure to Crystalline Silica.

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### SECTION III – PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point:	N/A	Specific Gravity (H <sub>2</sub> O) = 1):	N/A
Vapor Pressure (mm Hg.):	N/A	Melting Point:	N/A
Vapor Density (Air = 1):	N/A	Evaporation Rate (Butyl Acetate = 1):	N/A
Solubility in Water:	Not Soluble		
Appearance and Odor:	Odorless Solid		

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### SECTION IV – FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used):	N/A		
Flammable Limits:	N/A	LEL: N/A	UEL: N/A
Extinguishing Media:	N/A		
Special Fire Fighting Procedures:	None		
Unusual Fire and Explosion Hazards:	None		

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### SECTION V – REACTIVITY DATA

Stability: [ ] Unstable: [ ] Stable: [ X ]	Conditions to Avoid: None
Incompatibility (Materials to Avoid):	None
Hazardous Decomposition or Byproducts:	None
Hazardous Polymerization: May Occur: [ ] Will Not Occur: [ X ]	Conditions to Avoid: None

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### SECTION VI – HEALTH HAZARD DATA

Route(s) of Entry:  
Inhalation? Yes                      Skin: No                      Ingestion? Yes

#### Health Hazards (Acute and Chronic):

Dry sawing or grinding of concrete masonry products may result in the release of respirable crystalline quartz. Prolonged exposure to respirable crystalline quartz may cause delayed (chronic) lung injury (silicosis). Acute or rapidly developing silicosis may occur in a short period of time in heavy exposure. Silicosis is a form of disabling pulmonary fibrosis which can be progressive and may lead to death.

#### Carcinogenicity:

NTP? Yes

The National Toxicology Program (NTP) published its Sixth Annual Report on Carcinogens which concludes that "silica, crystalline (respirable)" may reasonably be anticipated to be a carcinogen. The NTP conclusion is based on sufficient evidence for the carcinogenicity of respirable crystalline silica in experimental animals and limited evidence in humans.

IARC Monographs? Yes

IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans (volume 42, 1987) concludes that there is sufficient evidence for the carcinogenicity of crystalline silica to experimental animals, and that there is limited evidence of the carcinogenicity of crystalline silica to humans. IARC Class 2A.

Signs and Symptoms of Exposure: Undue breathlessness, wheezing, cough and sputum production.

Medical Conditions Generally Aggravated by Exposure:

Pre-existing lung diseases such as emphysema or asthma. Pulmonary function may be reduced by inhalation of respirable crystalline silica. Also lung scarring produced by such inhalation may lead to progressive massive fibrosis of the lung which may aggravate other pulmonary conditions and diseases and which increases susceptibility to pulmonary tuberculosis. Progressive massive fibrosis may be accompanied by right heart enlargement, heart failure, and pulmonary failure. Smoking aggravates the effects of exposure.

Emergency and First Aid Procedures:

For sand in eyes during dry sawing or grinding operations, immediately flush generously with water for 15 minutes. If irritation persists, seek medical attention. For gross inhalation, remove person immediately to fresh air, give artificial respiration as needed, seek medical attention as needed.

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## SECTION VII – PRECAUTIONS FOR Safe Handling and Use

Steps to be taken in Case Material is Released or Spilled:

When dry sawing or grinding, use dustless systems for handling, storage, and clean-up so that airborne dust does not exceed the PEL. Use adequate ventilation and dust equipment. Practice good housekeeping. Do not permit dust to collect on walls, floors, sills, ledges, machinery, or equipment. Maintain, clean, and fit test respirators in accordance with OSHA regulations. Maintain and test ventilation and dust collection equipment. Wash or vacuum clothing which has become dusty. See also control measures in Section VIII.

Waste Disposal Method:

Normal breakage may be picked up and discarded as common waste. Residue from dry sawing and grinding operations should be disposed of in accordance with Federal, State, and Local regulations.

Precautions to be Taken in Handling and Storing: None

Other Precautions:

See OSHA Hazard Communication Rule 29 CFR Sections 1910.1200, 1915.00., 1917.28, 1918.90, 1926.59, and 1928.21 and state and local worker or community "right to know" laws and regulations. We recommend that smoking be prohibited in all areas where respirators must be used. **WARN YOUR EMPLOYEES (AND YOUR CUSTOMERS – USERS IN CASE OF**

RESALE) BY POSTING, AND OTHER MEANS, OF THE HAZARD AND OSHA PRECAUTIONS TO BE USE USED. PROVIDE TRAINING FOR YOUR EMPLOYEES ABOUT THE OSHA PRECAUTIONS.

See also American Society for Testing and Materials (ASTM) Standard Practice E1132-86, "Standard Practice for Health Requirements Relating to Occupational Exposure to Quartz dust."

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## SECTION VIII – CONTROL MEASURES

### Respiratory Protection

The following chart specifies the type of respirators which may provide respiratory protection for crystalline silica.

#### RESPIRATORY PROTECTION FOR CRYSTALLINE SILICA

CONDITION	MIMINUM RESPIRATORY PROTECTION*
-----------	---------------------------------

Up to 5 x PEL	Any dust respirator.
Up to 10 X PEL	Any dust respirator, except single-use or quarter-mask respirator. Any fume respirator or high efficiency particulate filter respirator. Any supplied-air respirator. Any self-contained breathing apparatus.
Up to 50 X PEL	A high efficiency particulate filter respirator with a full face piece. Any supplied-air respirator with a full face piece, helmet, or hood. Any self-contained breathing apparatus with a full face piece.
Up to 500 X PEL	A power air-purifying respirator with a high efficiency particulate filter. A type C supplied-air respirator operated in pressure-demand or other positive pressure or continuous-flow mode.
Greater than 500 X PEL or entry and escape from unknown concentrations	Self-contained breathing apparatus with a full face piece operated in pressure-demand or other positive mode.  A combination respirator which includes a Type C supplied-air respirator with a full face piece operated in pressure-demand or other positive pressure continuous-flow mode and an auxiliary self contained breathing apparatus operated in pressure-demand or other positive pressure mode.

\*Only NIOSH-approved or MSHA-approved equipment should be used. \*See 29 CFR 1910.134).



See also ANSI Standard Z88.2 – 1980 “Practices for Respiratory Protection.”

**Ventilation:**

**Local Exhaust:**

When dry sawing or grinding concrete masonry products, use sufficient local exhaust to reduce the level of respirable dust to the PEL. See ACGIH “Industrial Ventilation, A Manual of Recommended Practice,” latest edition.

**Mechanical:**

See “Other Precautions” Under Section VII

**Special:**

See “Other Precautions” Under Section VII

**Other:**

See “Other Precautions” Under Section VII

**Protective Gloves:**

Optional

**Eye Protection:**

When sawing or grinding concrete masonry products, wear protective shield or tight fitting goggles (safety glasses).

**Other Protective Clothing or Equipment:**

Optional

**Work/Hygienic Practices:**

Avoid creating and breathing dust. See “Other Precautions” under Section VII.

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to airborne dust particles created by dry sawing or grinding of our products. Customers/users of concrete masonry products must comply with all applicable health and safety laws, regulations, and orders.



<b>SUPPLIER</b> AURELIUS LIMITED PARTNERSHIP		<b>HAZARD RATING</b> 4-EXTREME    3-HIGH 2-MODERATE    1-SLIGHT 0-INSIGNIFICANT
<b>ADDRESS</b> 4230 Boston Street Baltimore, Maryland 21224	<b>TELEPHONE</b> (410) 837-1810	<b>FIRE</b> 3 <b>TOXICITY</b> 2 <b>REACTIVITY</b> 2 <b>SPECIAL</b> 0

## MATERIAL SAFETY DATA SHEET

<b>TRADE NAME (ON LABEL)</b> Spectra-Glaze® Compound II 615-C	<b>PRODUCT TYPE</b> Unsaturated Modified Proprietary Polymer
<b>CHEMICAL FORMULA</b> N/A	<b>CHEMICAL NAME OR SYNONYM</b> N/A

### SECTION I — COMPOSITION

COMPONENT	CAS REG. NOS.	APPROX. % WT.	OSHA/PEL	ACGIH TLV
*60% or less Styrene and/or Ester Monomers *These products identified as SARA 313 Toxic Chemicals	100-42-5-80-62-6 Trade Secret	<60% <52%	50 PPM	50 PPM

### SECTION II — PHYSICAL PROPERTIES

<b>APPEARANCE - ODOR</b> Clear to straw - pungent odor			
<b>FREEZING POINT (EF)</b> N/E	<b>BOILING POINT (EF)</b> Styrene - 293EF Proprietary Ester Monomer - 215EF	<b>VAPOR PRESSURE (mm Hg)</b> Styrene 5.00 mm Hg 68EF	<b>VAPOR DENSITY (AIR = 1)</b> N/A (Mixture)
<b>SOLUBILITY IN WATER</b> Very Slightly	<b>VOLATILE (% WT.)</b> N/E	<b>SPECIFIC GRAVITY</b> 1.02 - 1.2	<b>EVAP. RATE (ETHER = 1)</b> Less than 1

**SECTION III — FIRE AND EXPLOSION HAZARD**

<b>FLASH POINT (EF)</b> 73E F	<b>AUTO IGNITION TEMP. (EF)</b> N/A	<b>LOWER EXPLOSION LIMIT(%)</b> 1.1	<b>UPPER EXPLOSION LIMIT (%)</b> 6.1
<b>EXTINGUISHING MEDIUM</b> : FOAM g ALCOHOL FOAM : CO <sub>2</sub> : DRY CHEMICAL g WATER g FOG			
<b>SPECIAL FIRE FIGHTING PROCEDURES</b> Water or foam may cause violent frothing which may endanger safety of firefighter, especially if sprayed into container of hot burning liquid. Wear self contained breathing apparatus with full face piece operated in pressure demand or other positive pressure demanded when fighting fires.			
<b>UNUSUAL FIRE AND EXPLOSION HAZARDS</b> Excessive heat may cause violent rupture of closed containers due to polymer ratios. Never use welding or cutting tools on containers especially when empty because vapors from residue may explode violently			

**SECTION IV — HEALTH HAZARD**

<b>PRIMARY ROUTES OF EXPOSURE</b> : EYE : SKIN : ORAL : INHALATION
<b>CARCINOGENS OR SUSPECTED CARCINOGENIC INGREDIENTS</b> 9NTP 9IARC 9OSHA 9NONE No longer listed as carcinogenic. However, use caution and stay below ACGIH TLV.
<b>EFFECTS OF OVEREXPOSURE</b> Acute: Eyes - redness, tearing, blurred vision. Breathing - nausea, fatigue, possible unconsciousness. Chronic: May cause irritation of skin, dermatitis, eye irritation, nausea, dizziness.
<b>MEDICAL CONDITIONS GENERALLY BY EXPOSURE</b> Avoid excessive exposure to vapors if being treated for lung or respiratory problems.
<b>EMERGENCY AND FIRST AID PROCEDURES</b> If inhaled: If affected, remove to fresh air. If breathing is difficult, administer oxygen. If breathing is stopped, give artificial respiration. Call for medical attention. If in eyes: Flush copiously with water. Get medical attention. If on skin: Thoroughly wash with soap and water. Remove contaminated clothing. Launder before reuse. If ingested: DO NOT induce vomiting. Keep person warm. Get medical attention.

**SECTION V — REACTIVITY**

<b>STABILITY</b> 9Stable : Unstable	<b>CONDITIONS TO AVOID</b> Avoid excessive heat. Avoid breathing concentrated fumes. Avoid open storage.
<b>HAZARDOUS DECOMPOSITION PRODUCTS</b> May cause carbon dioxide - carbon monoxide - hydrocarbons	
<b>HAZARDOUS POLYMERIZATION</b> : May Occur 9 Will Not Occur	<b>CONDITIONS TO AVOID</b> Excessive heat - strong acids, alkalizes - uncontrolled polymerization catalysts.
<b>INCOMPATIBILITY (MATERIALS TO AVOID)</b> 9 Water :Other Avoid strong alkalizes or acids - excessive heat or peroxides - uncontrolled Polymerization catalysts.	

**SECTION VI — SPILL OR LEAK PROCEDURES****STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED**

Small Spill: Use Absorbent.

Larger Spill: Eliminate all sources or ignition. Wear protective equipment. Dike area of spill to avoid spreading. Use absorbent to finish clean-up. Dispose of in accordance with local, state and federal regulations.

**WASTE DISPOSAL METHODS**

Styrene is identified as a SARA section 313 toxic chemical. Dispose of this product in accordance with local, state and federal regulations.

**SECTION VII — SPECIAL PROTECTION****VENTILATION TYPE**

Forced if confined.

**RESPIRATORY PROTECTION**

If TLV is exceeded NIOSH - OSHA jointly approved air supplied respirators.

**PROTECTIVE GLOVES**

Solvent resistant V C commercial.

**EYE PROTECTION**

Chemical Goggles

**SECTION VIII — STORAGE AND HANDLING**

**STORAGE AND HANDLING PRECAUTIONS** - Avoid storing in areas of excessive heat. Keep out of direct sunlight. Use forklift carefully to avoid puncturing drums. Do not store in open containers.

**OTHER PRECAUTIONS** - Avoid double stacking of palletized drums. Do not store with strong acids - Alkalies in same storage area.

**SECTION IX — MISCELLANEOUS**

OTHER COMMENTS - N/A

**ABBREVIATIONS**

N/A: NOT APPLICABLE

N/D: NOT DETERMINED

N/E: NOT ESTABLISHED

UNK: UNKNOWN

<: LESS THAN

>: GREATER THAN

**SECTION X — TRANSPORTATION INFORMATION**

Resin Solution, 3, (Flammable Liquid), UN1866, P.G. II

PREPARED BY: Jim Franz

DATE: August 1999

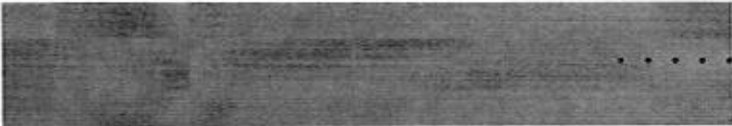
SUPERSEDES: July 1999

The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. It is the responsibility of the user to comply with all applicable federal, state and local laws and regulations.



Lonestar Industries, LLC.

**DIESEL FUEL**



**MATERIAL SAFETY DATA SHEET****Diesel Fuel (All Types)****MSDS No. 9909****EMERGENCY OVERVIEW****CAUTION!****OSHA/NFPA COMBUSTIBLE LIQUID - SLIGHT TO MODERATE IRRITANT  
EFFECTS CENTRAL NERVOUS SYSTEM  
HARMFUL OR FATAL IF SWALLOWED**

Moderate fire hazard. Avoid breathing vapors or mists. May cause dizziness and drowsiness. May cause moderate eye irritation and skin irritation (rash). Long-term, repeated exposure may cause skin cancer. If ingested, do NOT induce vomiting, as this may cause chemical pneumonia (fluid in the lungs).



NFPA 704 (Section 16)

**1. CHEMICAL PRODUCT AND COMPANY INFORMATION**

Hess Corporation  
1 Hess Plaza  
Woodbridge, NJ 07095-0961

EMERGENCY TELEPHONE NUMBER (24 hrs): **CHEMTREC (800) 424-9300**  
COMPANY CONTACT (business hours): Corporate Safety (732) 750-6000  
MSDS INTERNET WEBSITE: [www.hess.com](http://www.hess.com) (See Environment, Health, Safety & Social Responsibility)

**SYNONYMS:** Ultra Low Sulfur Diesel (ULSD); Low Sulfur Diesel; Motor Vehicle Diesel Fuel; Diesel Fuel #2; Dyed Diesel Fuel; Non-Road, Locomotive and Marine Diesel Fuel; Tax-exempt Diesel Fuel

See Section 16 for abbreviations and acronyms.

**2. COMPOSITION and CHEMICAL INFORMATION ON INGREDIENTS**

INGREDIENT NAME (CAS No.)	CONCENTRATION PERCENT BY WEIGHT
Diesel Fuel (68476-34-6)	100
Naphthalene (91-20-3)	Typically < 0.01

A complex mixture of hydrocarbons with carbon numbers in the range C9 and higher. Diesel fuel may be dyed (red) for tax purposes. May contain a multifunctional additive.

**3. HAZARDS IDENTIFICATION****EYES**

Contact with liquid or vapor may cause mild irritation.

**SKIN**

May cause skin irritation with prolonged or repeated contact. Practically non-toxic if absorbed following acute (single) exposure. Liquid may be absorbed through the skin in toxic amounts if large areas of skin are repeatedly exposed.

**INGESTION**

The major health threat of ingestion occurs from the danger of aspiration (breathing) of liquid drops into the lungs, particularly from vomiting. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure and even death.

Ingestion may cause gastrointestinal disturbances, including irritation, nausea, vomiting and diarrhea, and central nervous system (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory arrest, and death may occur.



## MATERIAL SAFETY DATA SHEET

**Diesel Fuel (All Types)**

**MSDS No. 9909**

### **INHALATION**

Excessive exposure may cause irritations to the nose, throat, lungs and respiratory tract. Central nervous system (brain) effects may include headache, dizziness, loss of balance and coordination, unconsciousness, coma, respiratory failure, and death.

**WARNING:** the burning of any hydrocarbon as a fuel in an area without adequate ventilation may result in hazardous levels of combustion products, including carbon monoxide, and inadequate oxygen levels, which may cause unconsciousness, suffocation, and death.

### **CHRONIC EFFECTS and CARCINOGENICITY**

Similar products produced skin cancer and systemic toxicity in laboratory animals following repeated applications. The significance of these results to human exposures has not been determined - see Section 11 Toxicological Information.

IARC classifies whole diesel fuel exhaust particulates as probably carcinogenic to humans (Group 2A). NIOSH regards whole diesel fuel exhaust particulates as a potential cause of occupational lung cancer based on animal studies and limited evidence in humans.

### **MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE**

Irritation from skin exposure may aggravate existing open wounds, skin disorders, and dermatitis (rash).

## **4. FIRST AID MEASURES**

### **EYES**

In case of contact with eyes, immediately flush with clean, low-pressure water for at least 15 min. Hold eyelids open to ensure adequate flushing. Seek medical attention.

### **SKIN**

Remove contaminated clothing. Wash contaminated areas thoroughly with soap and water or waterless hand cleanser. Obtain medical attention if irritation or redness develops.

### **INGESTION**

DO NOT INDUCE VOMITING. Do not give liquids. Obtain immediate medical attention. If spontaneous vomiting occurs, lean victim forward to reduce the risk of aspiration. Monitor for breathing difficulties. Small amounts of material which enter the mouth should be rinsed out until the taste is dissipated.

### **INHALATION**

Remove person to fresh air. If person is not breathing provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.

## **5. FIRE FIGHTING MEASURES**

### **FLAMMABLE PROPERTIES:**

FLASH POINT:	> 125 °F (> 52 °C) minimum PMCC
AUTOIGNITION POINT:	494 °F (257 °C)
OSHA/NFPA FLAMMABILITY CLASS:	2 (COMBUSTIBLE)
LOWER EXPLOSIVE LIMIT (%):	0.6
UPPER EXPLOSIVE LIMIT (%):	7.5

### **FIRE AND EXPLOSION HAZARDS**

Vapors may be ignited rapidly when exposed to heat, spark, open flame or other source of ignition. When mixed with air and exposed to an ignition source, flammable vapors can burn in the open or explode in confined spaces. Being heavier than air, vapors may travel long distances to an ignition source and flash back. Runoff to sewer may cause fire or explosion hazard.

### **EXTINGUISHING MEDIA**

SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO<sub>2</sub>, water spray, fire fighting foam, or Halon.





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**LARGE FIRES:** Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.

### **FIRE FIGHTING INSTRUCTIONS**

Small fires in the incipient (beginning) stage may typically be extinguished using handheld portable fire extinguishers and other fire fighting equipment.

Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA- approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing.

Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam.

See Section 16 for the NFPA 704 Hazard Rating.

## **6. ACCIDENTAL RELEASE MEASURES**

**ACTIVATE FACILITY'S SPILL CONTINGENCY OR EMERGENCY RESPONSE PLAN.**

Evacuate nonessential personnel and remove or secure all ignition sources. Consider wind direction; stay upwind and uphill, if possible. Evaluate the direction of product travel, diking, sewers, etc. to confirm spill areas. Spills may infiltrate subsurface soil and groundwater; professional assistance may be necessary to determine the extent of subsurface impact.

Carefully contain and stop the source of the spill, if safe to do so. Protect bodies of water by diking, absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. The use of fire fighting foam may be useful in certain situations to reduce vapors. The proper use of water spray may effectively disperse product vapors or the liquid itself, preventing contact with ignition sources or areas/equipment that require protection.

Take up with sand or other oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal - caution, flammable vapors may accumulate in closed containers. Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

## **7. HANDLING and STORAGE**

### **HANDLING PRECAUTIONS**

Handle as a combustible liquid. Keep away from heat, sparks, and open flame! Electrical equipment should be approved for classified area. Bond and ground containers during product transfer to reduce the possibility of static-initiated fire or explosion.

Diesel fuel, and in particular low and ultra low sulfur diesel fuel, has the capability of accumulating a static electrical charge of sufficient energy to cause a fire/explosion in the presence of lower flashpoint products such as gasoline. The accumulation of such a static charge occurs as the diesel flows through pipelines, filters, nozzles and various work tasks such as tank/container filling, splash loading, tank cleaning; product sampling; tank gauging; cleaning, mixing, vacuum truck operations, switch loading, and product agitation. There is a greater potential for static charge accumulation in cold temperature, low humidity conditions.

Documents such as 29 CFR OSHA 1910.106 "Flammable and Combustible Liquids, NFPA 77 Recommended Practice on Static Electricity, API 2003 "Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents and ASTM D4865 "Standard Guide for Generation and Dissipation of Static



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Electricity in Petroleum Fuel Systems" address special precautions and design requirements involving loading rates, grounding, bonding, filter installation, conductivity additives and especially the hazards associated with "switch loading." ["Switch Loading" is when a higher flash point product (such as diesel) is loaded into tanks previously containing a low flash point product (such as gasoline) and the electrical charge generated during loading of the diesel results in a static ignition of the vapor from the previous cargo (gasoline).]

Note: When conductivity additives are used or are necessary the product should achieve 25 picosiemens/meter or greater at the handling temperature.

### **STORAGE PRECAUTIONS**

Keep away from flame, sparks, excessive temperatures and open flame. Use approved vented containers. Keep containers closed and clearly labeled. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition.

Store in a well-ventilated area. This storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". Avoid storage near incompatible materials. The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks In Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Petroleum Storage Tanks".

### **WORK/HYGIENIC PRACTICES**

Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure. Use good personal hygiene practices. Avoid repeated and/or prolonged skin exposure. Wash hands before eating, drinking, smoking, or using toilet facilities. Do not use as a cleaning solvent on the skin. Do not use solvents or harsh abrasive skin cleaners for washing this product from exposed skin areas. Waterless hand cleaners are effective. Promptly remove contaminated clothing and launder before reuse. Use care when laundering to prevent the formation of flammable vapors which could ignite via washer or dryer. Consider the need to discard contaminated leather shoes and gloves.

## **8. EXPOSURE CONTROLS and PERSONAL PROTECTION**

### **EXPOSURE LIMITS**

Components (CAS No.)	Source	Exposure Limits		Note
		TWA/STEL		
Diesel Fuel: (68476-34-6)	OSHA	5 mg/m, as mineral oil mist		A3, skin
	ACGIH	100 mg/m <sup>3</sup> (as totally hydrocarbon vapor) TWA		
Naphthalene (91-20-3)	OSHA	10 ppm TWA		A4, Skin
	ACGIH	10 ppm TWA / 15 ppm STEL		

### **ENGINEERING CONTROLS**

Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces.

### **EYE/FACE PROTECTION**

Safety glasses or goggles are recommended where there is a possibility of splashing or spraying.

### **SKIN PROTECTION**

Gloves constructed of nitrile, neoprene, or PVC are recommended. Chemical protective clothing such as of E.I. DuPont TyChem®, Saranex® or equivalent recommended based on degree of exposure. Note: The resistance of specific material may vary from product to product as well as with degree of exposure. Consult manufacturer specifications for further information.





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### **RESPIRATORY PROTECTION**

A NIOSH/MSHA-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited. Refer to OSHA 29 CFR 1910.134, NIOSH Respirator Decision Logic, and the manufacturer for additional guidance on respiratory protection selection.

Use a positive pressure, air-supplied respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.

### **9. PHYSICAL and CHEMICAL PROPERTIES**

#### **APPEARANCE**

Clear, straw-yellow liquid. Dyed fuel oil will be red or reddish-colored.

#### **ODOR**

Mild, petroleum distillate odor

#### **BASIC PHYSICAL PROPERTIES**

BOILING RANGE: 320 to 690 oF (160 to 366 °C)  
VAPOR PRESSURE: 0.009 psia @ 70 °F (21 °C)  
VAPOR DENSITY (air = 1): > 1.0  
SPECIFIC GRAVITY (H<sub>2</sub>O = 1): 0.83 to 0.88 @ 60 °F (16 °C)  
PERCENT VOLATILES: 100 %  
EVAPORATION RATE: Slow; varies with conditions  
SOLUBILITY (H<sub>2</sub>O): Negligible

### **10. STABILITY and REACTIVITY**

**STABILITY:** Stable. Hazardous polymerization will not occur.

#### **CONDITIONS TO AVOID and INCOMPATIBLE MATERIALS**

Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources. Keep away from strong oxidizers; Viton®; Fluorel®

#### **HAZARDOUS DECOMPOSITION PRODUCTS**

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

### **11. TOXICOLOGICAL PROPERTIES**

#### **ACUTE TOXICITY**

Acute dermal LD50 (rabbits): > 5 ml/kg  
Acute oral LD50 (rats): 9 ml/kg  
Primary dermal irritation: extremely irritating (rabbits) Draize eye irritation: non-irritating (rabbits)  
Guinea pig sensitization: negative

#### **CHRONIC EFFECTS AND CARCINOGENICITY**

Carcinogenic: OSHA: NO IARC: NO NTP: NO ACGIH: A3

Studies have shown that similar products produce skin tumors in laboratory animals following repeated applications without washing or removal. The significance of this finding to human exposure has not been determined. Other studies with active skin carcinogens have shown that washing the animal's skin with soap and water between applications reduced tumor formation.

#### **MUTAGENICITY (genetic effects)**

This material has been positive in a mutagenicity study.



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12. ECOLOGICAL INFORMATION

Keep out of sewers, drainage areas, and waterways. Report spills and releases, as applicable, under Federal and State regulations.

13. DISPOSAL CONSIDERATIONS

Consult federal, state and local waste regulations to determine appropriate disposal options.

14. TRANSPORTATION INFORMATION

PROPER SHIPPING NAME:	Diesel Fuel	Placard (International Only):
HAZARD CLASS and PACKING GROUP:	3, PG III	
DOT IDENTIFICATION NUMBER:	NA 1993 (Domestic) UN 1202 (International)	
DOT SHIPPING LABEL:	None	

Use Combustible Placard if shipping in bulk domestically

15. REGULATORY INFORMATION

U.S. FEDERAL, STATE, and LOCAL REGULATORY INFORMATION

This product and its constituents listed herein are on the EPA TSCA Inventory. Any spill or uncontrolled release of this product, including any substantial threat of release, may be subject to federal, state and/or local reporting requirements. This product and/or its constituents may also be subject to other regulations at the state and/or local level. Consult those regulations applicable to your facility/operation.

CLEAN WATER ACT (OIL SPILLS)

Any spill or release of this product to "navigable waters" (essentially any surface water, including certain wetlands) or adjoining shorelines sufficient to cause a visible sheen or deposit of a sludge or emulsion must be reported immediately to the National Response Center (1-800-424-8802) as required by U.S. Federal Law. Also contact appropriate state and local regulatory agencies as required.

CERCLA SECTION 103 and SARA SECTION 304 (RELEASE TO THE ENVIRONMENT)

The CERCLA definition of hazardous substances contains a "petroleum exclusion" clause which exempts crude oil, refined, and unrefined petroleum products and any indigenous components of such. However, other federal reporting requirements (e.g., SARA Section 304 as well as the Clean Water Act if the spill occurs on navigable waters) may still apply.

SARA SECTION 311/312 - HAZARD CLASSES

<u>ACUTE HEALTH</u>	<u>CHRONIC HEALTH</u>	<u>FIRE</u>	<u>SUDDEN RELEASE OF PRESSURE</u>	<u>REACTIVE</u>
X	X	X	--	--

SARA SECTION 313 - SUPPLIER NOTIFICATION

This product may contain listed chemicals below the de minimis levels which therefore are not subject to the supplier notification requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and of 40 CFR 372. If you may be required to report releases of chemicals listed in 40 CFR 372.28, you may contact Hess Corporate Safety if you require additional information regarding this product.

CALIFORNIA PROPOSITION 65 LIST OF CHEMICALS

This product contains the following chemicals that are included on the Proposition 65 "List of Chemicals" required by the California Safe Drinking Water and Toxic Enforcement Act of 1986:

<u>INGREDIENT NAME (CAS NUMBER)</u>	<u>Date Listed</u>
Diesel Engine Exhaust (no CAS Number listed)	10/01/1990

CANADIAN REGULATORY INFORMATION (WHMIS)

Class B, Division 3 (Combustible Liquid) and Class D, Division 2, Subdivision B (Toxic by other means)

**MATERIAL SAFETY DATA SHEET****Diesel Fuel (All Types)****MSDS No. 9909****16. OTHER INFORMATION**

**NFPA® HAZARD RATING** HEALTH: 0  
FIRE: 2  
REACTIVITY: 0

Refer to NFPA 704 "Identification of the Fire Hazards of Materials" for further information

**HMIS® HAZARD RATING** HEALTH: 1 \* \* Chronic  
FIRE: 2  
PHYSICAL: 0

**SUPERSEDES MSDS DATED:** 02/28/2001**ABBREVIATIONS:**

AP = Approximately < = Less than > = Greater than  
N/A = Not Applicable N/D = Not Determined ppm = parts per million

**ACRONYMS:**

ACGIH	American Conference of Governmental Industrial Hygienists	NTP	National Toxicology Program
AIHA	American Industrial Hygiene Association	OPA	Oil Pollution Act of 1990
ANSI	American National Standards Institute (212) 642-4900	OSHA	U.S. Occupational Safety & Health Administration
API	American Petroleum Institute (202) 682-8000	PEL	Permissible Exposure Limit (OSHA)
CERCLA	Comprehensive Emergency Response, Compensation, and Liability Act	RCRA	Resource Conservation and Recovery Act
DOT	U.S. Department of Transportation [General info: (800) 467-4922]	REL	Recommended Exposure Limit (NIOSH)
EPA	U.S. Environmental Protection Agency	SARA	Superfund Amendments and Reauthorization Act of 1986 Title III
HMIS	Hazardous Materials Information System	SCBA	Self-Contained Breathing Apparatus
IARC	International Agency For Research On Cancer	SPCC	Spill Prevention, Control, and Countermeasures
MSHA	Mine Safety and Health Administration	STEL	Short-Term Exposure Limit (generally 15 minutes)
NFPA	National Fire Protection Association (617)770-3000	TLV	Threshold Limit Value (ACGIH)
NIOSH	National Institute of Occupational Safety and Health	TSCA	Toxic Substances Control Act
NOIC	Notice of Intended Change (proposed change to ACGIH TLV)	TWA	Time Weighted Average (8 hr.)
		WEEL	Workplace Environmental Exposure Level (AIHA)
		WHMIS	Canadian Workplace Hazardous Materials Information System

**DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES**

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Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material, even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in their use of the material.

.....  
**Lonestar Industries, LLC.**

**FACE BRICK**



**ACME BRICK COMPANY**  
**3101 S. BRYANT IRVIN RD.**  
**FORT WORTH, TEXAS 76109**

For additional information contact:  
 Our Industrial Hygenist (817) 332-4101

**BRICK MATERIAL SAFETY DATA SHEET**

Date Prepared: 09-01-91  
 Latest Revision: 05-01-06

**SECTION I - PRODUCT IDENTIFICATION**

Product Name: Brick  
 Chemical Family: Mixed Aluminosilicate  
 Formula: Complex Mixture

**SECTION II - HAZARDOUS INGREDIENTS**

Ingredients	CAS #	% Weight	Exposure Limits	
			OSHA PEL mg/m <sup>3</sup>	ACGIH TLV mg/m <sup>3</sup>
Aluminosilicates	Various	> 85	15	10
*Quartz (Crystalline Silica)	14808-60-7	Varies	1 (TWA) (respirable)	.025 (TWA) (respirable)

(BRICK MAY CONTAIN LOW CONCENTRATION OF OTHER OXIDES.)  
 \* ACGIH RECOMMENDS A MAXIMUM PERMISSIBLE CONCENTRATION OF 0.025 mg/m<sup>3</sup> OF RESPIRABLE CRYSTALLINE SILICA AS DETERMINED BY A FULL-SHIFT SAMPLE UP TO 10 HOURS WORKING DAY, 40 HOUR WORK WEEK.

**SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS**

Appearance and Odor: Shaped solid, odorless. Bricks come in a wide range of body and surface colors.

Bolling Point: NA      Evaporation Rate (T=Ethyl Ether = 1)      Specific Gravity: H20=1: 2.6 (Approximate)

Percent Volatile: NA      pH: NA

Vapor Pressure: NA      Vapor Density: NA      Solubility in Water: Negligible

**SECTION IV - FIRE AND EXPLOSION HAZARD DATA**

**SECTION V - REACTIVITY**

Flash Point: NA      Flammable limits (% By Volume in Air): LEL- NA / UEL- NA      Reactivity: NA

Fire Extinguishing Media: NA      Fire and Explosion Hazards: NA

Special Fire Fighting Procedures: NA

**SECTION VI - HEALTH HAZARD DATA**

Bricks as shipped, do not present an inhalation or ingestion hazard. A contact hazard does exist from flying chips or particles, sharp edges, crushed toes, etc. However, operations such as sawing and grinding may release particulates of chips that could have the following adverse effect:

**ACUTE EFFECTS OF OVEREXPOSURE:**

**Eye:** May cause mild to severe irritation by abrasion with dust or chips.  
**Skin:** Brick dust or chips may cause allergic reactions. Excessive exposure may result in abrasions.  
**Inhalation:** Brick dust or chips may cause congestion and irritation in nasal and respiratory passages.  
**Ingestion:** No known acute effects.

**CHRONIC EFFECTS OF OVEREXPOSURE:**

Excessive exposures to respirable brick dust created by sawing, drilling, grinding or crushing of bricks, or created by the cleanup and disposal of brick dusts and waste may over an extended period of time, result in the development of permanent and irreversible lung diseases, such as silicosis, tuberculosis, or lung cancer. The higher the crystalline silica content of the dust, the greater the health risk. Breathing brick dust may be associated with the development of scleroderma and kidney lesions and may aggravate existing respiratory conditions such as asthma, bronchitis and emphysema.



The following carcinogenicity classifications for crystalline silica have been established by the following agencies:

OSHA: Non-regulated  
IARC: Carcinogenic  
NTP: Carcinogenic

**WARNING:** Brick dust contains crystalline silica, a chemical that has been determined by IARC and NTP to cause cancer. Inhalation of brick dust above established or recommended exposure levels should be avoided by use of wet sawing and/or use of a NIOSH and/or MSHA approved respirator.

### SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

**Respiratory Protection:** Provide adequate ventilation to maintain exposures below the components listed in Section II with established PEL's or TLV's.

**Other Protective Equipment:** For airborne concentration exceeding the OSHA PEL or ACGIH TLV use a NIOSH and/or MSHA approved respirator.

**Other controls:**  
**Eye and Face:** Face shields should be used when sawing brick. Safety glasses with side shields may be required when chipping or breaking brick with a tool, grinding brick or other activities that release flying particulate.  
**Skin:** Use gloves and/or protective clothing if cuts, abrasions or allergic reactions are experienced.  
**Other:** Use of steel toe shoes is recommended when handling brick.

### SECTION VIII - CONTROL MEASURES

Use of wet sawing methods is recommended anytime that bricks must be cut. Always stack and store bricks in a stable manner to avoid falling hazards

### SECTION IX - FIRST AID AND MEDICAL

**Skin:** Wash with soap and water. If an allergic reaction causes a rash that does not heal within a few days consult a physician. Treat abrasions as any other scrape or cut with disinfectants and bandages.

**Eye:** Flush with running water. Obtain medical assistance if irritation continues.

### SECTION X - OTHER REGULATIONS

**RCRASARA:** Disposal must be in accordance with federal, state & local regulations.

Brick in solid form is typically considered a non-hazardous waste for disposal, but local regulation may vary, therefore, all waste must be disposed/recycled/reclaimed in accordance with federal, state, and local environmental control regulations. Water containing brick solids, such as from wet sawing operations, should be disposed of in accordance with federal, state and local environmental regulations. Brick waste should not be used as an abrasive blasting agent.

**DOT:** Bricks, as shipped, are not a Section 313 (Form R) reportable product.

### SECTION XI - OTHER INFORMATION

Acme Brick Company considers our product an "article" as defined in 29CFR 1910.1200(b)(6)(V) and 1920.1200(c).

This MSDS was prepared with information believed accurate at the time of preparation and was prepared and provided in good faith. However, Acme Brick Company assumes no responsibility as to the accuracy of such information and no warranty expressed or implied is made.

.....  
Lonestar Industries, LLC.

**FASTENERS**







**REACTIVITY DATA:**

<b>Stability:</b>	Stable
<b>Hazardous Decomposition Products:</b>	CO <sub>2</sub> and/or CO
<b>Incompatibilities - Materials to Avoid:</b>	Strong Mineral Acids, Alkali or Oxidizers
<b>Polymerization:</b>	Will not occur

**HEALTH HAZARD DATA:**

<b>Health Effects/Signs &amp; Symptoms:</b>	Not applicable
<b>Usual Route(s) of Entry:</b>	Sharp metal fastener may cut skin
<b>Medical Conditions Possibly Aggravated:</b>	None known
<b>Carcinogen Information:</b>	None Known
<b>Eye Contact:</b>	Not anticipated to pose a significant eye hazard
<b>Skin Contact:</b>	Not anticipated to pose a significant skin hazard
<b>Ingestion:</b>	Not anticipated to pose a significant ingestion hazard
<b>Inhalation:</b>	Not considered an inhalation hazard

**OCCUPATIONAL EXPOSURE CONTROL MEASURES:**

<b>Eye Protection:</b>	Safety glasses recommended
<b>Skin Protection:</b>	Gloves recommended
<b>Ingestion:</b>	Never place metal fasteners in mouth

**SPILL, LEAK AND DISPOSAL INFORMATION:**

**Procedures to follow if material is released or spilled:** n/a

<b>Waste Disposal Method(s):</b>	Any excess product can be recycled for further use or disposed of by methods which are in accordance with local, state and federal regulations.
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**ADDITIONAL OR MISCELLANEOUS INFORMATION:**

After working with coated materials, wash hands and face before eating, drinking or smoking.

Characteristics not covered on the MSDS are not applicable to this material at this time.

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Lonestar Industries, LLC.

**FLASHING COPPER**



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**Material Safety Data Sheet:**

U.S. Department of Labor

**MSDS**Occupational Safety and Health Administration  
(OSHA) Form: MSDS

Approved OSHA 174, Sept. 1985

OMB No. 1218-0072

<b>IDENTITY:</b> Laminated Copper Fabric Flashing <b>Synonyms:</b> Multi-Flash 500, Flash-Vent, Cop-R-Tex Duplex, Yorkshield TS, PT, HP Copper<90 wt. % Fiberglass Cloth<5 wt.% Hot Melt Adhesive<5 wt.% Polypropylene<10 wt.% Creped Craft Paper<5 wt.%	<b>The following legend is used:</b> NA: Not Applicable. NR: Not Reported/Recorded in literature. NK: none Known
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**Section I**

<b>Manufacturer's Name:</b> York Manufacturing	<b>Emergency Telephone Number:</b> 207-324-1300
<b>Address (Number, Street, City, State, and ZIP Code)</b> 43 Community Dr. Sanford, ME 04073	<b>Telephone Number for Information:</b> 207-324-1300
	<b>Date Prepared:</b> January 6, 2005
	<b>Signature of Preparer:</b> Joe Lincourt, VP

**Section II – Hazard Ingredients/Identity Information**

Hazardous Components (Specific Chemical Identity; Common Name (s))	OSHA PEL: NR	ACGIH TLV: NR	Other Limits Recommended	%(optional): NA
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No PEL exists for this product.

This laminate has not been tested as a whole but has been analyzed for chemical composition. Avoid inhalation of copper dust and any fumes generated at extremely elevated temperatures or when the product is ignited.

**Section III - Physical/Chemical Characteristics**

<b>Boiling Point:</b> °F	> 500 F	<b>Specific Gravity:</b> (H <sub>2</sub> O=1)	8.8 – 8.9
<b>Vapor Pressure:</b> (mm Hg. @ 68° F)	NA	<b>Melting Point:</b> °F	> 200F
<b>Vapor Density:</b> (AIR = 1)	NA	<b>Evaporation Rate:</b> (Butyl Acetate = 1)	NA
<b>Solubility in Water:</b> Insoluble			
<b>Appearance and Odor:</b> Odorless, Laminate assumes color of reinforcement material: yellow, red, white or green.			

**Section IV - Fire and Explosion Hazard Data**

<b>Flash Point (Method Used):</b> NA	<b>Flammable Limits</b>	LEL: NA	UEL: NA
<b>Extinguishing Media:</b> Dry sand or metal extinguishing powders.			
<b>Special Fire Fighting Procedures:</b> Wear NIOSH/MSHA approved SCBA & full protective equipment (FP N). Standard procedures for class A fires.			
<b>Unusual Fire and Explosion Hazards:</b> Fine dust may explode in the presence of strong ignition sources.			

**Section V – Reactivity Data**

<b>Stability</b>	Unstable		<b>Conditions to Avoid</b>
Yes	No		None.
<b>Incompatibility (Materials to Avoid):</b> Hydrogen Peroxide, Acetylene, Chlorine, Halogenates of Barium, Calcium, Magnesium, Potassium, Sodium and Zinc.			
<b>Hazardous Decomposition or Byproducts:</b> May generate metallic oxide fumes at temperatures above 1900 F.			
<b>Hazardous Polymerization</b>	May Occur	No	None.
NA	Will Not Occur	Yes	

**Section VI – Health Hazard Data**

<b>Route (s) of Entry:</b>	<b>Inhalation:</b> Use NIOSH approved respirator if dust is present.	<b>Skin:</b> Molten hot melt adhesive will cause non-chemical burns.	<b>Ingestion:</b> Large amounts of hot melt adhesive could cause physical blockage of the alimentary tract.
<b>Health Hazards (Acute and Chronic):</b> Irritation of eyes and the respiratory system.			
<b>Carcinogenicity:</b> NR	<b>NTP?</b> NR	<b>IARC Monographs?</b> NR	<b>OSHA Regulated?</b> No
<b>Signs and Symptoms of Exposure:</b> Irritation of eyes, nose, throat or lungs.			
<b>Medical Conditions Generally Aggravated by Exposure:</b> Sore throat and asthma.			
<b>Emergency and First Aid Procedures:</b> <b>Eyes:</b> Flush thoroughly with water for 15 minutes and get medical attention, <b>Skin:</b> Wash with plenty of water and soap. <b>Inhalation:</b> Promptly remove to fresh air and get medical attention. <b>Ingestion:</b> If victim is conscious, give liquids. Call a physician. Do not induce vomiting unless directed to do so by the physician.			

**Section VII - Precautions for Safe Handling and Use**

<b>Steps to Be Taken in Case Material is Released or Spilled:</b> NK
<b>Waste Disposal Method:</b> Dispose of the solids as per local, state and national regulations.
<b>Precautions to Be taken in Handling and Storing:</b> Avoid inhalation of dust and practice good housekeeping and personal hygiene procedures.
<b>Other Precautions:</b> NK

**Section VIII - Control Measures**

<b>Respiratory Protection (Specify Type):</b> NIOSH-approved respirator for dust or mist.		
<b>Ventilation</b>	<b>Local Exhaust:</b> NK	<b>Special:</b> NK
Yes	<b>Mechanical (General):</b> Mechanical exhaust is acceptable.	<b>Other:</b> NA
<b>Protective Gloves:</b> Impervious material		<b>Eye Protection:</b> Safety glasses. Do not wear contact lenses.
<b>Other Protective Clothing or Equipment:</b> Full sleeve shirt and full pants, safety shoes.		
<b>Work/Hygienic Practices:</b> Normal precautions applicable at the jobsite and manufacturing plant.		

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Lonestar Industries, LLC.

**FLASHING MASTIC**



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# MATERIAL SAFETY DATA SHEET

## Section 1: General Information

Product Name: Cop-R-Tite Flashing Mastic  
Manufacturer's Name: Advanced Building Products, Inc.  
Address: P.O. Box 98, Springvale, ME 04083  
Information Phone: 207-490-2306

## Section 2: Hazardous Ingredients

	Percentage	CAS	TLV
Asphalt	48-52	8052-42-4	5mg/m <sup>3</sup>
Mineral Spirits	19-23	64741-41-9	100 ppm
Interfibe 230	5-7	N/A	N/A
PA-14 Acetate	1-2	N/A	N/A
Min-U-Gel AR	10-15	8031-18-3	.1 mg/m <sup>3</sup> *
Muscovite (SER-V)	15-17	1318-94-1	N/A

\*Measured as crystalline silica (Quartz)

One of the components of this product contains crystalline silica, which is listed as a probable carcinogen by IARC. OSHA and NTP do not list crystalline silica as a carcinogen.

## Section 3: Health Hazard Information

CAUTION: HEATING MAY RELEASE HYDROGEN SULFIDE GAS (H<sub>2</sub>S)

Eye Contact: The cool material will cause minor eye irritation. However, thermal burns may result from contact with the hot material. The degree of the injury will depend on the amount of material that gets into the eye and the speed and thoroughness of the first aid treatment. Signs and symptoms may include: pain, tears, swelling, redness, and blurred vision. This hazard evaluation is based on the data from similar materials.

Skin Contact: The cool material will cause minor skin irritation. However, thermal burns may result from contact with the hot material. The degree of the injury will depend on the amount of material that gets on the skin and the speed and thoroughness of the first aid treatment. Signs and symptoms may include: pain, discoloration and swelling. This hazard evaluation is based on data from similar materials. The systematic toxicity of this substance has not been determined. However, it should be practically non-toxic to internal organs if it gets on the skin.

Inhalation: Fumes from the hot material can be unpleasant and may produce nausea and irritation of the upper respiratory tract. If inhaled, this substance is considered practically non-toxic to internal organs. This substance contains sulfur compounds, which may form Hydrogen Sulfide. The rotten eggs odor of Hydrogen Sulfide is unreliable as an indicator of concentration. Signs and symptoms of over exposure to Hydrogen Sulfide include respiratory tract irritation, headaches, dizziness, nausea, gastrointestinal disturbances,

coughing, a sensation of dryness and pain in the sulfide concentration of dryness and pain in the nose, throat and chest, confusion and unconsciousness. Hydrogen Sulfide concentrations of 1,000-2,000 PPM can be extremely hazardous. This hazard evaluation is based on data from similar materials.

**Ingestion:** This is an unlikely route of entry, however if swallowed, this substance is considered practically non-toxic.

**Additional Health Data Comment:** Studies in which mice were exposed to a variety of whole asphalts did not result in any increased cancer rate; mice exposed to asphalts diluted with Hydrogen solvents had increased incidence of certain types of cancer. Brief or intermittent skin contact with this asphalt product is not expected to produce any delayed effects. While normal handling of this product is not likely to cause cancer in humans, skin contact and breathing of mists of vapors should be reduced to humans.

This product contains Min-U-Gel AR, which contains crystalline silica. Crystalline silica has been listed as a carcinogen by IRAC. However, the particles are coated with asphalt and are not available for inhalation. As such, there is little or no chance of inhalation of crystalline silica and resultant diseases.

**First Aid:** **Eye Contact:** Flush eyes, including under eyelids, with running water for at least 15 minutes. Get medical attention. **Skin Contact:** If the hot melted material gets on skin, quickly cool in water. See a doctor for extensive burns. Do not try to peel the solidified material from the skin or use solvents or thinners to remove it. The use of vegetable oil or mineral oil is recommended for removal of this material from the skin. Flush exposed area with water while removing contaminated clothing. Get medical attention if irritation persists. **Inhalation:** If there are signs or symptoms of hydrogen sulfide exposure (respiratory tract irritation, headache, dizziness, nausea, gastrointestinal disturbances, coughing, a sensation of dryness and pain in the nose, throat and chest, confusion and unconsciousness), move the person to fresh air. If breathing has stopped, apply artificial respiration. Call a doctor. **Ingestion:** Unlikely, if this occurs give person milk or water. Keep head below the waist. Contact a physician or poison control center. Never give anything by mouth to a person who is unconscious or is having convulsions.

NFPA Rating: Health -1  
Fire -1  
Reactivity -1

#### **Section 4: Fire and Explosion Data**

Flash Point and Method: "110° F"  
Upper Explosive Limit: Not available  
Lowe Explosive Limit: Not available

**Extinguishing Media:** Water, Carbon Dioxide and dry chemical. Use water spray to cool fire-exposed containers. A fine water mist may be used to smother fire or to disperse vapors. Do not use a solid stream of water since the stream will scatter and spread the



fire. Fire fighters must wear self-contained breathing apparatus and full protective clothing when fighting fires involving this material.

### **Section 5: Reactivity Data**

Caution! Heating may release Hydrogen Sulfide gas (H<sub>2</sub>S)

This material is stable in closed containers at room temperature under normal storage and handling conditions. It does not polymerize. It is incompatible with strong oxidizing agents. Decomposition products can include carbon monoxide, carbon dioxide and water vapor.

### **Section 6: Physical Data**

Boiling Point: 650° F

Appearance & Odor: Black liquid with organic odor.

### **Section 7: Spill, Leak and Disposal Procedures**

Notify safety personnel of large spills or leaks. Clean-up personnel need protection against liquid contact and vapor inhalation. Absorb small spills and collect liquid, if feasible, or absorb with vermiculite or sand. Do not flush to sewer or stream. Dispose of liquid waste via licensed waste disposal company. Follow federal, state and local regulations.

### **Section 8: Special Protection Information**

Wear impervious gloves and safety glasses to prevent contact with the skin and eyes. If repeated or prolonged contact with liquid is likely, wear protective clothing including boots, apron, and face shield or splash goggles. Remove contaminated clothing immediately and do not reuse until it has been properly laundered.

Eye wash stations and safety showers should be available in use and handling areas. Contact lenses pose a special hazard; soft lenses may absorb and all lenses concentrate irritants.

### **Section 9: Special Precautions and Comments**

Store in closed containers in a cool, dry, well-ventilated area away from oxidizers, heat and open flame.

Protect containers from physical damage.

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Lonestar Industries, LLC.

**FLASHING PRIMER**



**W. R. GRACE**  
**MATERIAL SAFETY DATA SHEET**

Product Name: Perm-A-Barrier WB Primer

MSDS ID Number: M-85789

MSDS Date: 08/20/2007

**SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

**Product Name:** Perm-A-Barrier WB Primer  
**MSDS Number:** M-85789  
**Cancelled MSDS Number:** M-85734  
**MSDS Date:** 08/20/2007  
**Chemical Family Name:** Vinyl acetate-dioctyl maleate -2 ethylhexyl acrylate polymer dispersion in water  
**Product Use:** Horizontal and Vertical Grade Primer  
**Chemical Formula:** Mixture-NA  
**CAS # (Chemical Abstracts Service Number):** Mixture-NA

**Manufactured by:**

W.R.Grace & Co.-Conn.  
62 Whittemore Avenue  
Cambridge, MA 02140

Grace Canada, Inc.  
294 Clements Road West  
Ajax, Ontario L1S 3C6

**In Case of Emergency Call:**

In USA: (617) 876-1400 In Canada: (905) 683-8561

**SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS**

Ingredient	CAS#	Percent (max)
Diethylene glycol dibenzoate	000120-55-8	1-10
Phenol, styrenated	061788-44-1	1-10
Propanol, oxybis-, dibenzoate	027138-31-4	1-10
Vinyl acetate	000108-05-4	< 1

**SECTION 3 - HAZARDS IDENTIFICATION**

**Emergency Overview:**

**Warning!**

Causes eye irritation.  
Causes skin irritation.  
Causes respiratory tract irritation.  
May be harmful if ingested.  
Causes digestive tract irritation if ingested.

**HMIS Rating:**

Health: 2  
Flammability: 1  
Reactivity: 0  
Personal Protective Equipment: H (See Section 8)

**Potential Health Effects:**

**Inhalation:** Spray applications of this material may create aerosols which may be irritating to the upper respiratory tract, nose, and throat.

Prolonged inhalation may cause respiratory tract irritation.

Effects include: No other effects expected unless listed below.

**Eye Contact:** Spray applications of this material may create aerosols which may be irritating to the eyes.

Prolonged eye contact can result in redness and itching.

**Skin Contact:** Skin contact causes irritation.

Prolonged skin contact can result in irritation causing redness and itching.

**Skin Absorption:** Not expected to be harmful if absorbed through the skin.

**Ingestion:** Harmful if ingested.

If ingested, causes irritation to the linings of the mouth, esophagus and stomach.

Effects include the following: No other effects expected unless listed below.

**SECTION 4 - FIRST AID MEASURES:**

**Skin Contact:** If discomfort or irritation persists, consult a physician.

In case of skin contact, clean fingernails and wash skin with soap and water. If residue remains, clean with waterless handcream or abrasive soap. If irritation develops, consult a physician.

Remove contaminated clothing and wash before reuse.

**W. R. GRACE**  
**MATERIAL SAFETY DATA SHEET**

Product Name: Perm-A-Barrier WB Primer  
MSDS ID Number: M-85789

MSDS Date: 08/20/2007

**Eye Contact:** If discomfort or irritation persists, consult a physician.  
Flush eyes with water for at least 15 minutes while holding eyelids open.  
**Ingestion:** If discomfort or irritation persists, consult a physician.  
Never give anything by mouth to an unconscious person.  
Do not induce vomiting.  
**Inhalation:** If symptoms develop, get fresh air. If symptoms persist, consult a physician.  
If breathing has stopped, give artificial respiration then oxygen if needed.

**SECTION 5 - FIRE AND EXPLOSION HAZARD DATA**

**Flash Point:** NA Aqueous Solution  
**Flash Point Method:** Not Applicable  
**Lower Exploson Limit:** Not Available  
**Upper Explosion Limit:** Not Available  
**Auto-Ignition Temperature:** Not Available

**NFPA Rating:**

**Health:** 1  
**Flammability:** 1  
**Reactivity:** 0

**Extinguishing Media:** In case of fire, use water spray, dry chemical, Carbon dioxide or alcohol foam.  
**Special Fire Fighting Procedures:** Wear self-contained breathing apparatus and complete personal protective equipment when potential for exposure to vapors or products of combustion exist. Isolate area and keep unnecessary people away.  
**Unusual Fire and Explosion Hazards:** None known for this product.

**SECTION 6 - ACCIDENTAL RELEASE MEASURES:**

**Spills/Leaks:** Prevent spills from entering drinking water supplies, streams, or sewers.  
Collect material with an inert, noncombustible material and remove for disposal.

**SECTION 7 - HANDLING AND STORAGE**

**Precautionary Measures:** Avoid contact with eyes, skin and clothing.  
Do not take internally.  
Practice good personal hygiene to avoid ingestion.  
Use only with adequate ventilation.  
Wash clothing before reuse.  
To avoid skin contact, use gloves or barrier creams. Promptly cleanse hands with waterless hand cleaner, clean fingernails and wash with soap and water after handling.  
**FOR PROFESSIONAL USE ONLY. KEEP OUT OF CHILDREN'S REACH.**

**SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTIVE EQUIPMENT**

**EXPOSURE GUIDELINES (US)**

Ingredient	ACGIH TLV			OSHA PEL			Other
	TWA	STEL	Ceiling	TWA	STEL	Ceiling	
Diethylene glycol dibenzoate	-	-	-	-	-	-	-
Phenol, styrenated	-	-	-	-	-	-	-
Propanol, oxybis-, dibenzoate	-	-	-	-	-	-	-
Vinyl acetate	10 ppm TWA	15 ppm STEL	-	10 ppm TWA; 30 mg/m3 TWA	20 ppm STEL; 60 mg/m3 STEL	-	-

**EXPOSURE GUIDELINES (CANADA)**

Employers should consult provincial regulatory limits for exposure guidelines which may vary locally.

**Engineering Controls:** Not generally required.

**Personal Protective Equipment:**

**Respiratory Protection:** Respiratory protection is required during spray application. A dust/mist respirator such as a 3M Type P-95 or 3M Type 3-95 with organic vapor protection (or equivalent) is adequate. Specific working conditions, which must be assessed periodically, may require an increased level of respiratory protection. A respirator equipped with organic vapor cartridges may be required indoors and in other poorly ventilated areas. Respirators may not be required during non-spray applications and other specific situations. In all cases, maintain exposures below governmental limits specified in Section 2. (See

**W. R. GRACE**  
**MATERIAL SAFETY DATA SHEET**

Product Name: Perm-A-Barrier WB Primer  
MSDS ID Number: M-85789

MSDS Date: 08/20/2007

Work/Hygenic Practices for additional information.)

**Skin Protection:** Impervious (PVC, latex or nitrile) gloves should be worn anytime direct contact is possible.

**Eye Protection:** Wear goggles to prevent exposure to high vapor or mist concentrations. Wear goggles or safety glasses with side shields and a full-face shield to prevent contact due to splashing.

**Work/Hygenic Practices:** Work clothing with long sleeves/long pants and work boots must be worn. Clothing must be laundered before reuse. Disposable tyvek suits may be used during spray applications. None beyond those noted above.

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

<b>Physical State:</b>	Liquid
<b>Appearance/Odor:</b>	Green viscous solution slight vinegar odor
<b>Odor Threshold: (ppm)</b>	Not Determined
<b>pH:</b>	4.0-5.5
<b>Vapor Pressure: (Mm Hg)</b>	Unknown
<b>Vapor Density: (Air = 1)</b>	Unknown
<b>Solubility In Water:</b>	Complete
<b>Specific Gravity: (Water = 1)</b>	~1.0
<b>Evaporation Rate: (Butyl Acetate = 1)</b>	Unknown
<b>Boiling Point:</b>	>100°C/212°F
<b>Viscosity:</b>	Unknown
<b>Bulk Density: (Pounds/Cubic Foot)(Pcf)</b>	Not Applicable
<b>% Volatiles (gr/L): (70°F) (21°C)</b>	Not Available

**SECTION 10 - STABILITY AND REACTIVITY**

<b>Chemical Stability:</b>	Stable
<b>Conditions To Avoid:</b>	None known for this product.
<b>Hazardous Polymerization:</b>	Will not polymerize.
<b>Hazardous Decomposition Products:</b>	None known for this product.

**SECTION 11 - TOXICOLOGICAL INFORMATION**

**Ingredient(No data unless listed.)**

**CAS Number**

**LD50 and LC50**

Diethylene glycol dibenzoate

000120-55-8

Oral LD50 Rat : 2830 mg/kg; Dermal  
LD50 Rabbit : 20 mL/kg

**Carcinogenicity:**

Ingredient	IARC Group 1	IARC Group 2A	IARC Group 2B	NTP Known	NTP Suspect	OSHA
Diethylene glycol dibenzoate	No	No	No	No	No	No
Phenol, styrenated	No	No	No	No	No	No
Propanol, oxybis-, dibenzoate	No	No	No	No	No	No
Vinyl acetate	No	No	Yes	No	No	No

Extended inhalation and ingestion exposure to high concentrations of Vinyl acetate in animal rodent studies have resulted in increased tumor incidence. The relevance of these findings in humans is inconclusive.

<b>Mutagenicity:</b>	No information available.
<b>Teratogenicity:</b>	No information available.
<b>Reproductive Toxicity:</b>	No information available.

**SECTION 12 - ECOLOGICAL INFORMATION**

<b>Environmental Fate:</b>	No data available for product.
<b>Ecotoxicity:</b>	No data available for product.

**SECTION 13 - DISPOSAL CONSIDERATIONS**

<b>Waste Disposal Procedures:</b>	Consult all regulations (federal, state, provincial, local) or a qualified waste disposal firm when characterizing waste for disposal. According to EPA (40 CFR § 261), waste of this product is not defined as hazardous. Dispose of waste in accordance with all applicable regulations.
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**SECTION 14 - TRANSPORTATION INFORMATION**

<b>Proper Shipping Name:</b>	Not Applicable
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**W. R. GRACE**  
**MATERIAL SAFETY DATA SHEET**

Product Name: Perm-A-Barrier WB Primer  
MSDS ID Number: M-85789

MSDS Date: 08/20/2007

<b>UN/NA Number:</b>	Not Applicable
<b>Domestic Hazard Class:</b>	Nonhazardous
<b>Surface Freight Classification:</b>	Not Applicable
<b>Label/Placard Required:</b>	Not Applicable

**SECTION 15 - REGULATORY INFORMATION**

**REGULATORY CHEMICAL LISTS:**

**CERCLA (Comprehensive Response Compensation and Liability Act):**  
**(None present unless listed below)**

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt %</u>	<u>CERCLA RQ</u>
----------------------	--------------	-------------	------------------

**SARA Title III (Superfund Amendments and Reauthorization Act)**

**SARA Section 312/Tier I & II Hazard Categories:**

Health Immediate (acute)	Yes
Health Delayed (chronic)	No
Flammable	No
Reactive	No
Pressure	No

**302 Reportable Ingredients (Identification Threshold 1%):**

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt %</u>	<u>SARA 302 TPQ</u>
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**313 Reportable Ingredients (Chemicals present below reporting threshold are exempt):**

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt %</u>
Vinyl acetate	000108-05-4	.45

**National Volatile Organic Compound Emission Standards For Architectural Coatings:**

Volatile Organic Content: (gr/L) < 10 g/l

**WHMIS Classification(s):** D2 B

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR). This MSDS contains all the information required by the CPR.

**State Regulatory Information:**

**California Proposition 65:** This product does not contain substances known to the state of California to cause cancer, birth defects or other reproductive harm.

**Massachusetts Hazardous Substance List(Identification threshold 0.001%(1ppm)):**

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt %</u>
Vinyl acetate	000108-05-4	.45

**New Jersey Hazardous Substance List(Identification threshold (0.1%)):**

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt %</u>
Vinyl acetate	000108-05-4	.45

**Pennsylvania Hazardous Substance List(Identification threshold 0.01%):**

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt %</u>
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**W. R. GRACE**  
**MATERIAL SAFETY DATA SHEET**

Product Name: Perm-A-Barrier WB Primer

MSDS ID Number: M-85789

MSDS Date: 08/20/2007

**CHEMICAL INVENTORY STATUS:**

All chemicals in this product are listed or exempt from listing in the following countries:

US	CANADA		EUROPE	AUSTRALIA	JAPAN	KOREA	PHILIPPINES
TSCA	DSL	NDSL	EINECS/ELINCS	AICS	ENCS	ECL	PICCS
Yes	Yes	No	Not Determined	Not Determined	Not Determined	Not Determined	Not Determined

**SECTION 16 - OTHER INFORMATION**

**Non-Hazardous Ingredient Disclosure:**

**Chemical Name**

Water  
2-Butenedioic acid (2Z)-, dioctyl ester, polymer with etheny/acetate and 2-ethylhexyl 2-propenoate

**CAS Number**

007732-18-5  
025280-35-7

**Prepared by:** EH&S Department

**Approved by:** EH&S Department

**Approved Date:** 08/20/2007

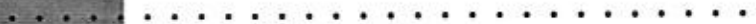
**Disclaimer:**

"The data included herein are presented in accordance with various environment, health and safety regulations. It is the responsibility of a recipient of the data to remain currently informed on chemical hazard information, to design and update its own program and to comply with all national, federal, state and local laws and regulations applicable to safety, occupational health, right-to-know and environmental protection."



.....  
Lonestar Industries, LLC.

**FLASHING RUBBERIZED**



**W. R. GRACE**  
**MATERIAL SAFETY DATA SHEET**

Product Name: Waterproofing Membrane  
MSDS ID Number: M-85804

MSDS Date: 04/18/2008

**SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

**Product Name:** Waterproofing Membrane  
**MSDS Number:** M-85804  
**Cancelled MSDS Number:** M-85787  
**MSDS Date:** 04/18/2008  
**Chemical Family Name:** Rubberized Asphalt Adhesive Sheet with Film and/or Mesh Comprising Various Components.  
**Product Use:** Waterproofing Membrane.  
**Chemical Formula:** Mixture-NA  
**CAS # (Chemical Abstracts Service Number):** Mixture-NA

**Manufactured by:**

W.R.Grace & Co.-Conn.  
62 Whittemore Avenue  
Cambridge, MA 02140

Grace Canada, Inc.  
294 Clements Road West  
Ajax, Ontario L1S 3C6

**In Case of Emergency Call:**

In USA: (617) 876-1400 In Canada: (905) 683-8561

**SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS**

<b>Ingredient</b>	<b>CAS#</b>	<b>Percent (max)</b>
Heavy Paraffinic Distillate Solvent Extract	064742-04-7	10-25
Petroleum Asphalt	008052-42-4	50-100
Styrene-Butadiene block copolymer	009003-55-8	10-25

**SECTION 3 - HAZARDS IDENTIFICATION**

**Emergency Overview:**

**Warning!**

Eye contact with rubberized asphalt residue on hands can cause irritation.  
Skin contact with rubberized asphalt can cause irritation.  
May be harmful if ingested.  
May be harmful if absorbed through skin.  
May cause teratogenic effects.  
May produce local skin tumors.  
Removal of release liner may generate a static electrical discharge (spark).  
Release liners are slippery. Remove from work area immediately.

**HMIS Rating:**

Health: 2\*  
Flammability: 1  
Reactivity: 0  
Personal Protective Equipment: B (See Section 8)

**Potential Health Effects:**

**Inhalation:** Due to the physical nature of this product, inhalation is unlikely. If heated, inhalation of vapor causes irritation, sore throat, coughing and breathing difficulty. Effects include: Nausea, headache, dizziness and irritation.  
**Eye Contact:** Eye contact with rubberized asphalt residue on hands can cause irritation  
**Skin Contact:** Skin contact causes irritation. Prolonged skin contact can result in dermatitis.  
Contact with petroleum oils in this product, may produce serious toxic effects including skin cancer, liver damage, blood effects and effects on the unborn based on tests with laboratory animals. Animal tests indicate that prolonged and repeated skin contact to the oils in this product may produce local skin tumors.  
Individuals with pre-existing skin disorders may be at increased risk for worsening their condition from exposure to this product.

**W. R. GRACE**  
**MATERIAL SAFETY DATA SHEET**

Product Name: Waterproofing Membrane  
MSDS ID Number: M-85804

MSDS Date: 04/18/2008

**Skin Absorption:** Product can be absorbed through the skin upon prolonged contact resulting in systemic effects such as nausea, headache, and general discomfort.

**Ingestion:** Due to the physical nature of this product, ingestion is unlikely.  
If ingested, causes burns to the linings of the mouth, esophagus and stomach.  
Effects include: Nausea, vomiting and diarrhea.  
Wash hands before eating.

---

**SECTION 4 - FIRST AID MEASURES:**

**Skin Contact:** In case of skin contact, clean fingernails and wash skin with soap and water. If residue remains, clean with waterless hand-cream or abrasive soap. Never use solvents.

If discomfort or irritation persists, consult a physician.  
Remove contaminated clothing and wash before reuse.

**Eye Contact:** Flush eyes with water for at least 15 minutes while holding eyelids open.  
Get immediate medical attention.

**Ingestion:** If swallowed, contact a physician immediately.  
Never give anything by mouth to an unconscious person.  
The decision to induce vomiting should only be made by a physician.

**Inhalation:** If symptoms develop, get fresh air. If symptoms persist, consult a physician.  
If breathing has stopped, give artificial respiration then oxygen if needed.  
Get immediate medical attention.

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**SECTION 5 - FIRE AND EXPLOSION HAZARD DATA**

Flash Point:	>210C (>410F)
Flash Point Method:	Open Cup
Lower Explosion Limit:	Not Available
Upper Explosion Limit:	Not Available
Auto-Ignition Temperature:	Not Available

**NFPA Rating:**

Health:	1
Flammability:	1
Reactivity:	0

**Extinguishing Media:** In case of fire, use water spray, dry chemical, Carbon dioxide or foam.

**Special Fire Fighting Procedures:**

Wear self-contained breathing apparatus and complete personal protective equipment when potential for exposure to vapors or products of combustion exist. Avoid breathing hazardous vapors or products of combustion, keep upwind. Isolate area and keep unnecessary people away. Prevent run-off from fire control or dilution from entering streams or drinking water supplies.

**Unusual Fire and Explosion Hazards:** None unless noted below.

Removal of release paper may create a static electric discharge (sparks). Do not remove where sparks may ignite flammable vapors.

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**SECTION 6 - ACCIDENTAL RELEASE MEASURES:**

**Spills/Leaks:** Due to the physical nature of this product, spills are not possible.

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**SECTION 7 - HANDLING AND STORAGE**

**Precautionary Measures:** Avoid contact with eyes, skin and clothing.

Practice good personal hygiene to avoid ingestion.

Use only with adequate ventilation.

Wash clothing before reuse.

Slippery when wet or covered with frost.

Do not apply where membrane odors may penetrate living areas.

To avoid skin contact, use gloves or barrier creams. Promptly cleanse hands with waterless hand cleaner, clean fingernails and wash with soap and water after handling.

Release liners are slippery. Remove from work area immediately after membrane application.

Consistent with good roofing practice, always wear fall protection when working on roof decks.

**W. R. GRACE**  
**MATERIAL SAFETY DATA SHEET**

Product Name: Waterproofing Membrane  
MSDS ID Number: M-85804

MSDS Date: 04/18/2008

FOR PROFESSIONAL USE ONLY. KEEP OUT OF CHILDREN'S REACH.

**SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTIVE EQUIPMENT**

**EXPOSURE GUIDELINES (US)**

Ingredient	ACGIH TLV			OSHA PEL			Other
	TWA	STEL	Ceiling	TWA	STEL	Ceiling	
Heavy Paraffinic Distillate Solvent Extract	-	-	-	-	-	-	-
Petroleum Asphalt	0.5 mg/m3 TWA (inhalable fraction); (as benzene-soluble aerosol)	-	-	-	-	-	-
Styrene-Butadiene block copolymer	-	-	-	-	-	-	-

**EXPOSURE GUIDELINES (CANADA)**

Employers should consult local Provincial regulatory limits for exposure guidelines, which may vary locally.

**Engineering Controls:** Not generally required.

**Personal Protective Equipment:**

**Respiratory Protection:** Respiratory protection is not generally required. If exposure limits are exceeded, wear approved respiratory protection.

**Skin Protection:** Use oil impervious gloves to avoid prolonged or repeated contact with rubberized asphalt residue.

**Eye Protection:** Not required for normal use.

**Work/Hygienic Practices:** Use good personal hygiene practices.

Avoid rubbing eyes while handling. Due to the physical nature of this product, ingestion is unlikely. Incidental ingestion of residue on hands can be avoided by using good personal hygiene practices. This product contains compounds subject to exposure guidelines and/or identified as carcinogens. (See Sections 8 and 11). However, due to the physical nature of this product, these compounds are unlikely to reach exposure limits unless airborne dust or spray mist is created. To avoid skin contact, wear recommended gloves (see skin protection recommendation) and wash with soap and water after handling. Intermittent or occasional skin contact with petroleum asphalt is not expected to have serious health effects as long as good personal hygiene measures are taken. Promptly cleanse with waterless hand cleaner, clean fingernails and wash with soap and water after handling. All employees working with this product must exercise good and prudent personal hygiene practices.

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

<b>Physical State:</b>	Solid sheet
<b>Appearance/Odor:</b>	A black, rubberized asphalt adhesive layer on a grey/black plastic sheet with a paper or plastic release sheet. Petroleum odor.
<b>Odor Threshold: (ppm)</b>	Unknown
<b>pH:</b>	Not Applicable
<b>Vapor Pressure: (Mm Hg)</b>	Not Applicable
<b>Vapor Density: (Air = 1)</b>	Not Applicable
<b>Solubility In Water:</b>	Negligible
<b>Specific Gravity: (Water = 1)</b>	1.0 - 1.1
<b>Evaporation Rate: (Butyl Acetate = 1)</b>	Not Applicable
<b>Boiling Point:</b>	Not Applicable
<b>Viscosity:</b>	Not Available
<b>Bulk Density: (Pounds/Cubic Foot)(Pcf)</b>	~70
<b>% Volatiles (gr/L): (70°F) (21°C)</b>	Negligible

**SECTION 10 - STABILITY AND REACTIVITY**

<b>Chemical Stability:</b>	Stable
<b>Conditions To Avoid:</b>	Heat, Oxidizing materials, Strong oxidizers and Water.
<b>Hazardous Polymerization:</b>	Will not polymerize.
<b>Hazardous Decomposition:</b>	Carbon dioxide, Carbon monoxide, Sulfur oxides and Low

**W. R. GRACE**  
**MATERIAL SAFETY DATA SHEET**

Product Name: Waterproofing Membrane  
MSDS ID Number: M-85804

MSDS Date: 04/18/2008

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**Products:** molecular weight hydrocarbons.

**W. R. GRACE**  
**MATERIAL SAFETY DATA SHEET**

Product Name: Waterproofing Membrane  
MSDS ID Number: M-85804

MSDS Date: 04/18/2008

**SECTION 11 - TOXICOLOGICAL INFORMATION**

**Ingredient(No data unless listed.)**                      **CAS Number**                      **LD50 and LC50**

**Carcinogenicity:**

Ingredient	IARC Group 1	IARC Group 2A	IARC Group 2B	NTP Known	NTP Suspect	OSHA
Heavy Paraffinic Distillate Solvent Extract	Yes	No	No	No	No	Yes
Petroleum Asphalt	No	No	Yes	No	No	No
Styrene-Butadiene block copolymer	No	No	No	No	No	No

Animal tests indicate that prolonged and repeated skin contact with the asphalt in this product may produce local skin tumors.

**Mutagenicity:** Not applicable.  
**Teratogenicity:** Petroleum oils in this product have caused effects on the unborn based on tests with laboratory animals.  
**Reproductive Toxicity:** Not applicable.

**SECTION 12 - ECOLOGICAL INFORMATION**

**Environmental Fate:** No data available for product.  
**Ecotoxicity:** No data available for product.

**SECTION 13 - DISPOSAL CONSIDERATIONS**

**Waste Disposal Procedures:** Consult all regulations (federal, state, provincial, local) or a qualified waste disposal firm when characterizing waste for disposal. According to EPA (40 CFR § 261), waste of this product is not defined as hazardous. Dispose of waste in accordance with all applicable regulations.

**SECTION 14 - TRANSPORTATION INFORMATION**

**Proper Shipping Name:** Not Applicable  
**UN/NA Number:** Not Applicable  
**Domestic Hazard Class:** Nonhazardous  
**Surface Freight Classification:** Asphalt Mixture, N.O.I.B.N.  
**Label/Placard Required:** Not Applicable

**SECTION 15 - REGULATORY INFORMATION**

**REGULATORY CHEMICAL LISTS:**

**CERCLA (Comprehensive Response Compensation and Liability Act):**  
**(None present unless listed below)**

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt %</u>	<u>CERCLA RQ</u>
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**SARA Title III (Superfund Amendments and Reauthorization Act)**

**SARA Section 312/Tier I & II Hazard Categories:**

Health Immediate (acute)	Yes
Health Delayed (chronic)	Yes
Flammable	No
Reactive	No
Pressure	No

**302 Reportable Ingredients (Identification Threshold 1%):**

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt %</u>	<u>SARA 302 TPQ</u>
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**313 Reportable Ingredients (Chemicals present below reporting threshold are exempt):**

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt %</u>
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**National Volatile Organic Compound Emission Standards For Architectural Coatings:**

Volatile Organic Content: (gr/L)                      Not Applicable

**WHMIS Classification(s):**                                      D2 B

**W. R. GRACE**  
**MATERIAL SAFETY DATA SHEET**

Product Name: Waterproofing Membrane  
MSDS ID Number: M-85804

MSDS Date: 04/18/2008

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR). This MSDS contains all the information required by the CPR.

**State Regulatory Information:**

**California Proposition 65:** This product contains substances known to the state of California to cause cancer, birth defects or other reproductive harm.

**Massachusetts Hazardous Substance List(Identification threshold 0.001%(1ppm)):**

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt %</u>
Heavy Paraffinic Distillate Solvent Extract	064742-04-7	21

**New Jersey Hazardous Substance List(Identification threshold (0.1%)):**

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt %</u>
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**Pennsylvania Hazardous Substance List(Identification threshold 0.01%):**

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt %</u>
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**CHEMICAL INVENTORY STATUS:**

All chemicals in this product are listed or exempt from listing in the following countries:

US	CANADA		EUROPE	AUSTRALIA	JAPAN	KOREA	PHILIPPINES
TSCA	DSL	NDSL	EINECS/ELINCS	AICS	ENCS	ECL	PICCS
Yes	Yes	No	Yes	Yes	Not Determined	Yes	Yes

**SECTION 16 - OTHER INFORMATION**

BITUTHENE® LOW TEMPERATURE WATERPROOFING MEMBRANE, MEMBRANE STRIPS  
BITUTHENE® SYSTEM 4000 WATERPROOFING MEMBRANE, MEMBRANE STRIPS  
PERM-A-BARRIER® WALL FLASHING, PERM-A-BARRIER® WALL MEMBRANE,  
PERM-A-BARRIER® LOW TEMPERATURE MEMBRANE, PERM-A-BARRIER  
DETAIL MEMBRANE, GRACE ICE & WATER SHIELD®,  
GRACE ROOF DETAIL MEMBRANE, PITTWRAP CW, GRACE® SELECT, VYCOR® V40 WEATHER  
BARRIER STRIPS, GRACE VYCOR® PLUS TAPES, GRACE® BASIK™, GRACE VYCOR DECK PROTECTOR,  
GRACE VYCOR ALL PURPOSE FLASHING, GRACE VYCOR ALUMINUM FLASHING,  
PREPRUFE SCS DETAIL TAPE

**Non-Hazardous Ingredient Disclosure:**

<u>Chemical Name</u>	<u>CAS Number</u>
Prepared by:	EH&S Department
Approved by:	EH&S Department
Approved Date:	04/18/2008

**Disclaimer:**

"The data included herein are presented in accordance with various environment, health and safety regulations. It is the responsibility of a recipient of the data to remain currently informed on chemical hazard information, to design and update its own program and to comply with all national, federal, state and local laws and regulations applicable to safety, occupational health, right-to-know and environmental protection."



.....  
**Lonestar Industries, LLC.**

**GALVANIZED STEEL SHEET**



**Hohmann & Barnard, Inc.**  
**Material Safety Data Sheet**  
**\*\*\* Galvanized Steel Sheet Items \*\*\***

Hohmann & Barnard, Inc.  
 30 Rasons Court  
 Hauppauge, NY 11788

USS CODE NO. 3C013ORIGINAL ISSUE DATE: 8/1/85REVISED: 12/87**I. IDENTIFICATION**

PRODUCT NAME: Galvanized Sheet - Electrolytic  
 COMMON NAME(S): Same  
 CAS NO.: 65997-19-5

**II. INGREDIENTS AND RECOMMENDED OCCUPATIONAL EXPOSURE LIMITS**

NOTE: Steel products under normal conditions do not present an inhalation, ingestion or contact health hazard (See Section VI).

BASE METAL, ALLOYING ELEMENTS AND METALLIC COATINGS	% WEIGHT	EXPOSURE LIMITS OSHA PEL	EXPOSURE LIMITS ACGIH TLV
Base Metal: Iron (1309-37-1 as iron oxide fume)	Balance	10 mg/M <sup>3</sup> for iron oxide fume	5 mg/M <sup>3</sup> for iron oxide fume
<b>Alloying Elements:</b>			
Carbon (7440-44-0)	.005/.60	None established	None established
Manganese (7439-96-5)	.05/1.50	( c ) 5 mg/M <sup>3</sup>	( c ) 5 mg/M <sup>3</sup> - dust 1 mg/M <sup>3</sup> - fume
Phosphorus (7723-14-0)	.15 max	None for inorganic phosphates	None for inorganic phosphates
Sulfur (7704-34-9)	.05 max	13 mg/M <sup>3</sup> as SO <sub>2</sub>	5 mg/M <sup>3</sup> as SO <sub>2</sub>
Aluminum (7429-90-5)	.10 max	None established	10 mg/M <sup>3</sup>
<b>Metallic Coating:</b>			
Zinc (1314-13-2)	10 max	5 mg/M <sup>3</sup>	10 mg/M <sup>3</sup> - Total ZnO dust 5 mg/M <sup>3</sup> - Resp. ZnO dust & fume

( c ) denotes "ceiling limit" which is not to be exceeded at any time  
 Oil coating may be used; see Annex II.

NOTE: All commercial metals contain small amounts of various elements in addition to those specified. These small quantities, frequently referred to as "trace" or "residual" elements, generally originate in the raw materials used. Typical levels of commonly involved trace or residual elements that may be encountered in steel products are provided in Annex I so that their potential hazards may be considered.

**III. PHYSICAL DATA**

MELTING POINT BASE METAL: 2750<sup>0</sup>F      METALLIC COATING: 800<sup>0</sup>F  
 APPEARANCE AND ODOR: Metallic Gray, No Odor

**IV. FIRE AND EXPLOSION HAZARD DATA**

STEEL PRODUCTS IN THE SOLID STATE PRESENT NO FIRE OR EXPLOSION HAZARD.

**V. REACTIVITY DATA**

Stable under normal conditions of use, storage and transport. Will react with strong acid to liberate hydrogen. At temperatures above the melting point of the coating, may liberate zinc fumes.

**VI. HEALTH HAZARD DATA**

NOTE: Steel products under normal conditions do not present an inhalation, ingestion or contact health hazard. However, operations, such as, burning, welding, sawing, brazing, grinding, and possibly machining, etc., which results in elevating the temperature of the product to or above its melting point or results in the generation of airborne particulates, may present health hazards.

**EFFECTS OF OVEREXPOSURE:****MAJOR EXPOSURE HAZARD**

( X ) INHALATION    ( ) SKIN CONTACT    ( ) EYE CONTACT    ( ) INGESTION

Chronic inhalation of high concentrations of iron oxide fumes or dusts may lead to a benign pneumoconiosis (siderosis). Inhalation of high concentrations of ferric oxide may possibly enhance the risk of lung cancer development in workers exposed to pulmonary carcinogens.

The inhalation of high concentrations of freshly formed oxide fumes and dusts of Manganese, Copper, Lead and/or Zinc in the respirable particle size range can cause an influenza-like illness termed metal fume fever. Typical symptoms last 12 to 48 hours and are characterized by metallic taste in the mouth, dryness and irritation of the throat, followed by weakness, muscle pain, fever and chills.

**EMERGENCY AND FIRST AID PROCEDURES:** For overexposure to airborne fumes and particulates, remove exposed person to fresh air. If breathing is difficult or has stopped, administer artificial respiration or oxygen as indicated. Seek medical attention promptly. Treat metal fume fever by bed rest, and administer a pain and fever reducing medication.

**VII. SPILL OR LEAK PROCEDURES**

NOT APPLICABLE TO STEEL IN THE SOLID STATE.

**VIII. SPECIAL PROTECTION INFORMATION**

**RESPIRATORY:** NIOSH/MSHA approved dust and fume respirators should be used to avoid excessive inhalation of particulates. Appropriate respirator selection depends on the magnitude of exposure.

**SKIN:** Protective gloves should be worn as required for welding, burning or handling operations.

**EYE:** Use safety glasses or goggles as required for welding, burning, sawing, brazing, grinding or machining operations.

**VENTILATION:** Local exhaust ventilation should be provided when welding, burning, sawing, brazing, grinding or machining to prevent excessive dust or fume exposure.

**OTHER PROTECTIVE EQUIPMENT:** Depending upon the conditions of use and specific work situation, additional protective equipment and/or clothing may be required to control exposures.

**IX. SPECIAL PRECAUTIONS****PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:**

Operations with the potential for generating high concentrations of airborne particulates should be evaluated and controlled as necessary. Avoid breathing metal fumes and/or dusts.

**OTHER COMMENTS:**

Medical conditions aggravated by exposure: Individuals with chronic respiratory disorders (i.e.: asthma, chronic bronchitis, emphysema, etc.) may be adversely affected by any fume or airborne particulate matter exposure.

This information is taken from sources or based upon data believed to be reliable; however, Hohmann & Barnard, Inc. makes no warranty as to the absolute correctness or sufficiency of any of the foregoing or that additional or other measures may not be required under particular conditions.

.....  
**Lonestar Industries, LLC.**

**GASOLINE**



.....

# AMERADA HESS CORPORATION

## MATERIAL SAFETY DATA SHEET

Gasoline, All Grades

MSDS No. 9950

### EMERGENCY OVERVIEW

**DANGER!**

**EXTREMELY FLAMMABLE - EYE AND MUCOUS MEMBRANE IRRITANT  
- EFFECTS CENTRAL NERVOUS SYSTEM - HARMFUL OR FATAL IF  
SWALLOWED - ASPIRATION HAZARD**



NFPA 704 (Section 16)

High fire hazard. Keep away from heat, spark, open flame, and other ignition sources.

If ingested, do NOT induce vomiting, as this may cause chemical pneumonia (fluid in the lungs). Contact may cause eye, skin and mucous membrane irritation. Harmful if absorbed through the skin. Avoid prolonged breathing of vapors or mists. Inhalation may cause irritation, anesthetic effects (dizziness, nausea, headache, intoxication), and respiratory system effects.

Long-term exposure may cause effects to specific organs, such as to the liver, kidneys, blood, nervous system, and skin. Contains benzene, which can cause blood disease, including anemia and leukemia.

### 1. CHEMICAL PRODUCT and COMPANY INFORMATION (rev. Jan-04)

Amerada Hess Corporation  
1 Hess Plaza  
Woodbridge, NJ 07095-0961

**EMERGENCY TELEPHONE NUMBER (24 hrs):**

**CHEMTREC (800)424-9300**

**COMPANY CONTACT (business hours):**

Corporate Safety (732)750-6000

**MSDS Internet Website**

[www.hess.com/about/enviro.html](http://www.hess.com/about/enviro.html)

**SYNONYMS:** Hess Conventional (Oxygenated and Non-oxygenated) Gasoline; Reformulated Gasoline (RFG); Reformulated Gasoline Blendstock for Oxygenate Blending (RBOB); Unleaded Motor or Automotive Gasoline

See Section 16 for abbreviations and acronyms.

### 2. COMPOSITION and INFORMATION ON INGREDIENTS \* (rev. Jan-04)

INGREDIENT NAME (CAS No.)	CONCENTRATION PERCENT BY WEIGHT
Gasoline (86290-81-5)	100
Benzene (71-43-2)	0.1 - 4.9 (0.1 - 1.3 reformulated gasoline)
n-Butane (106-97-8)	< 10
Ethyl Alcohol (Ethanol) (64-17-5)	0 - 10
Ethyl benzene (100-41-4)	< 3
n-Hexane (110-54-3)	0.5 to 4
Methyl-tertiary butyl ether (MTBE) (1634-04-4)	0 to 15.0
Tertiary-amyl methyl ether (TAME) (994-05-8)	0 to 17.2
Toluene (108-88-3)	1 - 25
1,2,4- Trimethylbenzene (95-63-6)	< 6
Xylene, mixed isomers (1330-20-7)	1 - 15

A complex blend of petroleum-derived normal and branched-chain alkane, cycloalkane, alkene, and aromatic hydrocarbons. May contain antioxidant and multifunctional additives. Non-oxygenated Conventional Gasoline and RBOB do not have oxygenates (Ethanol or MTBE and/or TAME). Oxygenated Conventional and Reformulated Gasoline will have oxygenates for octane enhancement or as legally required.

# AMERADA HESS CORPORATION

## MATERIAL SAFETY DATA SHEET

Gasoline, All Grades

MSDS No. 9950

### 3. HAZARDS IDENTIFICATION (rev. Dec-97)

#### EYES

Moderate irritant. Contact with liquid or vapor may cause irritation.

#### SKIN

Practically non-toxic if absorbed following acute (single) exposure. May cause skin irritation with prolonged or repeated contact. Liquid may be absorbed through the skin in toxic amounts if large areas of skin are exposed repeatedly.

#### INGESTION

The major health threat of ingestion occurs from the danger of aspiration (breathing) of liquid drops into the lungs, particularly from vomiting. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure and even death.

Ingestion may cause gastrointestinal disturbances, including irritation, nausea, vomiting and diarrhea, and central nervous system (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory arrest, and death may occur.

#### INHALATION

Excessive exposure may cause irritations to the nose, throat, lungs and respiratory tract. Central nervous system (brain) effects may include headache, dizziness, loss of balance and coordination, unconsciousness, coma, respiratory failure, and death.

**WARNING:** the burning of any hydrocarbon as a fuel in an area without adequate ventilation may result in hazardous levels of combustion products, including carbon monoxide, and inadequate oxygen levels, which may cause unconsciousness, suffocation, and death.

#### CHRONIC EFFECTS and CARCINOGENICITY

Contains benzene, a regulated human carcinogen. Benzene has the potential to cause anemia and other blood diseases, including leukemia, after repeated and prolonged exposure. Exposure to light hydrocarbons in the same boiling range as this product has been associated in animal studies with systemic toxicity. See also Section 11 - Toxicological Information.

#### MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Irritation from skin exposure may aggravate existing open wounds, skin disorders, and dermatitis (rash). Chronic respiratory disease, liver or kidney dysfunction, or pre-existing central nervous system disorders may be aggravated by exposure.

### 4. FIRST AID MEASURES (rev. Dec-97)

#### EYES

In case of contact with eyes, immediately flush with clean, low-pressure water for at least 15 min. Hold eyelids open to ensure adequate flushing. Seek medical attention.

#### SKIN

Remove contaminated clothing. Wash contaminated areas thoroughly with soap and water or waterless hand cleanser. Obtain medical attention if irritation or redness develops.

#### INGESTION

**DO NOT INDUCE VOMITING.** Do not give liquids. Obtain immediate medical attention. If spontaneous vomiting occurs, lean victim forward to reduce the risk of aspiration. Small amounts of material which enter the mouth should be rinsed out until the taste is dissipated.

#### INHALATION

Remove person to fresh air. If person is not breathing, ensure an open airway and provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.



# AMERADA HESS CORPORATION

## MATERIAL SAFETY DATA SHEET

Gasoline, All Grades

MSDS No. 9950

### 5. FIRE FIGHTING MEASURES (rev. Dec-97)

#### FLAMMABLE PROPERTIES:

FLASH POINT:	-45 °F (-43°C)
AUTOIGNITION TEMPERATURE:	highly variable; > 530 °F (>280 °C)
OSHA/NFPA FLAMMABILITY CLASS:	1A (flammable liquid)
LOWER EXPLOSIVE LIMIT (%):	1.4%
UPPER EXPLOSIVE LIMIT (%):	7.6%

#### FIRE AND EXPLOSION HAZARDS

Vapors may be ignited rapidly when exposed to heat, spark, open flame or other source of ignition. Flowing product may be ignited by self-generated static electricity. When mixed with air and exposed to an ignition source, flammable vapors can burn in the open or explode in confined spaces. Being heavier than air, vapors may travel long distances to an ignition source and flash back. Runoff to sewer may cause fire or explosion hazard.

#### EXTINGUISHING MEDIA

**SMALL FIRES:** Any extinguisher suitable for Class B fires, dry chemical, CO<sub>2</sub>, water spray, fire fighting foam, or Halon.

**LARGE FIRES:** Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.

During certain times of the year and/or in certain geographical locations, gasoline may contain MTBE and/or TAME. Firefighting foam suitable for polar solvents is recommended for fuel with greater than 10% oxygenate concentration - refer to NFPA 11 "Low Expansion Foam - 1994 Edition."

#### FIRE FIGHTING INSTRUCTIONS

Small fires in the incipient (beginning) stage may typically be extinguished using handheld portable fire extinguishers and other fire fighting equipment.

Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA- approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing.

Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam.

See Section 16 for the NFPA 704 Hazard Rating.

### 6. ACCIDENTAL RELEASE MEASURES (rev. Dec-97)

#### ACTIVATE FACILITY SPILL CONTINGENCY or EMERGENCY PLAN.

Evacuate nonessential personnel and remove or secure all ignition sources. Consider wind direction; stay upwind and uphill, if possible. Evaluate the direction of product travel, diking, sewers, etc. to confirm spill areas. Spills may infiltrate subsurface soil and groundwater; professional assistance may be necessary to determine the extent of subsurface impact.

Carefully contain and stop the source of the spill, if safe to do so. Protect bodies of water by diking, absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. The use of fire fighting foam may be useful in certain situations to reduce vapors. The proper use of water spray may effectively disperse product



# AMERADA HESS CORPORATION

## MATERIAL SAFETY DATA SHEET

**Gasoline, All Grades**

**MSDS No. 9950**

vapors or the liquid itself, preventing contact with ignition sources or areas/equipment that require protection.

Take up with sand or other oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal - caution, flammable vapors may accumulate in closed containers. Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

### 7. HANDLING and STORAGE (rev. Dec-97)

#### HANDLING PRECAUTIONS

\*\*\*\*\*USE ONLY AS A MOTOR FUEL\*\*\*\*\*  
\*\*\*\*\*DO NOT SIPHON BY MOUTH\*\*\*\*\*

Handle as a flammable liquid. Keep away from heat, sparks, and open flame! Electrical equipment should be approved for classified area. Bond and ground containers during product transfer to reduce the possibility of static-initiated fire or explosion.

Special slow load procedures for "switch loading" must be followed to avoid the static ignition hazard that can exist when higher flash point material (such as fuel oil) is loaded into tanks previously containing low flash point products (such as this product) - see API Publication 2003, "Protection Against Ignitions Arising Out Of Static, Lightning and Stray Currents.

#### STORAGE PRECAUTIONS

Keep away from flame, sparks, excessive temperatures and open flame. Use approved vented containers. Keep containers closed and clearly labeled. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition.

Store in a well-ventilated area. This storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". Avoid storage near incompatible materials. The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks In Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Petroleum Storage Tanks".

#### WORK/HYGIENIC PRACTICES

Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure. Use good personal hygiene practices. Avoid repeated and/or prolonged skin exposure. Wash hands before eating, drinking, smoking, or using toilet facilities. Do not use as a cleaning solvent on the skin. Do not use solvents or harsh abrasive skin cleaners for washing this product from exposed skin areas. Waterless hand cleaners are effective. Promptly remove contaminated clothing and launder before reuse. Use care when laundering to prevent the formation of flammable vapors which could ignite via washer or dryer. Consider the need to discard contaminated leather shoes and gloves.

### 8. EXPOSURE CONTROLS and PERSONAL PROTECTION (rev. Jan-04)

#### EXPOSURE LIMITS

Component (CAS No.)	Source	TWA (ppm)	STEL (ppm)	Exposure Limits	Note
Gasoline (86290-81-5)	ACGIH	300	500	A3	
Benzene (71-43-2)	OSHA	1	5	Carcinogen	
	ACGIH	0.5	2.5	A1, skin	
	USCG	1	5		
n-Butane (106-97-8)	ACGIH	800	--	2003 NOIC: 1000 ppm (TWA) Aliphatic Hydrocarbon Gases Alkane (C1-C4)	
Ethyl Alcohol (ethanol) (64-17-5)	OSHA	1000	--		
	ACGIH	1000	--	A4	
Ethyl benzene (100-41-4)	OSHA	100	--		
	ACGIH	100	125	A3	

# AMERADA HESS CORPORATION

## MATERIAL SAFETY DATA SHEET

**Gasoline, All Grades**

**MSDS No. 9950**

Component (CAS No.)	Source	Exposure Limits			Note
		TWA (ppm)	STEL (ppm)		
n-Hexane (110-54-3)	OSHA	500	--		
	ACGIH	50	--	skin	
Methyl-tertiary butyl ether (MTBE) (1634-04-4)	ACGIH	50	--	A3	
Tertiary-amyl methyl ether (TAME) (994-05-8)				None established	
Toluene (108-88-3)	OSHA	200	--	Ceiling: 300 ppm; Peak: 500 ppm (10 min.)	
	ACGIH	50	--	A4 (skin)	
1,2,4-Trimethylbenzene (95-63-6)	ACGIH	25	--		
Xylene, mixed isomers (1330-20-7)	OSHA	100	--		
	ACGIH	100	150	A4	

### ENGINEERING CONTROLS

Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces.

### EYE/FACE PROTECTION

Safety glasses or goggles are recommended where there is a possibility of splashing or spraying.

### SKIN PROTECTION

Gloves constructed of nitrile or neoprene are recommended. Chemical protective clothing such as that made of of E.I. DuPont Tychem®, products or equivalent is recommended based on degree of exposure.

Note: The resistance of specific material may vary from product to product as well as with degree of exposure. Consult manufacturer specifications for further information.

### RESPIRATORY PROTECTION

A NIOSH-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited. Refer to OSHA 29 CFR 1910.134, NIOSH Respirator Decision Logic, and the manufacturer for additional guidance on respiratory protection selection and limitations.

Use a positive pressure, air-supplied respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.

## 9. PHYSICAL and CHEMICAL PROPERTIES (rev. Jan-04)

### APPEARANCE

A translucent, straw-colored or light yellow liquid

### ODOR

A strong, characteristic aromatic hydrocarbon odor. Oxygenated gasoline with MTBE and/or TAME may have a sweet, ether-like odor and is detectable at a lower concentration than non-oxygenated gasoline.

### ODOR THRESHOLD

	<u>Odor Detection</u>	<u>Odor Recognition</u>
Non-oxygenated gasoline:	0.5 - 0.6 ppm	0.8 - 1.1 ppm
Gasoline with 15% MTBE:	0.2 - 0.3 ppm	0.4 - 0.7 ppm
Gasoline with 15% TAME:	0.1 ppm	0.2 ppm

### BASIC PHYSICAL PROPERTIES

BOILING RANGE:	85 to 437 °F (39 to 200 °C)
VAPOR PRESSURE:	6.4 - 15 RVP @ 100 °F (38 °C) (275-475 mm Hg @ 68 °F (20 °C)
VAPOR DENSITY (air = 1):	AP 3 to 4
SPECIFIC GRAVITY (H <sub>2</sub> O = 1):	0.70 - 0.78
EVAPORATION RATE:	10-11 (n-butyl acetate = 1)
PERCENT VOLATILES:	100 %

# AMERADA HESS CORPORATION

## MATERIAL SAFETY DATA SHEET

Gasoline, All Grades

MSDS No. 9950

SOLUBILITY (H<sub>2</sub>O): Non-oxygenated gasoline - negligible (< 0.1% @ 77 °F). Gasoline with 15% MTBE - slight (0.1 - 3% @ 77 °F); ethanol is readily soluble in water

### 10. STABILITY and REACTIVITY (rev. Dec-94)

**STABILITY:** Stable. Hazardous polymerization will not occur.

#### CONDITIONS TO AVOID

Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources

#### INCOMPATIBLE MATERIALS

Keep away from strong oxidizers.

#### HAZARDOUS DECOMPOSITION PRODUCTS

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke). Contact with nitric and sulfuric acids will form nitrocresols that can decompose violently.

### 11. TOXICOLOGICAL PROPERTIES (rev. Dec-97)

#### ACUTE TOXICITY

Acute Dermal LD50 (rabbits): > 5 ml/kg

Acute Oral LD50 (rat): 18.75 ml/kg

Primary dermal irritation (rabbits): slightly irritating

Draize eye irritation (rabbits): non-irritating

Guinea pig sensitization: negative

#### CHRONIC EFFECTS AND CARCINOGENICITY

Carcinogenicity: OSHA: NO IARC: YES - 2B

NTP: NO

ACGIH: YES (A3)

IARC has determined that gasoline and gasoline exhaust are possibly carcinogenic in humans. Inhalation exposure to completely vaporized unleaded gasoline caused kidney cancers in male rats and liver tumors in female mice. The U.S. EPA has determined that the male kidney tumors are species-specific and are irrelevant for human health risk assessment. The significance of the tumors seen in female mice is not known. Exposure to light hydrocarbons in the same boiling range as this product has been associated in animal studies with effects to the central and peripheral nervous systems, liver, and kidneys. The significance of these animal models to predict similar human response to gasoline is uncertain.

This product contains benzene. Human health studies indicate that prolonged and/or repeated overexposure to benzene may cause damage to the blood-forming system (particularly bone marrow), and serious blood disorders such as aplastic anemia and leukemia. Benzene is listed as a human carcinogen by the NTP, IARC, OSHA and ACGIH.

This product may contain methyl tertiary butyl ether (MTBE): animal and human health effects studies indicate that MTBE may cause eye, skin, and respiratory tract irritation, central nervous system depression and neurotoxicity. MTBE is classified as an animal carcinogen (A3) by the ACGIH.

### 12. ECOLOGICAL INFORMATION (rev. Jan-04)

Keep out of sewers, drainage areas and waterways. Report spills and releases, as applicable, under Federal and State regulations. If released, oxygenates such as ethers and alcohols will be expected to exhibit fairly high mobility in soil, and therefore may leach into groundwater. The API ([www.api.org](http://www.api.org)) provides a number of useful references addressing petroleum and oxygenate contamination of groundwater.

### 13. DISPOSAL CONSIDERATIONS (rev. Dec-97)

Consult federal, state and local waste regulations to determine appropriate disposal options.

# AMERADA HESS CORPORATION

## MATERIAL SAFETY DATA SHEET

**Gasoline, All Grades**

**MSDS No. 9950**

### 14. TRANSPORTATION INFORMATION (rev. Jan-04)

DOT PROPER SHIPPING NAME: Gasoline  
 DOT HAZARD CLASS and PACKING GROUP: 3, PG II  
 DOT IDENTIFICATION NUMBER: UN 1203  
 DOT SHIPPING LABEL: FLAMMABLE LIQUID

PLACARD:



### 15. REGULATORY INFORMATION (rev. Jan-04)

#### U.S. FEDERAL, STATE, and LOCAL REGULATORY INFORMATION

This product and its constituents listed herein are on the EPA TSCA Inventory. Any spill or uncontrolled release of this product, including any substantial threat of release, may be subject to federal, state and/or local reporting requirements. This product and/or its constituents may also be subject to other federal, state, or local regulations; consult those regulations applicable to your facility/operation.

#### CLEAN WATER ACT (OIL SPILLS)

Any spill or release of this product to "navigable waters" (essentially any surface water, including certain wetlands) or adjoining shorelines sufficient to cause a visible sheen or deposit of a sludge or emulsion must be reported immediately to the National Response Center (1-800-424-8802) or, if not practical, the U.S. Coast Guard with follow-up to the National Response Center, as required by U.S. Federal Law. Also contact appropriate state and local regulatory agencies as required.

#### CERCLA SECTION 103 and SARA SECTION 304 (RELEASE TO THE ENVIRONMENT)

The CERCLA definition of hazardous substances contains a "petroleum exclusion" clause which exempts crude oil, refined, and unrefined petroleum products and any indigenous components of such. However, other federal reporting requirements (e.g., SARA Section 304 as well as the Clean Water Act if the spill occurs on navigable waters) may still apply.

#### SARA SECTION 311/312 - HAZARD CLASSES

<u>ACUTE HEALTH</u>	<u>CHRONIC HEALTH</u>	<u>FIRE</u>	<u>SUDDEN RELEASE OF PRESSURE</u>	<u>REACTIVE</u>
X	X	X	--	--

#### SARA SECTION 313 - SUPPLIER NOTIFICATION

This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and of 40 CFR 372:

INGREDIENT NAME (CAS NUMBER)	CONCENTRATION WT. PERCENT
Benzene (71-43-2)	0.1 to 4.9 (0.1 to 1.3 for reformulated gasoline)
Ethyl benzene (100-41-4)	< 3
n-Hexane (110-54-3)	0.5 to 4
Methyl-tertiary butyl ether (MTBE) (1634-04-4)	0 to 15.0
Toluene (108-88-3)	1 to 15
1,2,4- Trimethylbenzene (95-63-6)	< 6
Xylene, mixed isomers (1330-20-7)	1 to 15

US EPA guidance documents ([www.epa.gov/tri](http://www.epa.gov/tri)) for reporting Persistent Bioaccumulating Toxics (PBTs) indicate this product may contain the following de minimis levels of toxic chemicals subject to Section 313 reporting:

INGREDIENT NAME (CAS NUMBER)	CONCENTRATION - Parts per million (ppm) by weight
Polycyclic aromatic compounds (PACs)	17
Benzo (g,h,i) perylene (191-24-2)	2.55
Lead (7439-92-1)	0.079



# AMERADA HESS CORPORATION

## MATERIAL SAFETY DATA SHEET

Gasoline, All Grades

MSDS No. 9950

### CANADIAN REGULATORY INFORMATION (WHMIS)

Class B, Division 2 (Flammable Liquid)

Class D, Division 2A (Very toxic by other means) and Class D, Division 2B (Toxic by other means)

### 16. OTHER INFORMATION (rev. Jan-04)

**NFPA® HAZARD RATING** HEALTH: 1 Slight  
FIRE: 3 Serious  
REACTIVITY: 0 Minimal

**HMIS® HAZARD RATING** HEALTH: 1 \* Slight  
FIRE: 3 Serious  
REACTIVITY: 0 Minimal  
\* CHRONIC

**SUPERSEDES MSDS DATED:** 12/30/97

### ABBREVIATIONS:

AP = Approximately < = Less than > = Greater than  
N/A = Not Applicable N/D = Not Determined ppm = parts per million

### ACRONYMS:

ACGIH	American Conference of Governmental Industrial Hygienists	NTP	National Toxicology Program
AIHA	American Industrial Hygiene Association	OPA	Oil Pollution Act of 1990
ANSI	American National Standards Institute (212)642-4900	OSHA	U.S. Occupational Safety & Health Administration
API	American Petroleum Institute (202)682-8000	PEL	Permissible Exposure Limit (OSHA)
CERCLA	Comprehensive Emergency Response, Compensation, and Liability Act	RCRA	Resource Conservation and Recovery Act
DOT	U.S. Department of Transportation [General Info: (800)467-4922]	REL	Recommended Exposure Limit (NIOSH)
EPA	U.S. Environmental Protection Agency	SARA	Superfund Amendments and Reauthorization Act of 1986 Title III
HMIS	Hazardous Materials Information System	SCBA	Self-Contained Breathing Apparatus
IARC	International Agency For Research On Cancer	SPCC	Spill Prevention, Control, and Countermeasures
MSHA	Mine Safety and Health Administration	STEL	Short-Term Exposure Limit (generally 15 minutes)
NFPA	National Fire Protection Association (617)770-3000	TLV	Threshold Limit Value (ACGIH)
NIOSH	National Institute of Occupational Safety and Health	TSCA	Toxic Substances Control Act
NOIC	Notice of Intended Change (proposed change to ACGIH TLV)	TWA	Time Weighted Average (8 hr.)
		WEEL	Workplace Environmental Exposure Level (AIHA)
		WHMIS	Workplace Hazardous Materials Information System (Canada)

### **DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES**

Information presented herein has been compiled from sources considered to be dependable, and is accurate and reliable to the best of our knowledge and belief, but is not guaranteed to be so. Since conditions of use are beyond our control, we make no warranties, expressed or implied, except those that may be contained in our written contract of sale or acknowledgment.

Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material, even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in their use of the material.

.....  
**Lonestar Industries, LLC.**

**GRAVEL**



.....

## MATERIAL SAFETY DATA SHEET

### HMIS Label

HEALTH	2*
FIRE	0
PHYSICAL HAZARD	0
PPE	X

### SECTION 1 – IDENTITY

**Distributed by:** TXI Operations, LP  
**Address:** 1341 W Mockingbird Lane  
 Dallas, TX 75247

**Product Name:** Gravel (TXI008)

**Chemical Name:** Silica

**Common Name:** Gravel

**Formula:** Predominantly SiO<sub>2</sub>

**Trade Name and Synonyms:** River Rock, Pea Gravel, Coarse Aggregate

**MSDS prepared:** September 1996      **Last revised:** January 2005

**Emergency Phone (Chemtrec):** 800-424-9300

**Outside USA:** 703-527-3887

**Telephone for information:** Nancy Gamett  
 972-647-3824

**Chemical Family:** Silicate

### SECTION 2 – HAZARDOUS INGREDIENTS

<u>Hazardous Component</u>	<u>CAS#</u>	<u>%Typical</u>	<u>TLV (Units)</u>	<u>PEL (Units)</u>
Quartz	14808-60-7	50-100	0.05 mg/m <sup>3</sup> *	10 mg/m <sup>3</sup> * %SiO <sub>2</sub> + 2
				30 mg/m <sup>3</sup> ** %SiO <sub>2</sub> + 2

\*Respirable Fraction

\*\*Total dust

PEL: Permissible Exposure Limit established by the Occupational Safety and Health Administration (OSHA).

TLV: Threshold Limit Value established by the American Conference of Governmental Industrial Hygienists (ACGIH).

This material, if it becomes a waste, is not classified as a RCRA hazardous waste (40 CFR 261).

### SECTION 3 – PHYSICAL DATA

**Bolling Point**

NA

**Specific Gravity (H<sub>2</sub>O=1)**

2.3-2.7

**Vapor Pressure (mmHg)**

NA

**Percent Volatile by Volume**

0

**Vapor Density (Air=1)**

NA

**Evaporation Rate (n-Butyl Acetate)**

NA

**Percent Soluble in Water**

Negligible (<0.1%)

**Reactivity in Water**

Will not evolve flammable or toxic gases

**Appearance and Odor**

Light colored, rounded or broken, no odor.

### SECTION 4 – FIRE AND EXPLOSION DATA

**Flash Point:** Will not ignite

**Extinguishing Media:** NA

**Unusual Fire and Explosion Hazards:** None

**Special Fire Fighting Procedures:** None

**Flammable Limits in Air (% by Volume):**

Lower: N/A Upper: N/A

**Auto Ignition Temperature:** NA



## SECTION 5 – HEALTH INFORMATION

### Signs and Symptoms of Exposure

**Acute Overexposure:** Inhalation-Congestion of nasal passages and respiratory systems. Eye: Excessive dust may cause severe abrasion of the cornea.

**Chronic Overexposure:** Excessive exposure, by inhalation, to dusts of this material, over an extended period of time may result in the development of pulmonary diseases including pneumoconiosis, silicosis, or lung cancer. Dust can cause inflammation to the lining tissue of the interior of the nose and inflammation of the cornea.

**Medical Conditions Generally Aggravated by Exposure:** Respiratory disorders or diseases may be aggravated by exposure

<b>Chemical/Component Listed as Carcinogen:</b>	<u>NTP</u>	<u>IARC</u>	<u>OSHA</u>
Quartz	YES	YES	NO

**Other Exposure Limits:** None

### Emergency & First Aids Procedures for Indicated Routes of Entry

Eyes: Rinse with copious amounts of water for 15 minutes. Do not rub eyes. If irritation persists, seek medical assistance.

Ingestion: Seek medical assistance immediately.

Inhalation: Remove to fresh air. Seek medical assistance immediately.

## SECTION 6 – REACTIVITY DATA

**Stability:** Stable

**Conditions to Avoid:** None known

**Incompatibility (materials to avoid):** None known

**Hazardous Polymerization:** Will not occur

**Hazardous Decomposition or Combustion Products:** None known

## SECTION 7 – SPILL OR LEAK PROCEDURES

### Steps to be Taken in Case Material is Leaked or Spilled

Wear personal protective equipment to prevent eye exposures. Use respiratory protection as necessary. Material not contaminated may be re-used. Avoid generation of excessive dusts.

### Waste Disposal Method

Consult federal, state and local regulations. As packaged, not classified as a hazardous waste under 40 CFR 261.

## SECTION 8 – PERSONAL PROTECTION INFORMATION

### Respiratory Protection

Not required under normal conditions. Select appropriate respirator based on the level of airborne contamination and presence of sufficient oxygen. Use only NIOSH/MSHA approved respirators. Follow OSHA respiratory regulations (29 CFR 1910.134) to ensure employee training and protection are adequate.

**Ventilation:** Use in well ventilated area.

**Protective Gloves:** Gloves to protect against abrasion.

**Eye Protection:** Goggles, or safety glasses with face shield.

**Other Protective Clothing or Equipment:** Prevent exposure to the eyes.

## SECTION 9 – SPECIAL PRECAUTIONS

### Precautions to be Taken in Handling & Storing

Store in a cool, dry, ventilated storage area in closed containers. Store in a manner to prevent accumulation of airborne dust.

**Other Precautions:** None determined.

### Other Information

Reasonable care has been taken in the preparation of this information, but the manufacturer nor preparer of the MSDS makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use.

Some information used in the generation of this MSDS was obtained from existing TXI MSDSs.

.....  
**Lonestar Industries, LLC.**

**HYDRATED LIME**



.....

# Material Safety Data Sheet

May be used to comply with  
OSHA's Hazard Communication Standard  
29 CFR 1910.1200. Standard must be  
consulted for specific requirements.

## U.S. Department of Labor

Occupational Safety and Health Administration  
(Non-Mandatory Form)  
Form Approved  
OMB No. 1218-0072



**IDENTITY** Type S Hydrated Lime Putty  
(Ca(OH)<sub>2</sub> \* Mg(OH)<sub>2</sub>)

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

### Section I

#### Manufacturer's Name and Address

Chemical Lime Company  
3724 Hulen Street  
Fort Worth, Texas 76107

#### Emergency Telephone Number

Chemtrec 800-424-9300

#### Information Phone Number

817-732-8164

#### Date Prepared

3/30/2006

### Section II - Hazardous Ingredients/Identity Information

Hazardous Components	CAS	Common Name	OSHA PEL	ACGIH TLV	Other Limits	% (optional)
Calcium hydroxide	1305-62-0	Hydrated Lime	5 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>	7340 mg/kg	<40%
Magnesium hydroxide	1309-42-8	Brucite	N.A.	N.A.		<25%
Magnesium oxide	1309-48-4	Periclase	10 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	6 mg/m <sup>3</sup>	<5%
Calcium carbonate	1317-65-3	Limestone	15 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	6450 mg/kg	<3%
Silicon dioxide	14808-60-7	Quartz	*see note below	0.025 mg/m <sup>3</sup>	4 mg/m <sup>3</sup>	<2%

\*SiO<sub>2</sub> OSHA PEL: 10 mg/m<sup>3</sup> divided by (the percentage of silica in the dust plus 2) (respirable)

### Section III - Physical/Chemical Characteristics

Boiling Point	100 °C	Melting Point	dec. 580 °C	Specific Gravity	1.35 - 1.4 g/cc
Vapor Pressure (mm Hg)	N.A.	Vapor Density	N.A.	Evaporation Rate	N.A.
Solubility in Water	Material is a stable suspension of calcium magnesium hydroxide in water. pH=12.4@25 °C				
Appearance and Odor	White high viscosity putty, odorless				

### Section IV - Fire and Explosion Hazard Data

Flash Point	LEL/UEL	Flammable Limits	Extinguishing Media
N.A.	N.A.	N.A.	Not Combustible -- Use extinguishing agent for surrounding fire

#### Special Firefighting Procedures/Unusual Fire and Explosion Hazards

Avoid skin contact or inhalation of dust if material becomes dry.

### Section V - Reactivity Data

Stability	Conditions to Avoid (stability - related)
Stable	Material is stable

#### Incompatibility (Materials to Avoid)

Acids: Reacts vigorously and produces heat. Maleic Anhydride: May react explosively. Nitro Organic Compounds: May react to form explosive salts. Phosphorous: May form flammable products when heated. Aluminum: May react to form hydrogen gas.

#### Hazardous Polymerization/Hazardous Decomposition of Byproducts

Will not occur (none)

### Section VI - Health Hazard Data

Route(s) of Entry: Inhalation, Ingestion

#### Health Hazards (Acute and Chronic)

Avoid skin and eye contact as irritation will occur. Contact lenses should not be worn when working with lime products. Inhalation can cause coughing, sneezing, or breathing problems.

Carcinogenicity: OSHA? SiO<sub>2</sub> NTP/IARC Monographs? SiO<sub>2</sub>

Respirable crystalline silica from occupational sources is classified by IARC as a Group I Carcinogen.

California Proposition 65: Silica is on the Governor's Proposition 65 list. Components used in this product may contain trace amounts of inherent naturally occurring elements (such as, but not limited to arsenic, cadmium) that are on the Governor's Proposition 65 list.

**Section VI - Health Hazard Data (continued)****Signs and Symptoms of Exposure**

Skin or eye irritation; coughing or breathing problems.

**Medical Conditions Generally Aggravated by Exposure**

Respiratory problems, asthma, dermatitis or skin or eye sensitivity.

**Emergency and First Aid Procedure**

Flush contaminated area with excess water. If eye contact, rinse eye with eye wash solution or excess water and seek medical attention immediately.

**Section VII - Precautions for Safe Handling and Use****Steps to be Taken in Case Material is Released or Spilled**

Protect skin and eyes from contact and avoid inhalation of mist. Collect using shovels or other suitable methods and place in steel drums. Keep away from acids or organic materials.

**Waste Disposal Method**

Carefully add water and flush to sewer. Consult local, state, or federal regulations.

**Precautions to be Taken in Handling and Storage**

Store in tightly closed containers and keep dry and away from acids or other incompatible substances. Do not store or ship in aluminum containers.

**Other Precautions**

Avoid eye contact and breathing dust if material becomes dry.

NFPA Rating: HEALTH: 1 FLAMMABILITY: 0 REACTIVITY: 0

HMIS Rating: HEALTH: 1 FLAMMABILITY: 0 REACTIVITY: 0

WHMIS Rating: D2A, E

**Section VIII - Control Measures****Respiratory Protection (Specify Type)**

Dust masks meeting the NIOSH N95 rating are sufficient for casual exposure to mist or dust. (42 CFR)

Ventilation	Local Exhaust N.A.	Special	Do not dispose of dust with combustible materials.
	Mechanical (General) N.A.	Other	

**Protective Gloves**

Clean dry rubber gloves

**Other Protective Clothing or Equipment**

Full clothing to cover arms and legs, safety glasses or face shield.

**Work/Hygienic Practices**

Eye wash and shower station should be readily available.

*Chemical Lime Company provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person. Individuals receiving this information must consult their own technical and legal advisors and/or exercise their own judgment in determining its appropriateness for a particular purpose. Chemical Lime Company makes no representations or warranties, either express or implied, including without limitation and warranties of merchantability or fitness for a particular purpose with respect to the information set forth herein or the product(s) to which the information refers. Accordingly, Chemical Lime Company will not be responsible or liable for any claims, losses or damages resulting from the use of or reliance upon or failure to use this information.*

References: Sax, N.I. & R.J. Lewis Sr. (1989) "Dangerous Properties of Industrial Materials", New York: Van Nostrand Reinhold Co. Ltd.  
Lewis, R.J. (1997) "Hazardous Chemicals Desk Reference", New York: Van Nostrand Reinhold Co. Ltd. KSA

.....  
**Lonestar Industries, LLC.**

**INSULATION FOAM FILL**



.....

# MATERIAL SAFETY DATA SHEET

FOR COATINGS, RESINS AND RELATED MATERIALS

(Approved by U.S. Department of Labor "Essentially Similar" to Form OSHA-20)

DATE OF PREP: December 1, 1998

SECTION I				
MANUFACTURER'S NAME:	Tailored Chemical Products, Inc.			
STREET ADDRESS:	3719 1st Avenue SW (P.O. Box 4186) Hickory, NC. 28603			
TELEPHONE #:	(828) 322-6512			
EMERGENCY TELEPHONE #:	1-800-687-1687	MANUFACTURER'S CODE IDENTIFICATION		
PRODUCT CLASS:	AMINO PLAST FOAM SYSTEM			
TRADE NAME:	CORE-FILL 500 FOAM INSULATION			
SECTION II - HAZARDOUS INGREDIENTS				
INGREDIENT	PERCENT	EXPOSURE LIMITS	LEL	VAPOR PRESSURE
NITROGEN RESIN NOT CONSIDERED HAZARDOUS UNDER OSHA 29 CFR-1910.20 & 1925.59	99%	N/A	N/A	N/A
SECTION III - PHYSICAL DATA				
BOILING RANGE: N/A	VAPOR DENSITY _HEAVIER _LIGHTER THAN AIR			
EVAPORATION RATE _FASTER _SLOWER THAN ETHER	PERCENT VOLATILE BY VOLUME	WEIGHT PER GALLON: .7 LBS./cu. foot		
SECTION IV - FIRE AND EXPLOSION HAZARD DATA				
DOT CATEGORY: White Fluffy Foam	FLASH POINT N/A	LEL N/A		
EXTINGUISHING MEDIA: N/A				
UNUSUAL FIRE AND EXPLOSION HAZARD: MATERIAL WILL NOT BURN UP TO 12000 DEGREES FARENHEIT				
SPECIAL FIRE FIGHTING PROCEDURES: NONE				

The information contained herein is furnished without warranty of any kind, except that it is accurate to the best knowledge of the manufacturer or obtained from sources considered to be accurate and the manufacturer does not assume any legal responsibility for the use or reliance upon same. Employees should use this information along with their own determinations to ensure proper use and the safety and health of employees.

SECTION V - HEALTH HAZARD DATA

EXPOSURE LIMITS: N/A

EFFECTS OF OVEREXPOSURE:

EYES: CONTACT WITH FRESH FOAM MAY CAUSE PRIMARY EYE IRRITATION

SKIN: N/A

INHALATION: N/A

INGESTION: N/A

EMERGENCY AND FIRST AID PROCEDURES:

EYES: WASH OUT WITH COPIOUS QUANTITIES OF WATER

SKIN: NORMAL SOAP AND WATER

SECTION VI - REACTIVITY DATA

STABILITY \_UNSTABLE X STABLE

CONDITIONS TO AVOID:

INCOMPATABILITY (Materials to avoid): STRONG ACIDS

HAZARDOUS DECOMPOSITION PRODUCTS: AMMONIA, CARBON DIOXIDE, OXIDES OF NITROGEN

HAZARDOUS POLYMERIZATION: \_MAY OCCUR X WILL NOT OCCUR

CONDITIONS TO AVOID: STRONG ACIDS

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: SWEEP UP FROM AREA AND CONTAIN IN PLASTIC GARBAGE BAGS

WASTE DISPOSAL METHOD: DISPOSAL MAY BE LANDFILL ACCORDING TO LOCAL, STATE, AND FEDERAL REGULATIONS

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: NONE REQUIRED

VENTILATION: NONE REQUIRED

PROTECTIVE EQUIPMENT OF CLOTHING REQUIRED: N/A

EYE PROTECTION: GOGGLES RECOMMENDED WHEN INSTALLING

OTHER PROTECTIVE EQUIPMENT: N/A

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: NONE REQUIRED

OTHER PRECAUTIONS:



.....  
**Lonestar Industries, LLC.**

**INSULATION LOOSE FILL**



**W. R. GRACE**  
**MATERIAL SAFETY DATA SHEET**

Product Name: Zonolite® Masonry Insulation  
MSDS ID Number: Z-01695

MSDS Date: 06/18/2007

**SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

**Product Name:** Zonolite® Masonry Insulation  
**MSDS Number:** Z-01695  
**Cancelled MSDS Number:** Z-01630  
**MSDS Date:** 06/18/2007  
**Chemical Family Name:** Expanded Vermiculite (Enoree, South Carolina Source):  
Magnesium-Aluminosilicate Mineral.  
**Product Use:** Aggregate Insulating Material for Masonry Applications  
**Chemical Formula:**  $(\text{Mg, Ca, K, Fe}^{11})_3 (\text{Si, Al, Fe}^{11})_4 \text{O}^{31}_5 (\text{OH})_2 \cdot \text{H}_2\text{O}$   
**CAS # (Chemical Abstracts Service Number):** Mixture NA

**Manufactured by:**

W.R.Grace & Co.-Conn.  
62 Whittemore Avenue  
Cambridge, MA 02140

Grace Canada, Inc.  
294 Clements Road West  
Ajax, Ontario L1S 3C8

**In Case of Emergency Call:**

In USA: (617) 876-1400 In Canada: (905) 683-8561

**SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS**

Ingredient	CAS#	Percent (max)
Quartz	014808-60-7	1-10
Vermiculite	001318-00-9	50-100

This product has been treated with a water based emulsion. AVOID WATER REACTIVE CHEMICALS.

**SECTION 3 - HAZARDS IDENTIFICATION**

**Emergency Overview:**

**Caution!**

Causes eye irritation.  
Causes respiratory tract irritation.  
Avoid contact with eyes.

**HMIS Rating:**

Health: 1  
Flammability: 0  
Reactivity: 0  
Personal Protective Equipment: E

**Potential Health Effects:**

**Inhalation:** Causes respiratory tract irritation.  
Effects include: Coughing, shortness of breath, wheezing and reduced pulmonary function from pneumoconiosis (dusty lungs).

**Eye Contact:** Eye contact causes physical irritation.  
Prolonged eye contact can result in redness and itching.

**Skin Contact:** Skin contact is not expected to cause any harmful effects.

**Skin Absorption:** Not expected to be harmful if absorbed through the skin.

**Ingestion:** Ingestion not expected to be harmful.

Effects include: No other effects expected unless listed below.

**SECTION 4 - FIRST AID MEASURES:**

**Skin Contact:** Wash with soap and water.

If discomfort or irritation persists, consult a physician.  
Remove contaminated clothing and wash before reuse.

**Eye Contact:** Flush eyes with water for at least 15 minutes while holding eyelids open.  
If discomfort or irritation persists, consult a physician.

**Ingestion:** Adverse health effects are not expected if swallowed.

**Inhalation:** If symptoms develop, get fresh air. If symptoms persist, consult a physician.  
If breathing has stopped, give artificial respiration then oxygen if needed.

**W. R. GRACE**  
**MATERIAL SAFETY DATA SHEET**

Product Name: Zonolite® Masonry Insulation  
MSDS ID Number: Z-01695

MSDS Date: 06/18/2007

**SECTION 5 - FIRE AND EXPLOSION HAZARD DATA**

**Flash Point:** Not Applicable  
**Flash Point Method:** Not Applicable  
**Lower Explosion Limit:** Not Available  
**Upper Explosion Limit:** Not Available  
**Auto-Ignition Temperature:** Not Available

**NFPA Rating:**

**Health:** 1  
**Flammability:** 0  
**Reactivity:** 0  
**Extinguishing Media:** Not Applicable. Product will not burn.  
**Special Fire Fighting Procedures:** None  
**Unusual Fire and Explosion Hazards:** None.

**SECTION 6 - ACCIDENTAL RELEASE MEASURES:**

**Spills/Leaks:** Carefully shovel or sweep up spilled material and place in suitable container for recycle or disposal.  
Dampen with water spray or use other methods to clean spill which avoid creating dust. Discard empty packaging promptly. Avoid excessive handling of empty packaging, which may result in unnecessary release of airborne particulates.  
Use proper personal protective equipment.

**SECTION 7 - HANDLING AND STORAGE**

**Precautionary Measures:** Avoid contact with eyes, skin and clothing.  
Avoid creating and inhaling airborne dust or particulates.  
Use only with adequate ventilation.  
Wash clothing before reuse.  
Provide respiratory protection if needed.  
**FOR PROFESSIONAL USE ONLY. KEEP OUT OF CHILDREN'S REACH.**

**SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTIVE EQUIPMENT**

**EXPOSURE GUIDELINES (US)**

Ingredient	ACGIH TLV			OSHA PEL			Other
	TWA	STEL	Ceiling	TWA	STEL	Ceiling	
Quartz	0.05 mg/m <sup>3</sup> TWA (respirable fraction)	-	-	respirable dust: 0.1 mg/m <sup>3</sup> TWA	-	-	-
Vermiculite	-	-	-	-	-	-	-

In addition to the exposure limits referenced above, the following non-specific limits for dust apply to this product; OSHA, 15 mg/m<sup>3</sup>-TWA or Total Dust and 5 mg/m<sup>3</sup>-TWA as Respirable Dust, ACGIH, 10 mg/m<sup>3</sup>-TWA as Total Dust and 3 mg/m<sup>3</sup>-TWA as Respirable Dust.

**EXPOSURE GUIDELINES (CANADA)**

Employers should consult local Provincial regulatory limits for exposure guidelines which may vary locally.

**Engineering Controls:** General ventilation may be desirable and should be used where appropriate.

**Personal Protective Equipment:**

**Respiratory Protection:** Respiratory protection may be desirable if dust is created in handling and is required at or above the Permissible Exposure Limits (PELs) specified.

**Skin Protection:** Gloves are recommended.

**Eye Protection:** Safety glasses or goggles should be worn.

**Work/Hygienic Practices:** Use good personal hygiene practices.

Quartz (Crystalline silica) is a naturally-occurring mineral that is commonly contained in materials that are mined from the earth's surface such as sand, limestone, clay and gypsum (Calcium sulfate). Total quartz is a value usually representing the combined fractions of large, nonrespirable sized particles and of respirable sized particles (less than ten microns in aerodynamic diameter). It is only the respirable fraction of total quartz that is recognized as hazardous by professionals in the field of Occupational Health and by most regulatory agencies. This product contains compounds subject to exposure guidelines and/or identified as carcinogens. (See Sections 8 and 11)

**W. R. GRACE**  
**MATERIAL SAFETY DATA SHEET**

Product Name: Zonolite® Masonry Insulation  
MSDS ID Number: Z-01695

MSDS Date: 06/18/2007

Grace has not been able to detect respirable sized quartz in vermiculite above the current Permissible Exposure Limit (PEL) during industrial hygiene sampling of workers at Grace production facilities. We believe that the highest potential for exposure exists at our production facilities due to the high volume of product produced and handled. In addition a wet sieving analysis combined with x-ray diffractometry has been conducted on vermiculite. Results indicate that respirable quartz is not present above the 0.1% by weight limit established by the Occupational Safety and Health Administration (OSHA) for carcinogens. OSHA states that if the hazardous substance is contained in the product below 0.1% by weight and exposures do not exceed permissible exposure limits, then the hazards do not apply.

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

<b>Physical State:</b>	Solid
<b>Appearance/Odor:</b>	Brown or Grey free flowing aggregate
<b>Odor Threshold: (ppm)</b>	Not Determined
<b>pH:</b>	Not Applicable
<b>Vapor Pressure: (Mm Hg)</b>	Unknown
<b>Vapor Density: (Air = 1)</b>	Unknown
<b>Solubility In Water:</b>	Negligible
<b>Specific Gravity: (Water = 1)</b>	Not Applicable
<b>Evaporation Rate: (Butyl Acetate = 1)</b>	Not Applicable
<b>Boiling Point:</b>	Not Applicable
<b>Viscosity:</b>	Not Applicable
<b>Bulk Density: (Pounds/Cubic Foot)(Pcf)</b>	4 – 10 PCF
<b>% Volatiles (gr/L): (70°F) (21°C)</b>	Not Available

**SECTION 10 - STABILITY AND REACTIVITY**

**Chemical Stability:** Stable

**Conditions To Avoid:** Vermiculite is often used as a chemical absorbent. When contact with highly reactive chemicals or chemicals that can off-gas at temperatures above room temperature (such as Hydrogen peroxide solutions) care should be taken to neutralize or make these materials inert prior to absorption. If possible consult the MSDS or supplier of the material being absorbed.

**Hazardous Polymerization:** Will not polymerize.

**Hazardous Decomposition Products:** None known for this product.

**SECTION 11 - TOXICOLOGICAL INFORMATION**

**Ingredient(No data unless listed.)**                      **CAS Number**                      **LD50 and LC50**

**Carcinogenicity:**

Ingredient	IARC Group 1	IARC Group 2A	IARC Group 2B	NTP Known	NTP Suspect	OSHA
Quartz	Yes	No	No	Yes	Yes	Yes
Vermiculite	No	No	No	No	No	No

**Mutagenicity:** Not applicable.

**Teratogenicity:** Not applicable.

**Reproductive Toxicity:** Not applicable.

**SECTION 12 - ECOLOGICAL INFORMATION**

**Environmental Fate:** No data available for product.

**Ecotoxicity:** No data available for product.

**SECTION 13 - DISPOSAL CONSIDERATIONS**

**Waste Disposal Procedures:** Consult all regulations (federal, state, provincial, local) or a qualified waste disposal firm when characterizing waste for disposal. According to EPA (40 CFR § 261), waste of this product is not defined as hazardous. Dispose of waste in accordance with all applicable regulations. According to US EPA (40 CFR § 261.3) waste of this product is not defined as hazardous.

**W. R. GRACE**  
**MATERIAL SAFETY DATA SHEET**

Product Name: Zonolite® Masonry Insulation  
MSDS ID Number: Z-01695

MSDS Date: 06/18/2007

**SECTION 14 - TRANSPORTATION INFORMATION**

Proper Shipping Name:	Not Applicable
UN/NA Number:	Not Applicable
Domestic Hazard Class:	Nonhazardous
Surface Freight Classification:	Vermiculite, other thin Vermiculite
Label/Placard Required:	Not Applicable

**SECTION 15 - REGULATORY INFORMATION**

**REGULATORY CHEMICAL LISTS:**

**CERCLA (Comprehensive Response Compensation and Liability Act):**  
**(None present unless listed below)**

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt %</u>	<u>CERCLA RQ</u>
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**SARA Title III (Superfund Amendments and Reauthorization Act)**

**SARA Section 312/Tier I & II Hazard Categories:**

Health Immediate (acute)	No
Health Delayed (chronic)	No
Flammable	No
Reactive	No
Pressure	No

**302 Reportable Ingredients (Identification Threshold 1%):**

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt %</u>	<u>SARA 302 TPQ</u>
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**313 Reportable Ingredients (Chemicals present below reporting threshold are exempt):**

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt %</u>
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**National Volatile Organic Compound Emission Standards For Architectural Coatings:**

Volatile Organic Content: (gr/L) Not Applicable

**WHMIS Classification(s):** D-2B

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR). This MSDS contains all the information required by the CPR.

**State Regulatory Information:**

**California Proposition 65:** WARNING! This product contains substances known to the state of California to cause cancer, birth defects or other reproductive harm.

**Massachusetts Hazardous Substance List(Identification threshold 0.001%(1ppm)):**

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt %</u>
Quartz	014808-60-7	1

**New Jersey Hazardous Substance List(Identification threshold (0.1%)):**

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt %</u>
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**Pennsylvania Hazardous Substance List(Identification threshold 0.01%):**

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt %</u>
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**CHEMICAL INVENTORY STATUS:**

All chemicals in this product are listed or exempt from listing in the following countries:

US	CANADA		EUROPE	AUSTRALIA	JAPAN	KOREA	PHILIPPINES
TSCA	DSL	NDSL	EINECS/ELINCS	AICS	ENCS	ECL	PICCS
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

**SECTION 16 - OTHER INFORMATION**

**Non-Hazardous Ingredient Disclosure:**

<u>Chemical Name</u>	<u>CAS Number</u>
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Prepared by:	EH&S Department
Approved by:	EH&S Department
Approved Date:	06/18/2007

**Disclaimer:**

"The data included herein are presented in accordance with various environment, health and safety regulations. It is the responsibility of a recipient of the data to remain currently informed on chemical hazard information, to design

**W. R. GRACE**  
**MATERIAL SAFETY DATA SHEET**

Product Name: Zonolite® Masonry Insulation  
MSDS ID Number: Z-01695

MSDS Date: 06/18/2007

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and update its own program and to comply with all national, federal, state and local laws and regulations applicable to safety, occupational health, right-to-know and environmental protection."

.....  
**Lonestar Industries, LLC.**

**INSULATION POLYISOCYANURATE**





## Material Safety Data Sheet

ITW Insulation Systems

ITW Insulation Systems encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

### 1. Product and Company Identification

**Product Name**

Rigid Polyisocyanurate Insulation

**COMPANY IDENTIFICATION**

ITW Insulation Systems  
1370 East 40<sup>th</sup> Street  
Building 7, Suite 1  
Houston, TX 77022-4101  
USA

Customer Information Number:

1-800-231-1024

### 2. Hazards Identification

**Emergency Overview****Color:** Light Grey**Physical State:** Bun/billet**Odor:** Odorless**Hazards of product:**

No significant immediate hazards for emergency response are known.

**OSHA Hazard Communication Standard**

This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**Potential Health Effects**

**Eye Contact:** Solid or dust may cause irritation or corneal injury due to mechanical action. Fumes/vapor released during thermal operations such as hot-wire cutting may cause eye irritation.

**Skin Contact:** Essentially nonirritating to skin. Mechanical injury only.

**Skin Absorption:** Skin absorption is unlikely due to physical properties.

**Inhalation:** Dust may cause irritation to upper respiratory tract (nose and throat). Fumes or dusts generated from cutting or grinding operations may cause irritation of the upper respiratory tract and lungs. Concentrations of the blowing agents anticipated incidental to proper handling are expected to be well below those which cause acute inhalation effects and below exposure guidelines.

**Ingestion:** Swallowing is unlikely because of the physical state. Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts. May cause choking or blockage of the digestive tract if swallowed.

\*Indicates a Trademark

### 3. Composition Information

Component	CAS #	Amount
Modified Polyisocyanurate Rigid Cellular Polymer	Not applicable	> 85.0 %
Hydrocarbon blowing agent(s)	Not applicable	< 10.0 %
Tris(1-chloro-2-propyl) phosphate	13674-84-5	< 5.0 %

### 4. First-aid measures

**Eye Contact:** Flush eyes with plenty of water; remove contact lenses after the first 1-2 minutes then continue flushing for several minutes. Only mechanical effects expected. If effects occur, consult a physician, preferably an ophthalmologist.

**Skin Contact:** Seek first aid or medical attention as needed.

**Inhalation:** Move person to fresh air; if effects occur, consult a physician.

**Ingestion:** If swallowed, seek medical attention. May cause gastrointestinal blockage. Do not give laxatives. Do not induce vomiting unless directed to do so by medical personnel.

**Notes to Physician:** No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

### 5. Fire Fighting Measures

**Extinguishing Media:** Water. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers.

**Fire Fighting Procedures:** Keep people away. Isolate fire and deny unnecessary entry. Soak thoroughly with water to cool and prevent re-ignition. Cool surroundings with water to localize fire zone.

**Special Protective Equipment for Firefighters:** Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

**Unusual Fire and Explosion Hazards:** Container may vent and/or rupture due to fire. When product is stored in closed containers, a flammable atmosphere can develop. Mechanical cutting, grinding or sawing can cause formation of dusts. To reduce the potential for dust explosion, do not permit dust to accumulate. This product contains a flame retardant to inhibit accidental ignition from small fire sources. This plastic foam product is combustible and should be protected from flames and other high heat sources. For more information, contact ITW. Dense smoke is emitted when burned without sufficient oxygen.

**Hazardous Combustion Products:** During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. In smoldering or flaming conditions, carbon monoxide, carbon dioxide and carbon are generated. Combustion products may include and are not limited to: Nitrogen oxides. Combustion products may include trace amounts of: Hydrogen cyanide. Hydrogen halides.

### 6. Accidental Release Measures

**Steps to be Taken if Material is Released or Spilled:** Contain spilled material if possible. Collect in suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

**Personal Precautions:** Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

**Environmental Precautions:** Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

## 7. Handling and Storage

### Handling

**General Handling:** This material is combustible and should not be exposed to flame or other ignition sources. Refer to "EXPOSURE CONTROLS AND PERSONAL PROTECTION", Section 8 of the (M)SDS. No smoking, open flames or sources of ignition in handling and storage area. Fabrication methods which involve cutting into this product may release the blowing agent(s) remaining in the cells. Provide adequate ventilation to assure localized concentrations in release areas are maintained below the lower flammable limit.

**Other Precautions:** Good housekeeping and controlling of dusts are necessary for safe handling of product.

### Storage

Minimize sources of ignition, such as static build-up, heat, spark or flame. Flammable vapors may accumulate in some storage situations. During shipment, storage, installation and use, this material should not be exposed to flame or other ignition sources.

## 8. Exposure Controls / Personal Protection

### Exposure Limits

Component	List	Type	Value
Cyclopentane (8Cl, 9Cl)	ACGIH	TWA	600 ppm
Isopentane	ACGIH	TWA	600 ppm

### Personal Protection

**Eye/Face Protection:** Eye protection should not be necessary. For fabrication operations safety glasses are recommended. If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles.

**Skin Protection:** No precautions other than clean body-covering clothing should be needed.

**Hand protection:** Use gloves to protect from mechanical injury. Selection of gloves will depend on the task.

**Respiratory Protection:** Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use an approved air-purifying respirator. In dusty or misty atmospheres, use an approved particulate respirator. The following should be effective types of air-purifying respirators: Particulate filter.

**Ingestion:** No precautions necessary due to the physical properties of the material.

### Engineering Controls

**Ventilation:** Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

## 9. Physical and Chemical Properties

Physical State	Bun/billet
Color	Light Brown
Odor	Odorless
Flash Point - Closed Cup	Not applicable
Flammable Limits In Air	Lower: Not applicable Upper: Not applicable
Autoignition Temperature	490 °C (914 °F) <i>ASTM D1929</i>
Vapor Pressure	Not applicable
Boiling Point (760 mmHg)	Not applicable.
Vapor Density (air = 1)	Not applicable
Specific Gravity (H <sub>2</sub> O = 1)	0.02 - 0.05 <i>Estimated</i>
Freezing Point	Not applicable

<b>Melting Point</b>	> 150 °C (> 302 °F) <i>Estimated Decomposes</i>
<b>Solubility in Water (by weight)</b>	insoluble in water
<b>pH</b>	Not applicable
<b>Kinematic Viscosity</b>	Not applicable

## 10. Stability and Reactivity

### Stability/Instability

Thermally stable at typical use temperatures.

**Conditions to Avoid:** Avoid temperatures above 150°C (302°F) Exposure to elevated temperatures can cause product to decompose. Avoid direct sunlight.

**Incompatible Materials:** Avoid contact with: Strong oxidizers.

### Hazardous Polymerization

Will not occur.

### Thermal Decomposition

Decomposition products depend upon temperature, air supply and the presence of other materials. Toxic gases are released during decomposition.

## 11. Toxicological Information

### Repeated Dose Toxicity

Repeated exposures to dusts of this material are not anticipated to result in systemic toxicity or permanent lung injury; however, excessive exposures may cause less severe respiratory effects.

## 12. Ecological Information

### CHEMICAL FATE

#### Movement & Partitioning

No bioconcentration is expected because of the relatively high molecular weight (MW greater than 1000). In the terrestrial environment, material is expected to remain in the soil. In the aquatic environment, material is expected to float.

#### Persistence and Degradability

Surface photodegradation is expected with exposure to sunlight. No appreciable biodegradation is expected.

### ECOTOXICITY

Not expected to be acutely toxic to aquatic organisms.

## 13. Disposal Considerations

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. ITW HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION

PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Landfill, Incinerator or other thermal destruction device. As a service to its customers, ITW can provide names of information resources to help identify waste management companies and other facilities which recycle, reprocess or manage chemicals or plastics, and that manage used drums. Telephone ITWs Customer Information Group at 1-800-231-1024 for further details.

## 14. Transport Information

**DOT Non-Bulk**  
NOT REGULATED

**DOT Bulk**  
NOT REGULATED

**IMDG**  
NOT REGULATED

**ICAO/IATA**  
NOT REGULATED

*This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.*

## 15. Regulatory Information

### OSHA Hazard Communication Standard

This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

### Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Immediate (Acute) Health Hazard	No
Delayed (Chronic) Health Hazard	No
Fire Hazard	No
Reactive Hazard	No
Sudden Release of Pressure Hazard	No

### Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

### Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List:

The following product components are cited in the Pennsylvania Hazardous Substance List and/or the Pennsylvania Environmental Substance List, and are present at levels which require reporting.

Component	CAS #	Amount
Hydrocarbon blowing agent(s)	Not applicable	< 10.0 %

**Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Special Hazardous Substances List:**

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

**California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)**

This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

**Toxic Substances Control Act (TSCA)**

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30

**CEPA - Domestic Substances List (DSL)**

All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

<b>16. Other Information</b>
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**Revision**

Identification Number: 50695 / 1001 / Issue Date 06/12/2007 / Version: 2.0

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

**Legend**

N/A	Not available
W/W	Weight/Weight
OEL	Occupational Exposure Limit
STEL	Short Term Exposure Limit
TWA	Time Weighted Average
ACGIH	American Conference of Governmental Industrial Hygienists, Inc.
ITW IHG	ITW Industrial Hygiene Guideline
WEEL	Workplace Environmental Exposure Level
HAZ DES	Hazard Designation
Action Level	A value set by OSHA that is lower than the PEL which will trigger the need for activities such as exposure monitoring and medical surveillance if exceeded.

*ITW Insulation Systems urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.*



.....  
**Lonestar Industries, LLC.**

**INSULATION POLYSTYRENE**





Residential	Roofing	Fabrication	Agricultural	Thermal Mass	Perimate	Prodeck	Thermal Laminates	Styrofoam
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**Styrofoam™ MSDS**

This is an abridged MSDS intended to provide information relevant to handling, processing and storage of product. To request a full copy of the Dow MSDS contact:

Aerodynamic Developments (Mfg.) Pty. Ltd. on 1800 051 100 or  
Dow Chemical (Aust.) Pty. Ltd. on 1800 338 019.

<b>PRODUCT</b>	STYROFOAM* Extruded Polystyrene Foam		
<b>GRADES</b>	LB, SM-BE, SM-TG, SP, RTM, IB, RM-SL, Floormate, Wallmate		
<b>UN NO</b>	Not Applicable	<b>SUB. RISK</b>	Not Applicable
<b>HAZCHEM</b>	Not Applicable	<b>SPEC. EPG</b>	Not Applicable
<b>G.T. EPG</b>	Not Applicable	<b>CAS NO</b>	Mixture
<b>PAC.K GRP</b>	Not Applicable	<b>SUSDP</b>	Not Applicable
<b>D.G. CLASS</b>	Not Applicable	<b>IMDG</b>	Not Applicable
<b>PRODUCT IDENTIFICATION:</b>			
<b>CHEMICAL ENTITY</b>	Extruded polystyrene foam blown with HCFC-142B and HCFC-22 and containing a brominate flame retardant.		
<b>HAZARDS CLASSIFICATION</b>	This product is not considered as hazardous according to Worksafe Australia.		
<b>PHYSICAL DESCRIPTION / PROPERTIES:</b>			
<b>APPEARANCE</b>	Rigid multicellular foam board. No odour.		
<b>BOILING POINT</b>	Greater than 75° C		
<b>MELTING POINT</b>	Greater than 75° C		
<b>FLASH POINT</b>	346° C		
<b>AUTO IGNITION TEMP</b>	491° C		
<b>DECOMPOSITION TEMP</b>	285° C		
<b>OTHER PROPERTIES</b>	Insoluble in water, density 20 to 70 kg/cubic metre		
<b>USE</b>	Generally for thermal insulation in many different constructions.		
<b>HEALTH HAZARD INFORMATION:</b>			
<b>ACUTE EFFECTS</b>	<b>SWALLOWED:</b>	Ingestion is unlikely due to physical state. Physical injury only.	
	<b>EYE:</b>	Solid or dust may cause irritation or corneal injury due to mechanical action.	
	<b>SKIN:</b>	Considered to be physiologically inert. No adverse effects anticipated this route of exposure incidental to proper industrial handling.	

	<b>INHALED:</b>	Dust may cause irritation to upper respiratory tract. No significant level of exposure to blowing agent or fire retardant during normal industrial procedures post manufacture. For further information contact Dow or Aero. Dev. (Mfg.) for unabridged MSDS.
	<b>CHRONIC EFFECTS:</b>	As above.
	<b>OTHER HEALTH HAZARD INFORMATION:</b>	Repeated exposures to this product are not anticipated to cause any significant adverse effects.
<b>FIRST AID</b>	<b>SWALLOWED:</b>	No adverse effects anticipated by this route of exposure.
	<b>EYE:</b>	Mechanical irritation only. Irrigate immediately with water for at least 5 minutes.
	<b>SKIN:</b>	No adverse effects anticipated by this route of exposure.
	<b>INHALED:</b>	Remove to fresh air if effects occur. Consult a doctor.
	<b>FIRST AID FACILITIES:</b>	Not applicable.
	<b>ADVICE TO DOCTOR:</b>	No other relevant information available.
	<b>TOXICITY DATA:</b>	Relevant to foam manufacture only. For further information contact Dow or Aero. Dev. (Mfg.) for unabridged MSDS.
<b>PRECAUTIONS FOR USE:</b>		
<b>EXPOSURE GUIDELINES</b>	INDUSTRIAL HYGIENE MEASUREMENTS of HCFC-142B and/or HCFC-22 have been made residential dwellings, warehouses and production facilities where concentration can be expected to be highest. These measurements indicate that HCFC-142B/HCFC-22 are present only at levels well below 150 ppm even when large quantities of extruded foam products are present.	
<b>ENGINEERING CONTROLS</b>	Good general ventilation should be sufficient for most conditions. Certain operations such as grinding or cutting may lead to build up of dust which could cause a dust explosion. Provide adequate local ventilation and appropriate dust handling systems. Hot wire cutting may generate vapour levels sufficient to generate eye and respiratory irritation. Provide adequate ventilation. Local exhaust ventilation on the equipment is necessary for processing operations such as cutting and grinding, to control the exposure to dust and flames.	
<b>PERSONAL PROTECTION</b>	<b>RESPIRATORY:</b>	In dusty atmospheres, use a approved dust respirator.
	<b>SKIN:</b>	No precautions other than clean body covering clothing should be needed
	<b>EYE / FACE:</b>	For fabrication operations safety glasses are recommended.
	<b>FLAMMABILITY:</b>	This product is combustible and may constitute a fire hazard if improperly used or installed. When installed this product should be adequately protected as directed by State and/or Local Government regulations or instructions in the specific application brochure.
<b>SAFE HANDLING INFORMATION</b>	<b>STORAGE &amp; TRANSPORT:</b>	This material is not classified as a dangerous good.
	<b>SPILLS &amp; DISPOSAL:</b>	Pick up or sweep up and place in suitable container for disposal.
	<b>DISPOSAL METHOD:</b>	Bury in an approved landfill, or burn in an adequate incinerator with excess oxygen, in accord with State and / or Local government regulations.
<b>FIRE/EXPLOSION</b>	<b>EXTINGUISHING MEDIA:</b>	Water spray.

<b>HAZARD</b>		
	<b>HAZARDOUS COMBUSTION PRODUCTS:</b>	Upon burning the product generates dense black smoke with small amounts of hydrogen bromide, -chloride, and -fluoride. Studies have shown that the products of combustion of this foam are not more acul toxic than the products of combustion of common building materials such as wood.
	<b>FIRE FIGHTING EQUIPMENT:</b>	Wear positive-pressure, self contained breathing apparatus.
	<b>SPECIFIC METHODS OF FIRE FIGHTING:</b>	Large volume of water directly on flame or burning surface. Soak thoroughly with water to cool and prevent re-ignition.
<b>REACTIVITY DATA</b>	<b>CHEMICAL STABILITY:</b>	Stable under normal handling and storage conditions.
	<b>INCOMPATIBILITY:</b>	Materials to avoid: organic solvents, esters, amines, aldehydes, oils, petrols.
	<b>DECOMPOSITION PRODUCTS:</b>	Under high heat, non flaming conditions, small amounts of aromatic hydrocarbons, predominantly styrene and ethyl benzene are generate
	<b>OTHER SAFE HANDLING INFORMATION:</b>	Exposed to intense sunlight over prolonged periods, the surface of the boards degrades into fine dust. This material contains a brominated flame retardant additive to inhibit accidental ignition from small fire sources. During shipment, storage, installation and use, this material should not be exposed to flame or other ignition sources.

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.....  
**Lonestar Industries, LLC.**

**MASONRY CLEANER**



# MATERIAL SAFETY DATA SHEET

## PROSOCO, Inc.



### I PRODUCT IDENTIFICATION

**MANUFACTURER'S NAME AND ADDRESS:** PROSOCO, Inc.  
3741 Greenway Circle  
Lawrence, KS 66046

**EMERGENCY TELEPHONE NUMBERS:**  
8:00 AM – 5:00 PM CST Monday-Friday:  
NON-BUSINESS HOURS (INFOTRAC):

785-865-4200  
800-535-5053

**PRODUCT TRADE NAME:** Sure Klean® 600 Detergent

### II HAZARDOUS INGREDIENTS

CHEMICAL NAME	(COMMON NAME)	CAS NO.	NFPA CODE	ACGIH TLV/TWA	OSHA PEL/TWA
Hydrogen Chloride Solution	(Hydrochloric Acid)	7647-01-0	3,0,0,-	5 ppm (Ceiling)	5 ppm (Ceiling)

Percent content of hazardous ingredients withheld as trade secret pursuant to Massachusetts regulations.

### III TYPICAL PHYSICAL DATA

	BOILING POINT (°F)	VAPOR PRESSURE (mm Hg)	VAPOR DENSITY	EVAPORATION RATE (Butyl Acetate = 1)
Hydrogen Chloride Solution	150°F	78 (68°F)	1.27	< 1.00
		SPECIFIC GRAVITY	SOLUBILITY IN WATER	APPEARANCE AND ODOR
Sure Klean® 600 Detergent		1.13	100%	Clear liquid with slight amber color, pungent odor

### IV FIRE AND EXPLOSION HAZARD DATA

#### EMERGENCY OVERVIEW

Sure Klean® 600 Detergent is a slightly amber-colored liquid with an irritating pungent odor. The vapor and mist from this product may cause irritation of the respiratory tract, wear appropriate respiratory protection. Wear splash-proof chemical goggles when handling this product.

**FLASH POINT (METHOD):** None

**FLAMMABLE LIMITS:** Unknown

**EXTINGUISHING MEDIA:** Any media appropriate for surrounding the type of fire involving this product.

**SPECIAL FIRE FIGHTING PROCEDURES:** Wear NIOSH/MSHA approved self-contained breathing apparatus with a full face piece operated in pressure demand or other positive pressure mode and full body protective clothing when fighting fires. Water may be used to cool closed containers.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Reacts with most metals to release hydrogen gas which can form explosive mixtures with air. Extinguish all nearby sources of ignition.

### V HEALTH HAZARD DATA

**PRIMARY ROUTES OF EXPOSURE:** Inhalation, skin, eyes.

**CARCINOGEN INFORMATION:** Not listed (OSHA, IARC, NTP). No standard carcinogenicity studies for hydrogen chloride were identified. Two studies on rats were conducted to determine if hydrogen chloride increased the formation of nasal tumors or increased the carcinogenic potential of formaldehyde. In both studies the rats were exposed to 10-ppm hydrogen chloride, 6 hours per day, 5 days per week. One study lasted 84 weeks while the other lasted the animals' lifetime. Hydrogen chloride did not cause an increase in nasal tumors and did not increase the carcinogenicity of formaldehyde.

**MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:** Asthma, bronchitis, emphysema, and other lung conditions; and chronic nose, sinus, or throat conditions. Exposures of 100 ppm for six hours a day for 50 days caused only slight unrest and irritation to the eyes and nose of rabbits, guinea pigs and pigeons. The hemoglobin content of the blood was also slightly diminished. Monkeys receiving 20 exposures of 33 ppm for six hours did not display any adverse effects. Higher exposures (unspecified) have caused weight loss which paralleled the severity of exposure. Baboons exposed to 500, 5000 or 10,000 ppm for 15 minutes did not have significant alterations in any pulmonary function parameters 3 days or 3 months after exposure. In humans long term overexposure has been associated with erosion of the teeth.

**EFFECTS OF OVEREXPOSURE:** Causes severe damage to eyes and even blindness very rapidly. Causes burns, possible deep ulceration to skin. Breathing of mist or dust can cause damage to nasal and respiratory passages. Swallowing results in severe damage to mucous membranes and deep tissue; can result in death on penetration to vital areas.

**EYE CONTACT:** Liquid or concentrated vapors can cause eye irritation, severe burns and permanent damage including blindness even after a short exposure to small amounts.

**SKIN CONTACT:** Liquid or concentrated vapors can rapidly cause burning of skin. Repeated or prolonged contact with dilute solutions and concentrated vapors can cause irritation and dermatitis.

**INHALATION:** Hydrogen chloride gas, mist, and vapor can cause irritation of respiratory tract, with burning, choking, coughing, headaches, and rapid heartbeat. 35 ppm can cause irritation of the throat and 50-100 ppm is nearly unbearable for one hour. Inflammation, destruction of nasal passages and breathing difficulties can occur with high concentrations and may be delayed in onset. Inhalation of sufficiently high concentrations may result in laryngeal spasms, laryngeal edema or rapidly developing pulmonary edema. Mists may also cause bleeding of the nose and gums, and ulceration of the nasal or oral mucosa. 1,000-2,000 ppm can be fatal.

**INGESTION:** Unlikely route of exposure. Can cause severe burns of mouth, esophagus, and stomach. Nausea, pain, and vomiting may occur. Depending on the amount swallowed, holes may develop in the intestinal tract, kidney inflammation, shock and death can occur.

#### **EMERGENCY AND FIRST AID PROCEDURES:**

**EYE CONTACT:** Rinse eyes with large quantities of water for at least 15 minutes, holding eyelids apart to ensure flushing of the entire eye surface. Get medical attention immediately.

**SKIN CONTACT:** Remove contaminated clothing and flush exposed area with large quantities of water for at least 15 minutes. Launder contaminated clothing before reuse. Discard contaminated shoes. Get immediate medical attention.

**INHALATION:** Remove person to fresh air. If breathing stops, administer artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Get medical attention immediately.

**INGESTION:** If conscious, give large quantities of water or milk. Do not induce vomiting. Get medical attention immediately. Do not give anything by mouth to an unconscious or convulsing person.

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## **VI REACTIVITY DATA**

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**STABILITY:** Stable

**CONDITIONS TO AVOID:** Contact with strong bases (alkali), can cause violent reaction generating large amounts of heat.

**INCOMPATIBILITY (MATERIALS TO AVOID):** Metals, oxidizing agents, nitric acid, chlorates, sulfides, and cyanides. Contact with sulfides releases poisonous flammable hydrogen sulfide. Mercuric sulfate, perchloric acid, carbides of calcium, cesium, rubidium, acetylides of cesium and rubidium, phosphides of calcium and uranium, and lithium silicide.

Hydrogen Chloride can react with cyanide, forming lethal concentrations of hydrocyanic acid. Do not enter confined spaces such as tanks or pits without proper entry procedures as required by 29 CFR 1910.146.

**HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS:** Hydrogen gas when contacting metals, hydrogen chloride, carbon monoxide and carbon dioxide. Hydrogen gas generation has the highest potential for harm in confined or poorly ventilated areas where concentrations can approach flammable or explosive concentrations.



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## VII SPILL OR LEAK PROCEDURES

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**SPILL, LEAK, WASTE DISPOSAL PROCEDURES:** Evacuate immediate area where concentrated fumes are present. Cleanup personnel must wear proper protective equipment. Provide adequate ventilation. Completely contain spilled material with dikes, etc., and prevent runoff into ground and surface waters or into sewers.

Dilution with water will decrease the fumes generated from spilled product. Spills and leaks should be neutralized by pouring dry soda ash or lime over the affected area. Concentrated product should be diluted with water before adding neutralizing agents to keep splattering and fumes to a minimum. Approximately 2.5 pounds of lime are required to neutralize one gallon of this product. Allow powdered material to remain on spill for five to ten minutes and flush thoroughly with water. Neutralized material, both liquid and solid, should be recovered for proper disposal.

**WASTE DISPOSAL METHODS:** Recovered solids or liquids may be disposed of in a permitted waste management facility. Neutralized materials may be discharged to a sanitary sewer with approval of the receiving treatment plant. Typical pH range of 6-10 is generally considered appropriate for discharge. Consult federal, state, and/or local authorities for approved procedure. For additional information regarding handling and disposal of rinse-water, please review Technical Bulletin 200-CW "Controlled Handling of Cleaning Wastewater". Empty containers must be triple rinsed before disposal in a permitted sanitary landfill. Check local restrictions.

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## VIII SPECIAL PROTECTION INFORMATION

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**RESPIRATORY PROTECTION:** For vapor or mist concentrations which exceed or are likely to exceed 5 ppm Threshold Limit Value (TLV), wear a NIOSH/MSHA approved half-mask respirator with acid gas cartridges. NIOSH/MSHA approved self-contained breathing apparatus (SCBA) or pressure demand supplied air respirator with full face piece should be worn when concentrations exceed 50 ppm. A SCBA is recommended by NIOSH during leaks and/or emergencies. Follow all applicable respirator use standards and regulations.

**VENTILATION:** Provide sufficient general and/or local exhaust ventilation to maintain exposure below the TLV.

**PROTECTIVE CLOTHING:** Wear splash resistant neoprene or PVC rain suit.

**PROTECTIVE GLOVES:** Nitrile rubber type, neoprene or PVC with acceptable acid resistance.

**EYE PROTECTION:** Chemical splash goggles and/or full face shield (8 inch minimum) in compliance with OSHA regulations. Do not wear contact lenses because they may contribute to the severity of an eye injury.

**OTHER PROTECTIVE EQUIPMENT:** Acid-resistant rubber boots, headgear. Eyewash and safety shower.

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## IX SPECIAL PRECAUTIONS

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**WORK PRACTICES:** Proper work practices and planning should be utilized to avoid contact with workers, passersby, and non-masonry surfaces. Brush on or apply at the lowest practical pressure. Do not atomize during application. Application equipment, scaffolding, swing stages and support systems must be constructed of acid resistant materials. Use only well maintained staging and scaffolding that is equipped with steel cable. This product will attack nylon, cotton and hemp roping. Use polypropylene ropes and safety lines. Dilution and application equipment should be of polypropylene or HDPE construction. Beware of wind drift. Wind-drift hazards may be diminished by pre-rinsing with low pressure water before pressure washing. Divert pedestrian traffic around work areas. See the Product Data sheet and label for specific precautions to be taken during use. Smoking, eating and drinking should be discouraged during the use of this product. Wash hands after handling or use.

**This product is only to be used as supplied and specified.** Do not alter, mix with chlorine-type bleaches or other chemicals, or dilute product except as specified on the label and Product Data sheet.

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:** Use proper safety equipment (see section VIII) when handling. Store in a cool, well-ventilated area. Separate from oxidizing agents, nitric acid, alkalis, chlorates, sulfides, etc. (see section VI). Do not remove product label. Material diluted for application must be properly labeled and stored in acid-resistant containers with rubber-lined steel, polypropylene or polyethylene construction.

Addition of acidic cleaner to water releases heat, which can result in violent boiling and splattering. **Always add cleaner to water slowly and in small amounts. Never use hot water. Never add water to acidic cleaners.**

Containers of this material may be hazardous when emptied, since emptied containers retain product residues (vapor, liquid, and/or solid). All hazard precautions given in this data sheet must be observed.

**OTHER PRECAUTIONS:** Do not get in eyes, on skin or on clothing. Can cause severe injury or blindness. Avoid breathing mist or vapor. Provide ventilation sufficient to limit employee exposure below OSHA permissible limit. Do not take internally. Wash thoroughly after handling.



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**X REGULATORY INFORMATION**

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**SHIPPING:** This product carries the shipping description "UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (Hydrochloric acid), 8, II" for shipping by ground, air and ocean transport. The product meets applicable DOT and UN standards when shipped in the original, unopened factory packaging, although container size may be limited for air transport. Some parcel shipping companies may limit container sizes.

**NATIONAL MOTOR FREIGHT CLASSIFICATION:** 44157 Sub 3    **Rate Class:** 85

**SARA 313 REPORTABLE:**

CHEMICAL NAME	CAS	UPPERBOUND CONCENTRATION % BY WEIGHT
Hydrogen Chloride	7647-01-0	30 %

**CALIFORNIA PROPOSITION 65:**            **This product contains no chemicals listed under California's Proposition 65.**

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**XI OTHER**

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**MSDS Status:**            **Date of Revision:** April 6, 2010  
**For Product Manufactured After:** N/A – No formulation change  
**Changes:** Regulatory Review. No changes made.  
**Item #:** 10020  
**Approved By:** Regulatory Department

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**DISCLAIMER:**

The information contained on the Material Safety Data Sheet has been compiled from data considered accurate. This data is believed to be reliable, but it must be pointed out that values for certain properties are known to vary from source to source. **PROSOCO, Inc. expressly disclaims any warranty express or implied as well as any liability for any injury or loss arising from the use of this information or the materials described.** This data is not to be construed as absolutely complete since additional data may be desirable when particular conditions or circumstances exist. It is the responsibility of the user to determine the best precautions necessary for the safe handling and use of this product for his unique application. This data relates only to the specific material designated and is not to be used in combination with any other material. Many federal and state regulations pertain directly or indirectly to the product's end use and disposal of containers and unused material. It is the purchaser's responsibility to familiarize himself with all applicable regulations.

**DATE OF PREPARATION:** April 6, 2010

# MATERIAL SAFETY DATA SHEET



## I PRODUCT IDENTIFICATION

**MANUFACTURER'S NAME AND ADDRESS:** PROSOCO, Inc.  
3741 Greenway Circle  
Lawrence, KS 66046

**EMERGENCY TELEPHONE NUMBERS:**  
8:00 AM – 5:00 PM CST Monday-Friday: 785-865-4200  
NON-BUSINESS HOURS (INFOTRAC): 800/535-5053

**PRODUCT TRADE NAME:** Sure Klean® Custom Masonry Cleaner

## II HAZARDOUS INGREDIENTS

CHEMICAL NAME	(COMMON NAME)	CAS NO.	NFPA CODE	ACGIH TLV/TWA	OSHA PEL/TWA
Hydrogen Chloride Solution	(Hydrochloric Acid)	7647-01-0	3,0,0,-	5 ppm (Ceiling)	5 ppm (Ceiling)

Percent content of hazardous ingredients withheld as trade secret pursuant to Massachusetts regulations.

## III PHYSICAL DATA

	BOILING POINT (°F)	VAPOR PRESSURE (mm Hg)	VAPOR DENSITY (1=Air)	EVAPORATION RATE (1=Butyl Acetate)
Hydrogen Chloride Solution	150°F	78 (68°F)	1.27	< 1.00
Sure Klean® Custom Masonry Cleaner		SPECIFIC GRAVITY	SOLUBILITY IN WATER	APPEARANCE AND ODOR
		1.13	100%	Clear liquid with slight amber color, pungent odor

## IV FIRE AND EXPLOSION HAZARD DATA

### EMERGENCY OVERVIEW

Sure Klean® Custom Masonry Cleaner is a slightly amber-colored liquid with an irritating pungent odor. The vapor and mist from this product may cause irritation of the respiratory tract, wear appropriate respiratory protection. Wear splash-proof chemical goggles when handling this product.

**FLASH POINT (METHOD):** None

**FLAMMABLE LIMITS:** Unknown

**EXTINGUISHING MEDIA:** Any media appropriate for surrounding the type of fire involving this product.

**SPECIAL FIRE FIGHTING PROCEDURES:** Wear NIOSH/MSHA approved self-contained breathing apparatus with a full face piece operated in pressure demand or other positive pressure mode and full body protective clothing when fighting fires. Water may be used to cool closed containers.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Reacts with most metals to release hydrogen gas which can form explosive mixtures with air. Extinguish all nearby sources of ignition.

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## V HEALTH HAZARD DATA

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**PRIMARY ROUTES OF EXPOSURE:** Inhalation, skin, eyes.

**CARCINOGEN INFORMATION:** Not listed (OSHA, IARC, NTP). No standard carcinogenicity studies for hydrogen chloride were identified. Two studies on rats were conducted to determine if hydrogen chloride increased the formation of nasal tumors or increased the carcinogenic potential of formaldehyde. In both studies the rats were exposed to 10-ppm hydrogen chloride, 6 hours per day, 5 days per week. One study lasted 84 weeks while the other lasted the animals' lifetime. Hydrogen chloride did not cause an increase in nasal tumors and did not increase the carcinogenicity of formaldehyde.

**MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:** Asthma, bronchitis, emphysema, and other lung conditions; and chronic nose, sinus, or throat conditions. Exposures of 100 ppm for six hours a day for 50 days caused only slight unrest and irritation to the eyes and nose of rabbits, guinea pigs and pigeons. The hemoglobin content of the blood was also slightly diminished. Monkeys receiving 20 exposures of 33 ppm for six hours did not display any adverse effects. Higher exposures (unspecified) have caused weight loss which paralleled the severity of exposure. Baboons exposed to 500, 5000 or 10,000 ppm for 15 minutes did not have significant alterations in any pulmonary function parameters 3 days or 3 months after exposure. In humans long term overexposure has been associated with erosion of the teeth.

**EFFECTS OF OVER EXPOSURE:** Causes severe damage to eyes and even blindness very rapidly. Causes burns, possible deep ulceration to skin. Breathing of mist or dust can cause damage to nasal and respiratory passages. Swallowing results in severe damage to mucous membranes and deep tissue; can result in death on penetration to vital areas.

**EYE CONTACT:** Liquid or concentrated vapors can cause eye irritation, severe burns and permanent damage including blindness even after a short exposure to small amounts.

**SKIN CONTACT:** Liquid or concentrated vapors can rapidly cause burning of skin. Repeated or prolonged contact with dilute solutions and concentrated vapors can cause irritation and dermatitis.

**INHALATION:** Hydrogen chloride gas, mist, and vapor can cause irritation of respiratory tract, with burning, choking, coughing, headaches, and rapid heartbeat. 35 ppm can cause irritation of the throat and 50-100 ppm is nearly unbearable for one hour. Inflammation, destruction of nasal passages and breathing difficulties can occur with high concentrations and may be delayed in onset. Inhalation of sufficiently high concentrations may result in laryngeal spasms, laryngeal edema or rapidly developing pulmonary edema. Mists may also cause bleeding of the nose and gums, and ulceration of the nasal or oral mucosa. 1,000-2,000 ppm can be fatal.

**INGESTION:** Unlikely route of exposure. Can cause severe burns of mouth, esophagus, and stomach. Nausea, pain, and vomiting may occur. Depending on the amount swallowed, holes may develop in the intestinal tract, kidney inflammation, shock and death can occur.

### **EMERGENCY AND FIRST AID PROCEDURES:**

**EYE CONTACT:** Rinse eyes with large quantities of water for at least 15 minutes, holding eyelids apart to ensure flushing of the entire eye surface. Get medical attention immediately.

**SKIN CONTACT:** Remove contaminated clothing and flush exposed area with large quantities of water for at least 15 minutes. Launder contaminated clothing before reuse. Discard contaminated shoes. Get immediate medical attention.

**INHALATION:** Remove person to fresh air. If breathing stops, administer artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Get medical attention immediately.

**INGESTION:** If conscious, give large quantities of water or milk. Do not induce vomiting. Get medical attention immediately. Do not give anything by mouth to an unconscious or convulsing person.

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## VI REACTIVITY DATA

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**STABILITY:** Stable

**CONDITIONS TO AVOID:** Contact with strong bases (alkali), can cause violent reaction generating large amounts of heat.

**INCOMPATIBILITY (MATERIALS TO AVOID):** Metals, oxidizing agents, nitric acid, chlorates, sulfides, and cyanides. Contact with sulfides releases poisonous flammable hydrogen sulfide. Mercuric sulfate, perchloric acid, carbides of calcium, cesium, rubidium, acetylides of cesium and rubidium, phosphides of calcium and uranium, and lithium silicide.

Hydrogen Chloride can react with cyanide, forming lethal concentrations of hydrocyanic acid. Do not enter confined spaces such as tanks or pits without proper entry procedures as required by 29 CFR 1910.146.

**HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS:** Hydrogen gas when contacting metals, hydrogen chloride, carbon monoxide and carbon dioxide. Hydrogen gas generation has the highest potential for harm in confined or poorly ventilated areas where concentrations can approach flammable or explosive concentrations.

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## VII SPILL OR LEAK PROCEDURES

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**SPILL, LEAK, WASTE DISPOSAL PROCEDURES:** Evacuate immediate area where concentrated fumes are present. Cleanup personnel must wear proper protective equipment. Provide adequate ventilation. Completely contain spilled material with dikes, etc., and prevent runoff into ground and surface waters or into sewers.

Dilution with water will decrease the fumes generated from spilled product. Spills and leaks should be neutralized by pouring dry soda ash or lime over the affected area. Concentrated product should be diluted with water before adding neutralizing agents to keep splattering and fumes to a minimum. Approximately 2.5 pounds of lime are required to neutralize one gallon of this product. Allow powdered material to remain on spill for five to ten minutes and flush thoroughly with water. Neutralized material, both liquid and solid, should be recovered for proper disposal.

**WASTE DISPOSAL METHODS:** Recovered solids or liquids may be disposed of in a permitted waste management facility. Neutralized materials may be discharged to a sanitary sewer with approval of the receiving treatment plant. Typical pH range of 6-10 is generally considered appropriate for discharge. Consult federal, state, and/or local authorities for approved procedure. For additional information regarding handling and disposal of rinse-water, please review Technical Bulletin 200-CW "Controlled Handling of Cleaning Wastewater". Empty containers must be triple rinsed before disposal in a permitted sanitary landfill. Check local restrictions.

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## VIII SPECIAL PROTECTION INFORMATION

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**RESPIRATORY PROTECTION:** For vapor or mist concentrations which exceed or are likely to exceed 5 ppm Threshold Limit Value (TLV), wear a NIOSH/MSHA approved half-mask respirator with acid gas cartridges. NIOSH/MSHA approved self-contained breathing apparatus (SCBA) or pressure demand supplied air respirator with full face piece should be worn when concentrations exceed 50 ppm. A SCBA is recommended by NIOSH during leaks and/or emergencies. Follow all applicable respirator use standards and regulations.

**VENTILATION:** Provide sufficient general and/or local exhaust ventilation to maintain exposure below the TLV.

**PROTECTIVE CLOTHING:** Wear splash resistant neoprene or PVC rain suit.

**PROTECTIVE GLOVES:** Nitrile rubber type, neoprene or PVC with acceptable acid resistance.

**EYE PROTECTION:** Chemical splash goggles and/or full face shield (8 inch minimum) in compliance with OSHA regulations. Do not wear contact lenses because they may contribute to the severity of an eye injury.

**OTHER PROTECTIVE EQUIPMENT:** Acid-resistant rubber boots, headgear. Eyewash and safety shower.

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## IX SPECIAL PRECAUTIONS

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**WORK PRACTICES:** Proper work practices and planning should be utilized to avoid contact with workers, passersby, and non-masonry surfaces. Brush on or apply at the lowest practical pressure. Do not atomize during application. Application equipment, scaffolding, swing stages and support systems must be constructed of acid resistant materials. Use only well maintained staging and scaffolding that is equipped with steel cable. This product will attack nylon, cotton and hemp roping. Use polypropylene ropes and safety lines. Dilution and application equipment should be of polypropylene or HDPE construction. Beware of wind drift. Wind-drift hazards may be diminished by pre-rinsing with low pressure water before pressure washing. Divert pedestrian traffic around work areas. See the Product Data sheet and label for specific precautions to be taken during use. Smoking, eating and drinking should be discouraged during the use of this product. Wash hands after handling or use.

**This product is only to be used as supplied and specified.** Do not alter, mix with chlorine-type bleaches or other chemicals, or dilute product except as specified on the label and Product Data sheet.

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:** Use proper safety equipment (see section VIII) when handling. Store in a cool, well-ventilated area. Separate from oxidizing agents, nitric acid, alkalis, chlorates, sulfides, etc. (see section VI). Do not remove product label. Material diluted for application must be properly labeled and stored in acid-resistant containers with rubber-lined steel, polypropylene or polyethylene construction.

Addition of acidic cleaner to water releases heat, which can result in violent boiling and spattering. **Always add cleaner to water slowly and in small amounts. Never use hot water. Never add water to acidic cleaners.**

Containers of this material may be hazardous when emptied, since emptied containers retain product residues (vapor, liquid, and/or solid). All hazard precautions given in this data sheet must be observed.

**OTHER PRECAUTIONS:** Do not get in eyes, on skin or on clothing. Can cause severe injury or blindness. Avoid breathing mist or vapor. Provide ventilation sufficient to limit employee exposure below OSHA permissible limit. Do not take internally. Wash thoroughly after handling.

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## X REGULATORY INFORMATION

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**SHIPPING:** This product carries the shipping description "UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (Hydrochloric acid), 8, II" for shipping by ground, air and ocean transport. The product meets applicable DOT and UN standards when shipped in the original, unopened factory packaging, although container size may be limited for air transport. Some parcel shipping companies may limit container sizes.

**NATIONAL MOTOR FREIGHT CLASSIFICATION:** 44157 Sub 3    **Rate Class:** 85

**SARA 313 REPORTABLE:**

CHEMICAL NAME	CAS	UPPERBOUND CONCENTRATION % BY WEIGHT
Hydrogen Chloride	7647-01-0	30 %

**CALIFORNIA PROPOSITION 65:**    This product contains no chemicals listed under California's Proposition 65.

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## XI OTHER

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**MSDS Status:**    **Date of Revision:** April 5, 2007  
**For Product Manufactured After:** January 1, 2007  
**Changes:** Updated Shipping description for Regulatory changes  
**Item #:** 35001  
**Approved By:** Regulatory Department

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## DISCLAIMER:

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**DATE OF PREPARATION:** April 5, 2007



# MATERIAL SAFETY DATA SHEET



## I PRODUCT IDENTIFICATION

**MANUFACTURER'S NAME AND ADDRESS:** PROSOCO, Inc.  
3741 Greenway Circle  
Lawrence, KS 66046

**EMERGENCY TELEPHONE NUMBERS:**  
8:00 AM – 5:00 PM CST Monday-Friday: 785/865-4200  
NON-BUSINESS HOURS (INFOTRAC): 800/535-5053

**PRODUCT TRADE NAME:** Sure Klean<sup>®</sup> Light Duty Concrete Cleaner

## II HAZARDOUS INGREDIENTS

CHEMICAL NAME	(COMMON NAME)	CAS NO.	NFPA CODE	ACGIH TLV/TWA	OSHA PEL/TWA
Orthophosphoric Acid	(Phosphoric Acid)	7664-38-2	3,0,1,-	1 mg/m <sup>3</sup>	1 mg/m <sup>3</sup>
2,3,4,5,6-Pentahydroxy-1-Hexanoic Acid	(Gluconic Acid)	526-95-4	1,0,0,-	Not listed	Not listed

Percentage content of hazardous ingredients withheld as trade secret pursuant to OSHA regulations.

## III PHYSICAL DATA

	BOILING POINT (°F)	VAPOR PRESSURE (mm Hg)	VAPOR DENSITY (Air = 1)	EVAPORATION RATE (Butyl Acetate = 1)
Orthophosphoric Acid	243	0.0285 (36°F)	N/A	N/A
2,3,4,5,6-Pentahydroxy-1-Hexanoic Acid	212	17.5 (68°F)	N/A	N/A

	SPECIFIC GRAVITY	SOLUBILITY IN WATER	APPEARANCE AND ODOR
Sure Klean <sup>®</sup> Light Duty Concrete Cleaner	1.129	100%	Clear liquid with light odor

## IV FIRE AND EXPLOSION HAZARD DATA

### EMERGENCY OVERVIEW

Sure Klean<sup>®</sup> Light Duty Concrete Cleaner is a corrosive liquid that may cause damage to the skin and eyes. May cause respiratory tract irritation. Wear proper safety equipment to avoid exposure.

**FLASH POINT (METHOD):** None.

**FREEZE POINT (METHOD):** 19.8°F (ASTM D 1177)

**FLAMMABLE LIMITS:** No applicable information found.

**EXTINGUISHING MEDIA:** Any media appropriate for surrounding the type of fire involving this product.

**SPECIAL FIRE FIGHTING PROCEDURES:** Wear NIOSH/MSHA approved self-contained breathing apparatus with a full face piece operated in pressure demand or other positive pressure mode, and full body protective clothing when fighting fires. Water spray may be used to cool closed containers.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Reacts with most metals to release hydrogen gas; which can form explosive mixtures with air. Risk increases in poorly ventilated spaces. Extinguish all nearby sources of ignition.

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## V HEALTH HAZARD DATA

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**PRIMARY ROUTES OF EXPOSURE:** Skin, eyes, inhalation, ingestion.

**CARCINOGEN INFORMATION:** Not listed (OSHA, IARC, NTP).

**MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:** Pre-existing skin disorders, eye problems, or impaired liver, kidney, or respiratory function may be aggravated.

**EFFECTS OF OVER EXPOSURE:** Causes burns to eyes that may cause permanent damage. Causes burns to skin. Breathing of mist can cause irritation to nasal and respiratory passages. Ingestion can cause damage to mucous membranes.

**EYE CONTACT:** Liquid or concentrated vapors can cause eye irritation, burns and permanent damage. Burning sensation may not be immediately noticeable.

**SKIN CONTACT:** Liquid can cause burning of skin. Burning may not be immediately noticeable.

**INHALATION:** Vapors and mists are irritating to the nose, throat, and mucous membranes. Breathing high concentrations may result in death.

**INGESTION:** Causes irritation of mouth, esophagus, and stomach; nausea, pain, and vomiting frequently occur.

### **EMERGENCY AND FIRST AID PROCEDURES:**

**EYE CONTACT:** Rinse eyes with large quantities of water for at least 15 minutes, holding eyelids apart to ensure flushing of the entire eye surface. Get medical attention immediately.

**SKIN CONTACT:** Remove contaminated clothing and flush exposed area with large quantities of water for at least 15 minutes. Launder contaminated clothing and shoes before reuse. Get immediate medical attention.

**INHALATION:** Remove person to fresh air. If breathing stops, administer artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**INGESTION:** If conscious, give large quantities of water or milk. Do not induce vomiting. Get medical attention immediately. Do not give anything by mouth to an unconscious or convulsing person.

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## VI REACTIVITY DATA

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**STABILITY:** Stable.

**CONDITIONS TO AVOID:** Contact with strong bases (alkalis), can cause violent reaction generating large amounts of heat.

**INCOMPATIBILITY (MATERIALS TO AVOID):** Metals, oxidizing agents, reducing agents, sulfides, cyanides, sulfites, and alkalis.

**HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS:** Hydrogen gas when contacting metals, carbon monoxide, carbon dioxide, and phosphorus oxide fumes.

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## VII SPILL OR LEAK PROCEDURES

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**SPILL, LEAK, WASTE DISPOSAL PROCEDURES:** Evacuate immediate area where concentrated fumes are present. Cleanup personnel must wear proper protective equipment. Completely contain spilled material with dikes, etc., and prevent runoff into ground and surface waters or into sewers. Dilute with water and neutralize with soda ash or dilute caustic soda. Neutralized material, both liquid and solid, should be recovered for proper disposal. Provide adequate ventilation.

**WASTE DISPOSAL METHODS:** Recovered solids or liquids may be sent to a licensed reclaimer or disposed of in a permitted waste management facility. Neutralized liquid residues should be acceptable for discharge to a sanitary sewer with permission of the receiving facility. Consult federal, state, and/or local authorities for approved procedure. Empty containers may be triple rinsed with water to remove all residues and disposed of in a sanitary landfill.



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## VIII SPECIAL PROTECTION INFORMATION

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**RESPIRATORY PROTECTION:** Phosphoric acid has a very low vapor pressure at room temperature and is not expected to present a significant inhalation hazard under ambient conditions. For vapor or mist concentrations; which exceed or are likely to exceed 1 mg/m<sup>3</sup> Threshold Limit Value (TLV) for phosphoric acid, a NIOSH/MSHA approved supplied air respirator in the continuous feed mode should be utilized. A NIOSH approved dust/mist respirator may be used for nuisance level mists. Follow all applicable respirator use standards and regulations.

**VENTILATION:** Provide sufficient explosion-proof general and/or local exhaust ventilation to maintain exposure below the TLV.

**PROTECTIVE CLOTHING:** Wear neoprene or PVC rain suit. Need for full body splash protection is dependent on application methods and job-site conditions. User should assess conditions and act in accordance with OSHA regulations regarding employee health and safety.

**PROTECTIVE GLOVES:** Rubber type, neoprene or PVC with acceptable acid resistance.

**EYE PROTECTION:** Chemical splash goggles and/or full-face shield (8-inch minimum) in compliance with OSHA regulations. Do not wear contact lenses because they may contribute to the severity of an eye injury.

**OTHER PROTECTIVE EQUIPMENT:** Acid-resistant rubber boots, headgear as needed depending on application methods and job-site conditions. Eyewash and safety shower should be readily accessible.

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## IX SPECIAL PRECAUTIONS

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**WORK PRACTICES:** Proper work practices and planning should be utilized to avoid contact with workers, passersby, and non-masonry surfaces. Do not atomize during application. Beware of wind drift. Pre-rinsing with low-pressure water immediately before pressure washing effectively reduces product content in pressure washing residues. See the Product Data sheet and label for specific precautions to be taken during use. Smoking, eating and drinking should be prohibited during the use of this product. Wash hands before breaks and at the end of a shift.

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:** Use proper safety equipment (see section VIII) when handling. Store in a cool, well-ventilated area. Separate from oxidizing agents, reducing agents, alkalis, cyanides, sulfides, etc. (see section VI). Dilution, storage and application equipment should be of HDPE, polypropylene or other acid-resistant materials.

Addition of acidic cleaner to water releases heat, which can result in violent boiling and spattering. **Always add cleaner to water slowly and in small amounts. Never use hot water. Never add water to acidic cleaners.**

Containers of this material may be hazardous when emptied, since emptied containers retain product residues (vapor, liquid, and/or solid). All hazard precautions given in this data sheet must be observed.

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## X REGULATORY INFORMATION

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**SHIPPING:** This product carries the proper shipping description **UN1760, Corrosive Liquid, N.O.S. (Phosphoric And Gluconic Acid), 8, II** for shipping by all modes in domestic and international transport.

**NATIONAL MOTOR FREIGHT CLASSIFICATION:** NMFC #: 44157 Sub 3 Class Rate: 85

**SARA 313 REPORTABLE:**

CHEMICAL NAME	CAS	UPPERBOUND CONCENTRATION % BY WEIGHT
NA		

**CALIFORNIA PROPOSITION 65:** Contains no chemicals listed under California's Proposition 65.

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XI OTHER

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**MSDS Status:**           **Date of Revision:** April 18, 2007  
**For Product Manufactured After:** N/A. No formulary changes.  
**Changes:** Updated Shipping Description (Section X) for DOT Regulation Compliance  
**Item #:** 10088  
**Approved By:** Regulatory Department

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**DATE OF PREPARATION:**           April 18, 2007

# MATERIAL SAFETY DATA SHEET



## I PRODUCT IDENTIFICATION

**MANUFACTURER'S NAME AND ADDRESS:** PROSOCO, Inc.  
3741 Greenway Circle  
Lawrence, KS 66046

**EMERGENCY TELEPHONE NUMBERS:**  
8:00 AM – 6:00 PM CST Monday-Friday: 785-865-4200  
NON-BUSINESS HOURS (INFOTRAC): 800/535-5053

**PRODUCT TRADE NAME:** Enviro Klean<sup>®</sup> Safety Klean

## II HAZARDOUS INGREDIENTS

CHEMICAL NAME	(COMMON NAME)	CAS NO.	NFPA CODE	ACGIH TLV/TWA	OSHA PEL/TWA
Proprietary Organic Salt*	(None)	Not Available	1,0,1,B	Not Established	Not Established
Cationic surfactant	Cationic surfactant	Not Available	Not Available	Not Established	Not Established

\*Specific chemical identity withheld as a trade secret pursuant to OSHA regulations.

## III PHYSICAL DATA

	BOILING POINT (°F)	VAPOR PRESSURE (mm Hg)	VAPOR DENSITY (1=Air)	EVAPORATION RATE (1 = Ethyl ether)
Proprietary Organic Salt	212°F	Not Available	Not Available	Not Available
Cationic surfactant	Not Available	Not Available	>1.0	>1.0

	SPECIFIC GRAVITY	SOLUBILITY IN WATER	APPEARANCE AND ODOR
Enviro Klean <sup>®</sup> Safety Klean	1.15	100%	Clear, amber liquid, clean odor

## IV FIRE AND EXPLOSION HAZARD DATA

### EMERGENCY OVERVIEW

Enviro Klean<sup>®</sup> Safety Klean is an amber-colored liquid with a clean-smelling odor. Wear splash-proof chemical goggles when handling this product. Product may cause burns to eyes when in direct contact.

**FLASH POINT (METHOD):** Does not ignite. (ASTM D 3278)

**FLAMMABLE LIMITS:** Unknown

**EXTINGUISHING MEDIA:** Any media appropriate for surrounding the type of fire involving this product.

**SPECIAL FIRE FIGHTING PROCEDURES:** Wear NIOSH/MSHA approved self-contained breathing apparatus with a full face piece operated in pressure demand or other positive pressure mode and full body protective clothing when fighting fires. Water may be used to cool closed containers.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Contact with most metals at temperatures above 140 degrees F may cause reaction and release of hydrogen gas, which can form explosive mixtures with air. Extinguish all nearby sources of ignition.

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## V HEALTH HAZARD DATA

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**PRIMARY ROUTES OF EXPOSURE:** Ingestion, skin, eyes.

**CARCINOGEN INFORMATION:** Not listed (IARC, NTP or ACGIH).

**MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:** None known.

**EFFECTS OF OVEREXPOSURE:** None known.

**EYE CONTACT:** Causes burns to the eyes. Liquid or concentrated vapors can cause eye irritation, severe burns and permanent damage including blindness even after a short exposure to small amounts.

**SKIN CONTACT:** Prolonged or repeated contact with liquid can cause irritation.

**INHALATION:** Not a likely route of exposure due to physical properties of product. Product has a low vapor pressure at room temperature and is not expected to present a significant inhalation hazard under ambient conditions. Product can be irritating to the respiratory tract if inhaled as a mist or if the material vaporized.

**INGESTION:** Unlikely route of exposure. This product may be harmful or fatal if ingested.

### **EMERGENCY AND FIRST AID PROCEDURES:**

**EYE CONTACT:** Rinse eyes with large quantities of water for at least 15 minutes, holding eyelids apart to ensure flushing of the entire eye surface. Get medical attention immediately.

**SKIN CONTACT:** Remove contaminated clothing and flush exposed area with large quantities of water for at least 15 minutes. Launder contaminated clothing before reuse. Discard contaminated shoes. Get immediate medical attention.

**INHALATION:** Remove person to fresh air. If breathing stops, administer artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Get medical attention immediately.

**INGESTION:** If conscious, give large quantities of water or milk. Do NOT induce vomiting. Get medical attention immediately. Do not give anything by mouth to an unconscious or convulsing person.

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## VI REACTIVITY DATA

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**STABILITY:** Normally Stable

**CONDITIONS TO AVOID:** Avoid excessive heat for prolonged periods of time. Contact with strong bases (alkali), can cause violent reaction generating large amounts of heat.

**INCOMPATIBILITY (MATERIALS TO AVOID):** Metals, oxidizing agents, nitric acid, chlorates, sulfides, and cyanides. Contact with sulfides releases poisonous flammable hydrogen sulfide.

**HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS:** Fire creates: Carbon monoxide (CO) and Carbon Dioxide (CO<sub>2</sub>) Hydrogen gas when contacting metals, hydrogen chloride, carbon monoxide and carbon dioxide. Hydrogen gas generation has the highest potential for harm in confined or poorly ventilated areas where concentrations can approach flammable or explosive concentrations.

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## VII SPILL OR LEAK PROCEDURES

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**SPILL, LEAK, WASTE DISPOSAL PROCEDURES:** Follow all precautionary instructions. Supply adequate ventilation. Contain with inert material and prevent from reaching drains, sewers and surface waters. Dilute with water and neutralize with baking soda, lime or other alkaline compound. Collect for disposal. Clean up remaining materials from spill with suitable absorbent.

**WASTE DISPOSAL METHODS:** Product as supplied is classified as a hazardous waste for the characteristic of corrosivity. Recovered solids or liquids may be disposed of in a permitted waste management facility. Neutralized materials may be discharged to a sanitary sewer with approval of the receiving treatment plant. Typical pH range of 6-10 is generally considered appropriate for discharge. Consult federal, state, and/or local authorities for approved procedure. For additional information regarding handling and disposal of rinse-water, please review Technical Bulletin 200-CW "Controlled Handling of Cleaning Wastewater". Empty containers must be triple rinsed before disposal in a permitted sanitary landfill. Check local restrictions. Empty container should be rinsed with water to remove all residue before disposal.

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## VIII SPECIAL PROTECTION INFORMATION

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**RESPIRATORY PROTECTION:** Not normally needed if good ventilation is maintained. Wear a NIOSH approved dust/mist respirator when mists are present.

**VENTILATION:** Product has low vapor pressure and is not expected to evolve vapors. Provide sufficient general and/or local exhaust ventilation when mists are present or if working in enclosed spaces.

**PROTECTIVE CLOTHING:** Wear splash resistant neoprene or PVC rain suit as needed to prevent prolonged skin contact. Wear splash boots as needed.

**PROTECTIVE GLOVES:** Nitrile rubber type, neoprene or PVC with acceptable acid resistance.

**EYE PROTECTION:** Chemical splash goggles and/or full face shield (8 inch minimum) in compliance with OSHA regulations. Do not wear contact lenses because they may contribute to the severity of an eye injury.

**OTHER PROTECTIVE EQUIPMENT:** Acid-resistant rubber boots, headgear. An eyewash should be accessible to the work area. Supply fresh water for rinsing skin.

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## IX SPECIAL PRECAUTIONS

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**WORK PRACTICES:** Proper work practices and planning should be utilized to avoid contact with workers, passersby, and non-masonry surfaces. Brush on or apply at the lowest practical pressure. Do not atomize during application. Application equipment, scaffolding, swing stages and support systems must be constructed of acid resistant materials. Use only well maintained staging and scaffolding that is equipped with steel cable. Use polypropylene ropes and safety lines. Dilution and application equipment should be of polypropylene or HDPE construction. Beware of wind drift. Wind-drift hazards may be diminished by pre-rinsing with low-pressure water before pressure washing. Divert pedestrian traffic around work areas. See the Product Data sheet and label for specific precautions to be taken during use. Smoking, eating and drinking should be discouraged during the use of this product. Wash hands after handling or use.

**This product is only to be used as supplied and specified.** Do not alter, mix with chlorine-type bleaches or other chemicals, or dilute product except as specified on the label and Product Data sheet.

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:** Use proper safety equipment (see section VIII) when handling. Store in a cool, well-ventilated area. Separate from oxidizing agents, nitric acid, alkalis, chlorates, sulfides, etc. (see section VI). Do not remove product label. Material diluted for application must be properly labeled and stored in acid-resistant containers with rubber-lined steel, polypropylene or polyethylene construction..

Addition of acidic cleaner to water releases heat, which can result in violent boiling and spattering. Always add cleaner to water slowly and in small amounts. Never use hot water. Never add water to acidic cleaners.

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## X REGULATORY INFORMATION

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**SHIPPING:** This product is classified as hazardous for shipment by all modes of transport. The Proper Shipping Description is **UN3265, Corrosive Liquid, Acidic, Organic, N.O.S., (Contains Urea Salts), 8, III.** Case quantities of 1-gallon, 1-quart and 1-pint containers are classified as ORM-D Consumer Commodity for domestic ground shipment only. Shipment by air may be restricted or require special packaging.

### SARA 313 REPORTABLE:

CHEMICAL NAME	CAS	UPPERBOUND CONCENTRATION % BY WEIGHT
None		

**CALIFORNIA PROPOSITION 65:** This product contains no chemicals listed under California's Proposition 65.

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**XI OTHER**

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**MSDS Status:**           **Date of Revision:** April 18, 2007  
**For Product Manufactured After:** N/A – No product reformulation  
**Changes:** Updated Shipping Description (Section X) for DOT Regulation Compliance  
**Item #:** 41035  
**Approved By:** Regulatory Department

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**DATE OF PREPARATION:** April 18, 2007



# MATERIAL SAFETY DATA SHEET

## PROSOCO, Inc.



### I PRODUCT IDENTIFICATION

**MANUFACTURER'S NAME AND ADDRESS:** PROSOCO, Inc.  
3741 Greenway Circle  
Lawrence, KS 66046

**EMERGENCY TELEPHONE NUMBERS:**  
8:00 AM – 5:00 PM CST Monday-Friday: 785/865-4200  
NON-BUSINESS HOURS (INFOTRAC): 800/535-5053

**PRODUCT TRADE NAME:** Sure Klean® Vana Trol®

### II HAZARDOUS INGREDIENTS

CHEMICAL NAME	(COMMON NAME)	CAS NO.	NFPA CODE	ACGIH TLV/TWA	OHSA PEL/TWA
Glycolic Acid	(Hydroxyacetic Acid)	79-14-1	3,0,0,-	10 mg/m3 (manufacturer AEL)	10 mg/m3 (manufacturer AEL)
Hydrogen Chloride Solution	(Hydrochloric Acid)	7647-01-0	3,0,0,-	5 ppm (Ceiling)	5 ppm (Ceiling)

Percent content of hazardous ingredients withheld as trade secret pursuant to Massachusetts regulations.

### III TYPICAL PHYSICAL DATA

	BOILING POINT (°F)	VAPOR PRESSURE (mm Hg)	VAPOR DENSITY	EVAPORATION RATE (1=Butyl Acetate NE < 1.00)
Glycolic Acid	234°F	17.5 (68°F)	Vapor is water	
Hydrogen Chloride Solution	150°F	78 (68°F)	1.27	< 1.00

	SPECIFIC GRAVITY	SOLUBILITY IN WATER	APPEARANCE AND ODOR
Sure Klean® Vana Trol®	1.14	100%	Clear liquid to slight amber color, pungent odor

### IV FIRE AND EXPLOSION HAZARD DATA

#### EMERGENCY OVERVIEW

Sure Klean® Vana Trol® is a slightly amber-colored liquid with an irritating pungent odor. The vapor and mist from this product may cause irritation of the respiratory tract, wear appropriate respiratory protection. Wear splash-proof chemical goggles when handling this product.

**FLASH POINT (METHOD):** None

**FLAMMABLE LIMITS:** Unknown

**EXTINGUISHING MEDIA:** Any media appropriate for surrounding the type of fire involving this product.

**SPECIAL FIRE FIGHTING PROCEDURES:** Wear NIOSH/MSHA approved self-contained breathing apparatus with a full face piece operated in pressure demand or other positive pressure mode and full body protective clothing when fighting fires. Water may be used to cool closed containers.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Reacts with most metals to release hydrogen gas, which can form explosive mixtures with air. Extinguish all nearby sources of ignition.



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## V HEALTH HAZARD DATA

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**PRIMARY ROUTES OF EXPOSURE:** Inhalation, skin, eyes.

**CARCINOGEN INFORMATION:** Not listed (OSHA, IARC, NTP). No standard carcinogenicity studies for hydrogen chloride were identified. Two studies on rats were conducted to determine if hydrogen chloride increased the formation of nasal tumors or increased the carcinogenic potential of formaldehyde. In both studies the rats were exposed to 10-ppm hydrogen chloride, 6 hours per day, 5 days per week. One study lasted 84 weeks while the other lasted the animals' lifetime. Hydrogen chloride did not cause an increase in nasal tumors and did not increase the carcinogenicity of formaldehyde.

**MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:** Asthma, bronchitis, emphysema, and other lung conditions; and chronic nose, sinus, or throat conditions. Exposures of 100 ppm for six hours a day for 50 days caused only slight unrest and irritation to the eyes and nose of rabbits, guinea pigs and pigeons. The hemoglobin content of the blood was also slightly diminished. Monkeys receiving 20 exposures of 33 ppm for six hours did not display any adverse effects. Higher exposures (unspecified) have caused weight loss, which paralleled the severity of exposure. Baboons exposed to 500, 5000 or 10,000 ppm for 15 minutes did not have significant alterations in any pulmonary function parameters 3 days or 3 months after exposure. In humans long term overexposure has been associated with erosion of the teeth.

**EFFECTS OF OVEREXPOSURE:** Causes severe damage to eyes and even blindness very rapidly. Causes burns, possible deep ulceration to skin. Breathing of mist or dust can cause damage to nasal and respiratory passages. Swallowing results in severe damage to mucous membranes and deep tissue; can result in death on penetration to vital areas. Glycolic Acid has been reported to cause kidney and liver damage in experimental animals from inhalation or ingestion.

**EYE CONTACT:** Liquid or concentrated vapors can cause eye irritation, severe burns and permanent damage including blindness even after a short exposure to small amounts.

**SKIN CONTACT:** Liquid or concentrated vapors can rapidly cause burning of skin. Repeated or prolonged contact with dilute solutions and concentrated vapors can cause irritation and dermatitis.

**INHALATION:** Hydrogen chloride gas, mist, and vapor can cause irritation of respiratory tract, with burning, choking, coughing, headaches, and rapid heartbeat. 35 ppm can cause irritation of the throat and 50-100 ppm is nearly unbearable for one hour. Inflammation, destruction of nasal passages and breathing difficulties can occur with high concentrations and may be delayed in onset. Inhalation of sufficiently high concentrations may result in laryngeal spasms, laryngeal edema or rapidly developing pulmonary edema. Mists may also cause bleeding of the nose and gums, and ulceration of the nasal or oral mucosa. 1,000-2,000 ppm can be fatal.

**INGESTION:** Unlikely route of exposure. Can cause severe burns of mouth, esophagus, and stomach. Nausea, pain, and vomiting may occur. Depending on the amount swallowed, holes may develop in the intestinal tract, kidney inflammation, shock and death can occur.

### **EMERGENCY AND FIRST AID PROCEDURES:**

**EYE CONTACT:** Rinse eyes with large quantities of water for at least 15 minutes, holding eyelids apart to ensure flushing of the entire eye surface. Get medical attention immediately.

**SKIN CONTACT:** Remove contaminated clothing and flush exposed area with large quantities of water for at least 15 minutes. Launder contaminated clothing before reuse. Discard contaminated shoes. Get immediate medical attention.

**INHALATION:** Remove person to fresh air. If breathing stops, administer artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Get medical attention immediately.

**INGESTION:** If conscious, give large quantities of water or milk. Do not induce vomiting. Get medical attention immediately. Do not give anything by mouth to an unconscious or convulsing person.

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## VI REACTIVITY DATA

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**STABILITY:** Stable

**CONDITIONS TO AVOID:** Contact with strong bases (alkali), can cause violent reaction generating large amounts of heat.

**INCOMPATIBILITY (MATERIALS TO AVOID):** Metals, oxidizing agents, nitric acid, chlorates, sulfides, and cyanides. Contact with sulfides releases poisonous flammable hydrogen sulfide. Mercuric sulfate, perchloric acid, carbides of calcium, cesium, rubidium, acetylides of cesium and rubidium, phosphides of calcium and uranium, and lithium silicide.

Hydrogen Chloride can react with cyanide, forming lethal concentrations of hydrocyanic acid. Do not enter confined spaces such as tanks or pits without proper entry procedures as required by 29 CFR 1910.146.

**HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS:** Hydrogen gas when contacting metals, hydrogen chloride, carbon monoxide and carbon dioxide. Hydrogen gas generation has the highest potential for harm in confined or poorly ventilated areas where concentrations can approach flammable or explosive concentrations.

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## VII SPILL OR LEAK PROCEDURES

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**SPILL, LEAK, WASTE DISPOSAL PROCEDURES:** Evacuate immediate area where concentrated fumes are present. Cleanup personnel must wear proper protective equipment. Provide adequate ventilation. Completely contain spilled material with dikes, etc., and prevent runoff into ground and surface waters or into sewers.

Dilution with water will decrease the fumes generated from spilled product. Spills and leaks should be neutralized by pouring dry soda ash or lime over the affected area. Concentrated product should be diluted with water before adding neutralizing agents to keep splattering and fumes to a minimum. Approximately 2.5 pounds of lime are required to neutralize one gallon of this product. Allow powdered material to remain on spill for five to ten minutes and flush thoroughly with water. Neutralized material, both liquid and solid, should be recovered for proper disposal.

**WASTE DISPOSAL METHODS:** Recovered solids or liquids may be disposed of in a permitted waste management facility. Neutralized materials may be discharged to a sanitary sewer with approval of the receiving treatment plant. Typical pH range of 6-10 is generally considered appropriate for discharge. Consult federal, state, and/or local authorities for approved procedure. For additional information regarding handling and disposal of rinse-water, please review Technical Bulletin 200-CW "Controlled Handling of Cleaning Wastewater". Empty containers must be triple rinsed before disposal in a permitted sanitary landfill. Check local restrictions.

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## VIII SPECIAL PROTECTION INFORMATION

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**RESPIRATORY PROTECTION:** For vapor or mist concentrations, which exceed or are likely to exceed 5 ppm Threshold Limit Value (TLV), wear a NIOSH/MSHA approved half-mask respirator with acid gas cartridges. NIOSH/MSHA approved self-contained breathing apparatus (SCBA) or pressure demand supplied air respirator with full face piece should be worn when concentrations exceed 50 ppm. A SCBA is recommended by NIOSH during leaks and/or emergencies. Follow all applicable respirator use standards or regulations.

**VENTILATION:** Provide sufficient general and/or local exhaust ventilation to maintain exposure below the TLV.

**PROTECTIVE CLOTHING:** Wear neoprene or PVC rain suit. (Consult safety equipment supplier.)

**PROTECTIVE GLOVES:** Rubber type, neoprene or PVC with acceptable acid resistance. (Contact safety equipment supplier for approved gloves.)

**EYE PROTECTION:** Chemical splash goggles and/or full face shield (8 inch minimum) in compliance with OSHA regulations. Do not wear contact lenses because they may contribute to the severity of an eye injury.

**OTHER PROTECTIVE EQUIPMENT:** Acid-resistant rubber boots, headgear. Eyewash and safety shower.

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## IX SPECIAL PRECAUTIONS

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**WORK PRACTICES:** Proper work practices and planning should be utilized to avoid contact with workers, passersby, and non-masonry surfaces. Brush on or apply at the lowest practical pressure. Do not atomize during application. Application equipment, scaffolding, swing stages and support systems must be constructed of acid resistant materials. Beware of wind drift. Wind-drift hazards may be diminished by pre-rinsing with low pressure water before pressure washing. Divert pedestrian traffic around work areas. See the Product Data sheet and label for specific precautions to be taken during use. Smoking, eating and drinking should be discouraged during the use of this product. Wash hands after handling or use.

**This product is only to be used as supplied and specified.** Do not alter, mix with chlorine-type bleaches or other chemicals, or dilute product except as specified on the label and Product Data sheet.

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:** Use proper safety equipment (see section VIII) when handling. Store in a cool, well-ventilated area. Separate from oxidizing agents, nitric acid, alkalis, chlorates, sulfides, etc. (see section VI). Do not remove product label. Material diluted for application must be properly labeled and stored in acid-resistant containers such as rubber-lined steel or plastic.

Addition of acidic cleaner to water releases heat, which can result in violent boiling and splattering. **Always add cleaner to water slowly and in small amounts. Never use hot water. Never add water to acidic cleaners.**

Containers of this material may be hazardous when emptied, since emptied containers retain product residues (vapor, liquid, and/or solid). All hazard precautions given in this data sheet must be observed.

**OTHER PRECAUTIONS:** Do not get in eyes, on skin or on clothing. Can cause severe injury or blindness. Avoid breathing mist or vapor. Provide ventilation sufficient to limit employee exposure below OSHA permissible limit. Do not take internally. Wash thoroughly after handling.

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**X REGULATORY INFORMATION**

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**SHIPPING:** This product carries the shipping description "UN1760, Corrosive Liquid, N.O.S. (Hydrochloric and Hydroxyacetic acid), 8, II" for shipping by ground, air and ocean transport. The product meets applicable DOT and UN standards when shipped in the original, unopened factory packaging, although container size may be limited for air transport. Some parcel shipping companies may limit container sizes.

**NATIONAL MOTOR FREIGHT CLASSIFICATION:** 44157 Sub 3    **Rate Class:** 85

**SARA 313 REPORTABLE:**

CHEMICAL NAME	CAS	UPPERBOUND CONCENTRATION % BY WEIGHT
Hydrogen Chloride	7647-01-0	30 %

**CALIFORNIA PROPOSITION 65:**        **This product contains no chemicals listed under California's Proposition 65.**

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**XI OTHER**

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**MSDS Status:**        **Date of Revision:** April 6, 2010  
**For Product Manufactured After:** N/A – No formulary change.  
**Changes:** Regulatory Review. No changes made.  
**Item #:** 10030  
**Approved By:** Regulatory Department

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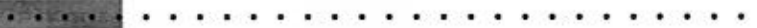
**DISCLAIMER:**

The information contained on the Material Safety Data Sheet has been compiled from data considered accurate. This data is believed to be reliable, but it must be pointed out that values for certain properties are known to vary from source to source. **PROSOCO, Inc. expressly disclaims any warranty express or implied as well as any liability for any injury or loss arising from the use of this information or the materials described.** This data is not to be construed as absolutely complete since additional data may be desirable when particular conditions or circumstances exist. It is the responsibility of the user to determine the best precautions necessary for the safe handling and use of this product for his unique application. This data relates only to the specific material designated and is not to be used in combination with any other material. Many federal and state regulations pertain directly or indirectly to the product's end use and disposal of containers and unused material. It is the purchaser's responsibility to familiarize himself with all applicable regulations.

**DATE OF PREPARATION:** April 6, 2010

.....  
**Lonestar Industries, LLC.**

**MORTAR COLOR**



# CONCENTRATED MORTAR COLOR



## SOLOMON COLORS

### • Material Safety Data Sheet

#### I. PRODUCT IDENTIFICATION

PRODUCT NAME .....  
 CHEMICAL FAMILY .....  
 CAS NUMBER .....  
 DOT CLASS .....  
 CHEMICAL FORMULA .....

Solomon Colors Concentrated Mortar Color  
 Inorganic Metal Oxide,  
 Carbon Blend  
 1309-37-1, 1333-86-4  
 Not regulated  
 Blends of Fe<sub>2</sub>O<sub>3</sub>, Fe<sub>3</sub>O<sub>4</sub>,  
 Fe<sub>2</sub>O<sub>3</sub> • H<sub>2</sub>O, and/or C

#### II. INGREDIENTS

COMPONENTS  
 Iron (III) Oxide (dust)  
 No. 80, 85, 97

COMPONENTS  
 Fe<sub>2</sub>O<sub>3</sub> • H<sub>2</sub>O, Fe<sub>3</sub>O<sub>4</sub>  
 Fe<sub>2</sub>O<sub>3</sub>  
 Fe<sub>3</sub>O<sub>4</sub>  
 C

OSHA-PEL	ACGIH-TLV
None Est.	None Est.
None Est.	None Est.
None Est.	None Est.
3.5 mg/m <sup>3</sup>	3.5 mg/m <sup>3</sup>

#### III. PHYSICAL DATA

APPEARANCE .....  
 COLOR .....  
 ODOR .....  
 MELT POINT/FREEZE POINT .....  
 BOILING POINT .....  
 VAPOR PRESSURE .....  
 SPECIFIC GRAVITY .....  
 BULK DENSITY .....  
 SOLUBILITY IN WATER .....  
 % VOLATILE BY VOLUME .....

Fine, dry powder  
 Buff, Red, Brown, or Black  
 None  
 Not applicable  
 Not applicable  
 Not applicable  
 4 to 5  
 55-80 lbs. per cubic ft.  
 Insoluble  
 Nil

#### IV. FIRE AND EXPLOSION DATA

FLASH POINT \*F (°C) .....  
 IGNITION TEMPERATURE (°C) .....  
 EXTINGUISHING MEDIA .....  
 SPECIAL FIRE FIGHTING PROCEDURES .....  
 UNUSUAL FIRE & EXPLOSIVE HAZARDS .....

Not applicable  
 Not applicable  
 Not flammable  
 None  
 None

#### FOR COLOR NOS. 80, 85, 97

FLASH POINT \*F (°C) .....  
 IGNITION TEMPERATURE (°C) .....  
 EXTINGUISHING MEDIA .....  
 SPECIAL FIRE FIGHTING PROCEDURES .....  
 UNUSUAL FIRE & EXPLOSIVE HAZARDS .....

Not applicable  
 500 to 700 in air  
 Water  
 Normal fog or nozzle jet application  
 of water and/or exclusion of air.  
 Burning carbon black can produce carbon  
 monoxide and sulfur dioxides. Use a  
 NIOSH approved respirator for protection  
 from possible exposure during a fire.  
 Exercise caution as it may not be obvious  
 that it is burning unless stirred and sparks  
 are present.

#### V. REACTIVITY DATA

STABILITY .....  
 INCOMPATIBILITY .....  
 HAZARDOUS DECOMPOSITION OR BY-PRODUCTS .....  
 HAZARDOUS POLYMERIZATION .....  
 CONDITION TO AVOID .....

Stable  
 None  
 Carbon may form carbon monoxide,  
 carbon dioxide or sulfur oxides if present.  
 Will not polymerize  
 Strong acids such as hydrochloric,  
 hydrofluoric, etc. Excessive heat and  
 strong oxidizers such as chlorates,  
 bromates or nitrates.

Concentrated Mortar Color • Material Safety Data Sheet





## V. REACTIVITY DATA (continued)

PRIMARY ROUTE(S) OF EXPOSURE .....	Eye and skin contact, inhalation
HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE ACUTE .....	Nuisance Dust No chronic health effects are known from repeated exposure to iron oxide pigments.
CHRONIC .....	None known Not applicable

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE .....

## VI. HUMAN HEALTH DATA

### EXPOSURE LIMITS

OSHA PEL .....	Not established for this product.
ACGIH TLV .....	Not established for this product. The recommended guideline is the TLV for nuisance particulates, 10 mg/m <sup>3</sup> of total dust.

### EMERGENCY & FIRST AID PROCEDURES

EYE CONTACT .....	Flush eyes with plenty of water, lifting lids periodically for at least 15 minutes. Consult a physician if irritation persists.
SKIN CONTACT .....	Wash with soap and water.
INHALATION .....	Remove from dusty area to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen. Call a physician.
INGESTION .....	Immediately contact a physician.

## VII. PRECAUTIONS FOR SAFE HANDLING AND USE

### STEPS TO BE TAKEN IN CASE MATERIAL IS

RELEASED OR SPILLED .....	Common housekeeping, vacuum or scoop material into a container for reclamation or disposal. Material which cannot be reclaimed should be landfilled in accordance with local, state, and federal regulations. Store in a dry area.
WASTE DISPOSAL METHOD .....	None
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE .....	None
OTHER PRECAUTIONS .....	None

## VIII. CONTROL MEASURES

RESPIRATORY PROTECTIONS .....	NIOSH approved dust respirator when required for dust. Local exhaust when required for dust.
VENTILATION .....	None
PROTECTIVE GLOVES .....	None
PROTECTIVE GLASSES .....	None
OTHER .....	None
WORK/HYGIENE PRACTICES .....	Wash thoroughly after handling and before eating. Keep dust away from food and beverages.

## IX. SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE .....	Material should be kept in a closed container to minimize dust. Keep dry. Avoid breathing dust. Avoid contact with eyes and skin. Wash thoroughly after handling.
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THE INFORMATION AND RECOMMENDATIONS CONTAINED HEREIN ARE BASED UPON DATA BELIEVED TO BE CORRECT. HOWEVER, NO GUARANTEE OR WARRANTY OF ANY KIND EXPRESSED OR IMPLIED IS MADE WITH RESPECT TO THE INFORMATION CONTAINED HEREIN.

.....  
Lonestar Industries, LLC.

**MORTAR NET**





# 1-INCH AND .4-INCH MORTAR NET MATERIAL SAFETY DATA SHEET

1/5

## PLEASE REPLACE ANY OUTDATED INFORMATION WITH THE FOLLOWING

### 1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

24-Hour Emergency Phone Number: 517-636-4400

Product: PE/HD 10062N

Product Code: 63765

Effective Date: 11/07/95      Date Printed: 01/17/96      MSD: 000443

The Dow Chemical Company, Midland, MI 48674

Customer Information Center: 800-258-2436

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Polyethylene homopolymer      CAS# 009002-88-4      100%

### 3. HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

Color: White. Appearance: Pellets or granules. Odor: None.  
Toxic fumes are released in fire situations.

POTENTIAL HEALTH EFFECTS (See Section 11 for toxicological data.)

EYE: Solid or dust may cause irritation or corneal injury due to mechanical action.

SKIN: Essentially nonirritating to skin. Mechanical injury only. A single prolonged skin exposure is not likely to result in the material being absorbed through skin in harmful amounts.

INGESTION: Single dose oral toxicity is believed to be very low. No hazards anticipated from ingestion incidental to industrial exposure.

INHALATION: Vapors are unlikely due to physical properties. Single exposure to dust is not likely to be hazardous.

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: No relevant information found.

### 4. FIRST AID

EYE: Flush eyes with plenty of water; mechanical irritation only.

SKIN: Wash off in flowing water or shower

#### 4. FIRST AID (cont.)

INGESTION: No adverse effects anticipated by this route of exposure incidental to proper industrial handling.

INHALATION: Remove to fresh air if affects occur. Consult a physician.

#### 5. FIRE FIGHTING MEASURES

##### FLAMMABLE PROPERTIES

FLASH POINT: Not applicable

METHOD USED: Not applicable

##### FLAMMABILITY LIMITS

LFL: Not applicable

UFL: Not applicable

HAZARDOUS COMBUSTION PRODUCTS: Under fire conditions polymers decompose. The smoke may contain polymer fragments of varying compositions in addition to unidentified toxic and/or irritating compounds. Hazardous combustion products may include and are not limited to carbon monoxide and carbon dioxide.

OTHER FLAMMABILITY INFORMATION: Dense smoke is emitted when burned without sufficient oxygen. Mechanical handling can cause formation of dusts. To reduce the potential for dust explosion, do not permit dust to accumulate.

EXTINGUISHING MEDIA: Water, carbon dioxide, dry chemical.

FIRE FIGHTING INSTRUCTIONS: Keep people away. Isolate fire area and deny unnecessary entry. Cool surroundings with water to localize fire zone. Hand held carbon dioxide or dry chemical extinguishers may be used for small fires. water to cool and prevent reignition. Soak thoroughly with water to cool and prevent reignition.

PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, pants, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

#### 6. ACCIDENTAL RELEASE MEASURES (See Section 15 for Regulatory Information)

CLEANUP: Sweep up.

#### 7. HANDLING AND STORAGE

HANDLING: Good housekeeping and controlling of dusts are necessary for safe handling of product. Electrically ground all equipment.

STORAGE: The polymer pellets and finished article should be stored in a manner that they are not exposed to ultra-violet light.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**ENGINEERING CONTROLS:** Good general ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operations.

### PERSONAL PROTECTIVE EQUIPMENT

- **EYE/FACE PROTECTION:** Use safety glasses. If there is a potential for exposure to particles which could cause mechanical injury to the eye, wear chemical goggles.
- **SKIN PROTECTION:** No precautions other than clean body-covering clothing should be needed.
- **RESPIRATORY PROTECTION:** For most conditions, no respiratory protection should be needed; however, if handling at elevated temperatures without sufficient ventilation, use an approved air-purifying respirator. In dusty atmospheres, use an approved dust respirator.

**EXPOSURE GUIDELINE(S):** None established.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**APPEARANCE/PHYSICAL STATE:** Translucent white, solid pellets or granules.

**ODOR:** No odor.

**VAPOR PRESSURE:** Not applicable

**VAPOR DENSITY:** Not applicable

**BOILING POINT:** Not applicable

**SOLUBILITY IN WATER/MISCIBILITY:** Nil

**SPECIFIC GRAVITY OR DENSITY:** 0.91 -0.97

## 10. STABILITY AND REACTIVITY

**CHEMICAL STABILITY:** Stable

**CONDITIONS TO AVOID:** Temperatures over 572F, 300C will release combustible gases.

**INCOMPATIBILITY WITH OTHER MATERIALS:** None

**HAZARDOUS DECOMPOSITION PRODUCTS:** Decomposition products depend on temperature, other materials present and air supply. During thermal processing this material can degrade to produce trace hydrocarbons, aldehydes, organic acids, and alcohols in limited quantities. Complete combustion results in carbon dioxide and water.

**HAZARDOUS POLYMERIZATION:** Will not occur.

## 11. TOXICOLOGICAL INFORMATION

See Section 3 for Potential Health Effects. For detailed toxicological data, write or call the address or non-emergency number shown in Section 1.

INGESTION: Single dose oral LD50 has not been determined.

## 12. ECOLOGICAL INFORMATION

For detailed Ecological data, write or call the address or non-emergency number shown in Section 1.

### ENVIRONMENTAL FATE

**MOVEMENT & PARTITIONING:** No bioconcentration is expected because of high molecular weight (MW > 1000). In the terrestrial environment, material is expected to remain in the soil. In the aquatic environment, material is expected to float.

**DEGRADATION & PERSISTENCE:** This water insoluble polymeric solid is expected to be inert in the environment. Surface photodegradation is expected with exposure to sunlight. No appreciable biodegradation is expected.

ECOTOXICITY: Not expected to be acutely toxic.

## 13. DISPOSAL CONSIDERATIONS

See Section 15 for Regulatory Information

**DISPOSAL: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER.** All disposal methods must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. THE DOW CHEMICAL COMPANY HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION 2 (Composition/Information On Ingredients).

FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: recycler, reclaimer, incinerator or other thermal destruction device, and landfill.

For additional information, refer to Stability & Reactivity Information, MSDS Section 10.

As a service to its customers, Dow can provide lists of companies which recycle, reprocess or manage chemicals or plastics, and companies that manage used drums. Telephone Dow's Customer Information Center at 800-258-2436 or 517-832-1556 for further details.

## 14. TRANSPORT INFORMATION

DEPARTMENT OF TRANSPORTATION (D.O.T.): This product is not regulated by D.O.T. when shipped domestically by land.

CANADIAN TDG INFORMATION: This product is not regulated by TDG when shipped domestically by land.

## 15. REGULATORY INFORMATION

(Not meant to be all-inclusive—selected regulations represented)

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations. See other sections for health and safety information.

### U.S. REGULATIONS

**SARA 313 INFORMATION:** To the best of our knowledge, this product contains no chemical subject to SARA Title III Section 313 supplier notification requirements.

**SARA HAZARD CATEGORY:** This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Not to have met any hazard category

**TOXIC SUBSTANCES CONTROL ACT (TSCA):** All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

**STATE RIGHT-TO-KNOW:** This product is not known to contain any substances subject to the disclosure requirements of New Jersey and Pennsylvania.

**OSHA HAZARD COMMUNICATION STANDARD:** This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

### CANADIAN REGULATIONS

**WHMIS INFORMATION:** The Canadian Workplace Hazardous Materials Information System (WHMIS) Classification for this product is:

This product is not a "Controlled Product" under WHMIS.

## 16. OTHER INFORMATION

**NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) RATINGS:**

Health: 0

Flammability: 1

Reactivity: 0

**MSDS STATUS:** Revised to Section 16 format

## Mortar Net 2"

# MATERIAL SAFETY DATA SHEET

Date Issued: 11/8/2004

### SECTION 1 MATERIAL IDENTIFICATION

**Material Name:** Commercial Mortar Net: Fibrous web bonded or coated with polymers

**Fiber type:** Polyester

**Binder type:** Polyvinylchloride

**Product Codes:** 215033 (2.0")

### SECTION 2 HAZARDOUS INGREDIENTS

Antimony Trioxide (Flame retardant)

See Section VI

#### CAS NO

1309-64-4

#### %

2.8-3.8%

PEL: 0.5 mg/cu.m.

### SECTION 3 PHYSICAL DATA

**Appearance and Odor:** Green, stiff fibrous structure. No discernible odor.

**Density in Lbs. per cu.ft.:** .8-1.2

**Melt point.:** Binder softens. Fiber melts over 230°

### SECTION 4 FIRE AND EXPLOSION HAZARD DATA

**Flash point does not apply to these fibrous materials.**

**Burning characteristics:** Retarded burn rate

**Extinguishing media:** Water spray, dry chemical, or carbon dioxide.

**Fire fighting procedures:** Wear positive pressure self-contained breathing apparatus and protective clothing.

### SECTION V REACTIVITY DATA AND PHYSICAL HAZARDS

**These materials are stable during normal use.**

**Conditions to avoid:** Inhalation of fumes if incinerated. Any mechanical action that would pulverize product to create an airborne, respirable dust.

**Hazardous decomposition products:** Oxides of carbon, hydrogen halides, small quantities of aliphatic and aromatic hydrocarbons, antimony oxide and/or antimony oxychloride.

### SECTION VI HEALTH HAZARD INFORMATION

**Effect of Exposure:** No known chronic or acute effects when handling or using media.

Antimony trioxide is physically and totally immobilized and encapsulated within the binder and presents no hazard in normal use.

### SECTION VII DISPOSAL PROCEDURES

**Waste Disposal Method:** Dispose of in accordance with current federal, state, and local regulations. This material is normally landfillable, and the substances contained in this product are non-leachable.

### SECTION VIII SAFE HANDLING AND USE INFORMATION

**Ventilation:** If product is hot-wired cut, provide local exhaust to remove fumes.

**Protective gloves:** None-required

**Eye protection:** Use safety glasses if this material is cut or processed in any type of industrial operations.

### SECTION IX ADDITIONAL INFORMATION

none

This information contained herein is furnished without warranty of any kind. Users should consider these data as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the health and safety of employees and customers.



.....  
**Lonestar Industries, LLC.**

**PORTLAND CEMENT**





# MATERIAL SAFETY DATA SHEET

Material: **Portland Cement**

## Section I - Identification

<b>Supplier:</b> <b>Name:</b> Holcim (US) Inc. <b>Address:</b> 6211 N. Ann Arbor Road Dundee, MI 48131 <b>Telephone:</b> 800-854-4656	<b>Emergency Contact Information: (CHEMTREC)</b> Health 1-800-424-9300 Transportation 1-800-424-9300
<b>Product Codes:</b> Portland Cement Type I, IA, II, III, IV, V, White Cement. CSA Type 10, 20, 30, 40, & 50. This MSDS covers many products. Individual constituents will vary.	<b>Formula:</b> This product consists of finely ground Portland cement clinker mixed with a small amount of calcium sulfate (gypsum).
<b>Chemical Family:</b> Chemical compounds. Calcium silicate components and other calcium compounds containing iron and aluminum make up the majority of this product.	<b>Chemical Name and Synonyms:</b> Portland cement. Portland cement is also known as hydraulic cement.

## Section II - Components

### Hazardous Ingredients

Component (%)	CAS No.	OSHA PEL (8-hour TWA)	ACGIH TLV-TWA (2002)
Tri-calcium silicate (20-70)	12168-85-3	see Nuisance Dust PEL	see Nuisance Dust TLV
Di-calcium silicate (10-60)	10034-77-2	see Nuisance Dust PEL	see Nuisance Dust TLV
Tetra-calcium- aluminoferrite (5-15)	12068-35-8	see Nuisance Dust PEL	see Nuisance Dust TLV
Calcium sulfate (2-10)	---	see Nuisance Dust PEL	see Nuisance Dust TLV
Tri-calcium Aluminate (1-15)	12042-78-3	see Nuisance Dust PEL	see Nuisance Dust TLV
Magnesium oxide (0-4)	1309-48-4	see Nuisance Dust PEL	see Nuisance Dust TLV
Nuisance Dusts	---	15 mg/m <sup>3</sup> (total dust); 5 mg/m <sup>3</sup> (respirable dust)	10 mg/m <sup>3</sup> (total dust); 3 mg/m <sup>3</sup> (respirable dust)
Crystalline Silica (Quartz) * (0-1%)	14808-60-7	10 mg/m <sup>3</sup> /percent silica + 2 (respirable dust) 30 mg total dust/m <sup>3</sup> /percent silica + 2 (total dust)	0.10 mg/m <sup>3</sup>
Hexavalent Chromium (measured as chromic acid and chromates)	18540-29-9	(100 mg/m <sup>3</sup> )	

**Trace constituents:** Portland Cement has a variable composition depending upon the cementitious products produced in the cement kiln. Small amounts of naturally occurring, but potentially harmful, chemical compounds might be detected during chemical analysis. These trace compounds might include free crystalline silica, potassium and sodium compounds; heavy metals including cadmium, chromium, nickel and lead; and organic compounds. Other trace constituents may include calcium oxide (also known as free lime or quick lime).

## Section III - Hazards Identification

### Emergency Overview

Portland cement is a light gray powder that poses little immediate hazard. A single short-term exposure to the dry powder is not likely to cause serious harm. However, exposure to wet portland cement can cause serious, potentially irreversible tissue (skin or eye) destruction in the form of chemical (caustic) burns or an allergic reaction. The same type of tissue destruction can occur if wet or moist areas of the body are exposed for sufficient duration to dry portland cement.

### Potential Health Effects

- **Relevant Routes of Exposure:** Eye contact, skin contact, inhalation, and ingestion
- **Effects resulting from eye contact:** Exposure to airborne dust may cause immediate or delayed irritation or inflammation.

Eye contact with larger amounts of dry powder or splashes of wet Portland cement may cause effects ranging from moderate eye irritation to chemical burns and blindness. Such exposures require immediate first aid (see section IV) and medical attention to prevent significant damage to the eye.

- **Effects resulting from skin contact:** Discomfort or pain cannot be relied upon to alert a person to a hazardous skin exposure. Consequently, the only effective means of avoiding skin injury or illness involves minimizing skin contact, particularly contact with wet cement. Exposed persons may not feel discomfort until hours after the exposure has ended and significant injury has occurred. Exposure to dry Portland cement may cause drying of the skin with consequent mild irritation or more significant effects attributable to aggravation of other conditions. Dry portland cement contacting wet skin or exposure to moist or wet portland cement may cause more severe skin effects including thickening, cracking or fissuring of the skin. Prolonged exposure can cause severe skin damage in the form of (caustic) chemical burns. Some individuals may exhibit an allergic response (e.g., allergic contact dermatitis) upon exposure to portland cement, possibly due to trace amounts of chromium. The response may appear in a variety of forms ranging from a mild rash to severe skin ulcers. Persons already sensitized may react to the first contact with the product. Other persons may experience this effect after years of contact with portland cement products.
- **Effects resulting from inhalation:** Portland cement contains small amounts of free crystalline silica. Prolonged exposure to respirable free crystalline silica can aggravate other lung conditions and cause silicosis, a disabling and potentially fatal lung disease and/or other diseases. Risk of injury or disease depends on duration and degree of exposure. (Also see "Carcinogenic potential" below.) Exposure to Portland cement may cause irritation to the moist mucous membranes of the nose, throat, and upper respiratory system. It may also leave unpleasant deposits in the nose.
- **Effects resulting from ingestion:** Although small quantities of dust are not known to be harmful, ill effects are possible if larger quantities are consumed. Portland cement should not be eaten.
- **Carcinogenic potential:** NTP, OSHA, or IARC has not listed Portland cement as a carcinogen. It may, however, contain trace amounts of substances listed as carcinogens by these organizations. Crystalline silica, which is present in Portland cement in small amounts, has been listed by IARC and NTP as a known human carcinogen (Group I) through inhalation. Hexavalent chromium is listed by IARC, EPA, NTP and OSHA as Group I known carcinogen by inhalation.
- **Medical conditions which may be aggravated by inhalation or dermal exposure:**
  - Pre-existing upper respiratory and lung diseases
  - Unusual (hyper) sensitivity to hexavalent chromium (chromium<sup>+6</sup>) salts.

## Section IV - First Aid

**Eyes:** Immediately flush eyes thoroughly with water. Continue flushing eye for at least 15 minutes, including under lids, to remove all particles. Call physician immediately.

**Skin:** Wash skin with cool water and pH-neutral soap or a mild detergent. Seek medical treatment in all cases of prolonged exposure to wet cement, wet cement mixtures, wet concrete liquids from fresh cement products, or prolonged wet skin exposure to dry cement.

**Inhalation of Airborne Dust:** Remove to fresh air. Seek medical help if coughing or other symptoms do not subside. (Inhalation of gross amounts of portland cement requires immediate medical attention.)

**Ingestion:** Do not induce vomiting. If conscious, have the victim drink plenty of water and call a physician immediately.

## Section V - Fire & Explosion Data

Flash point:	None	Auto ignition temperature:	Not Combustible
Lower Explosive Limit:	None	Upper Explosive Limit:	None
Extinguishing media:	Not Combustible	Unusual fire & explosion hazards	None
Hazardous combustion products:	None		
Special fire fighting procedures:	None. (Although portland cement poses no fire-related hazards, a self-contained breathing apparatus is recommended to limit exposure to combustion products when fighting any fire.)		

## Section VI - Accidental Release Measures

Collect dry material using a scoop. Avoid actions that cause dust to become airborne. Avoid inhalation of dust and contact with skin. Wear appropriate personal protective equipment as described in Section VIII.

Scrape up wet material and place in an appropriate container. Allow the material to "dry" before disposal. Do not attempt to wash portland cement down drains.

Dispose of waste material according to local, state, and federal regulations.

## Section VII - Handling & Storage

Keep portland cement dry until used. Normal temperatures and pressures do not affect the material. Promptly remove dusty clothing or clothing which is wet with cement fluids and launder before reuse. Wash thoroughly after exposure to dust or wet cement mixtures or fluids.

## Section VIII - Exposure Control/Personal Protection

**Skin Protection:** Prevention is essential to avoiding potentially severe skin injury. Avoid contact with unhardened wet portland cement products. If contact occurs, promptly wash affected area with soap and water. Where prolonged exposure to unhardened portland cement products might occur, wear impervious clothing and gloves to prevent skin contact. Where required, wear sturdy boots that are impervious to water to eliminate foot and ankle exposure. Do not rely on barrier creams; barrier creams should not be used in place of impervious gloves and clothing. Periodically wash areas contacted by dry portland cement or wet cement or concrete with a pH neutral soap. Wash again at the end of the work. If irritation occurs, immediately wash the affected area and seek treatment. If clothing becomes saturated with wet concrete, it should be removed and replaced with clean, dry clothing.

**Respiratory protection:** Avoid actions that cause dust to become airborne. Use local or general ventilation to control exposures below applicable exposure limits. Use NIOSH/MSHA-approved (under 30 CFR 11) or NIOSH-approved (under 42 CFR 84) respirators in poorly ventilated areas, if an applicable exposure limit is exceeded, or when dust causes discomfort or irritation. (Advisory: Respirators and filters purchased after July 10, 1998, must be certified under 42 CFR 84.)

**Ventilation:** Use local exhaust or general dilution ventilation to control exposure within applicable limits.

**Eye Protection:** In conditions where user may be exposed to splashes or puffs of cement, wear safety glasses with side shields or goggles. In extremely dusty or unpredictable environments, wear unvented or indirectly vented goggles to avoid eye irritation or injury. Contact lenses should not be worn when working with portland cement or fresh cement products.

## Section IX - Physical & Chemical Properties

Appearance:	Gray or white powder	Vapor Pressure:	Not applicable
Odor:	No distinct odor	Vapor density:	Not applicable
Physical state:	Solid (powder)	Boiling point:	Not applicable (i.e., > 1000 °C)
pH (in water):	12 to 13	Melting point:	Not applicable
Solubility in water:	Slightly (0.1 to 1.0%)	Specific gravity (H <sub>2</sub> O = 1.0):	3.15
Evaporation Rate:	Not applicable		

## Section X - Stability & Reactivity

Stability:	Stable.
Incompatibility:	Wet portland cement is alkaline. As such it is incompatible with acids, ammonium salts, and aluminum metal.
Conditions to avoid:	Unintentional contact with water.
Hazardous decomposition:	Will not spontaneously occur. Adding water produces (caustic) calcium hydroxide as a result of hydration.
Hazardous polymerization:	Will not occur.

## Section XI - Toxicological Information

For a description of available, more detailed toxicological information, contact Holcim (US) Inc. (in Section I).

## Section XII - Ecological Information

Ecotoxicity:	No recognized unusual toxicity to plants or animals
Relevant physical and chemical properties:	See Sections IX & X

## Section XIII - Disposal

Dispose of waste material according to local, state, and federal regulations. (Since portland cement is stable, uncontaminated material may be saved for future use.) Dispose of bags in an approved landfill or incinerator.

## Section XIV - Transportation Data

Hazardous materials description/proper shipping name:	Portland cement is not hazardous under U.S. Department of Transportation (DOT) regulations
Hazard class:	Not applicable
Identification class:	Not applicable
Required label text:	Not applicable
Hazardous substances/reportable quantities (RQ):	Not applicable

## Section XV - Other Regulatory Information



Status under USDOL-OSHA Hazard Communication Rule, 29 CFR 1910.1200:	<i>Portland cement is considered a "hazardous chemical" under this regulation, and should be part of any hazard communication program.</i>
Status under CERCLA/Superfund, 40 CFR 117 and 302:	<i>Not listed.</i>
Hazard Category under SARA (Title III), Sections 311 & 312:	<i>Portland cement qualifies as a "hazardous substance" with delayed health effects.</i>
Status under SARA (Title III) Section 313:	<i>Not subject to reporting requirements under section 313.</i>
Status under TSCA (as of May 1997):	<i>Some substances in portland cement are on the TSCA inventory list.</i>
Status under the Federal Hazardous Substances Act:	<i>Portland cement is a "hazardous substance" subject to statutes promulgated under the subject act.</i>
Status under California Proposition 65:	<i>WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. California law requires the manufacturer to give the above warning in the absence of definitive testing to prove that the defined risks do not exist.</i>
Status under Canadian Environmental Protection Act:	<i>Not listed.</i>
Workplace Hazardous Material Information System (Canada):	<i>Portland cement is considered to be a hazardous material under the Hazardous Product Act as defined by the Controlled Products Regulations (Class E - Corrosive Material) and is therefore subject to the labeling and MSDS requirements of the Workplace Hazardous Materials Information System (WHMIS).</i>

## Section XVI - Other Information

Approved by: Susan Diehl, Vice President

Revision Date: February 9, 2005

**Other important information:** Portland cement should only be used by knowledgeable persons. While the information provided in the material safety data sheet is believed to provide a useful summary of the hazards of portland cement as it is commonly used, the sheet cannot anticipate and provide all of the information that might be needed in every situation. Inexperienced product users should obtain proper training before using this product.

A key to using the product safely requires the user to recognize that portland cement chemically reacts with water, and that some of the intermediate products of this reaction (that is, those present while a portland cement product is "setting") pose a more severe hazard than does portland cement itself. These hazards include potential injuries to eyes and skin.

The data furnished in this sheet do not address hazards that may be posed by other materials mixed with portland cement to produce portland cement products. Users should review other relevant material safety data sheets before working with this portland cement or with portland cement products, including, for example, portland cement concrete.

SELLER MAKES NO WARRANTY, EXPRESSED OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THERE OF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION PROVIDED BY HOLCIM (US) INC., EXCEPT THAT THE PRODUCT SHALL CONFORM TO CONTRACTED SPECIFICATIONS.

.....  
**Lonestar Industries, LLC.**

**PVC CONTROL JOINT**



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## MATERIAL SAFETY DATA SHEET

(Page 1 of 2)

### PVC Control Joint

(Flexible Vinyl Pellet Compound)

MSDS Review Date: June 2005

#### **Section I - Chemical Product and Company Identification**

Dimex Corporation Phone #: 800-334-3776  
Route #1, Box 140G  
Marietta, Ohio 45750

Product Identification: FPVCBLK75A-EB  
Chemical Name/Synonyms: Polyvinyl Chloride, PVC, Vinyl  
Formula: PVC resin (CH<sub>2</sub>CHCl)<sub>n</sub> plus functional additives  
Chemical Family: Vinyl resin - Chloroethene Polymer  
CAS Registry Number: Not applicable to compounds

#### **Section II - Hazardous Ingredients**

\*\*Flexible vinyl pellet compounds are mixtures of PVC resins with various functional additives. Additives are bound up in the manufacturing process and are not expected to create any hazard when handled or processed in accordance with good manufacturing and industrial hygiene practices.

\*\*Trace amounts of hydrogen chloride may be generated from the PVC compound if overheated. Volatiles from stabilizers, plasticizers, lubricants, etc. which may be generated in trace amounts may prove sensitive to some individuals.

#### **Section III - Physical Data**

Solubility in water: Very slight  
Specific Gravity: 1.15 to 1.70 depending on formulation  
Appearance & Odor: Pigmented or unpigmented granules, odorless or with a bland odor  
Other: Characteristics such as vapor pressure, vapor density, boiling point & evaporation rate are not applicable.

#### **Section IV - Fire and Explosion Hazard Data**

\*\*Flash Ignition and Self Ignition temperatures vary somewhat with the composition but should be no lower than the following:

Flash Ignition Temperature - 300° C  
Self Ignition Temperature - 410° C

\*\*Vinyl compounds will not support combustion but can be forced to burn by continuous application of intense heat.

\*\*Extinguishing Media - Water is most effective. ABC dry chemical, AFFF and protein type air foams are also effective. Belden vinyl compounds are "ordinary combustibles" (NFPA Class A).

\*\*Special Fire Fighting Procedure - Positive pressure self contained breathing apparatus (SCBA) is suggested during and immediately after a fire.

\*\*Combustion Products - When forced to burn, primary combustion gases will be hydrogen chloride, carbon monoxide, carbon dioxide and aliphatic olefins. Trace amounts of benzene and aliphatic and aromatic hydrocarbons may be present.

\*\*Hydrogen Chloride has a corrosive effect on many metals and appropriate measure should be taken when exposure occurs.

#### **Section V - Health Hazard Data**

Threshold limit value: None established  
Effects of overexposure: Non at room temperature

At processing temperatures vinyl compounds may emit fumes and vapors that are irritating to the respiratory tract, eyes or skin of some sensitive individuals.

**\*\*Emergency and First Aid Procedure:** If irritation from exposure to processing fumes persists, remove affected individual, call a physician and provide suitable protection before re-entry.

**Section VI - Reactivity**

Stability:	Stable
Hazardous Polymerization:	Will not occur
Hazardous decomposition products:	Hydrogen chloride, carbon monoxide, carbon dioxide, aliphatic olefins. Trace amounts of benzene and aromatic and aliphatic hydrocarbons.
Incompatibility:	Avoid contact with acetal, acetal copolymers and amines during processing

**Section VII - Spill or Leak**

Vacuum or sweep into a closed container for reuse or disposal. Dispose of in a licensed landfill or by incineration. If incinerated, be aware that hydrogen chloride is generated.

**Section VIII - Special Protection Information**

Ventilation:	Provide effective ventilation to draw fumes away from workers to prevent routine inhalation.
Respiratory Protection:	Not normally required
Protective Equipment:	Gloves for handling hot materials and safety glasses are recommended for all industrial work places.

**Section IX: - Special Precautions**

Normal Melt Processing:	Provide adequate ventilation to avoid build up of fumes.
Clean up:	Avoid conditions that will result in significant decomposition caused by excessive heat history.

Compound at of above normal processing temperatures should not be allowed to accumulate in thick masses, or it will begin to thermally decompose and to swell due to internal gassing. Molten waste should be collected as strands or flattened and quenched in cold water. Decomposing metal should be removed to a well ventilated area, preferable outdoors.

**Section X: - Transportation**

Vinyl compounds are not classified as hazardous by the U.S. Department of Transportation under the Title 49 of the Code of Federal Regulations, 1983 edition.

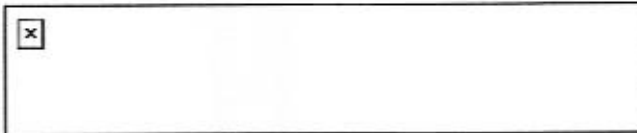
**Section XI: - Hazardous Codes**

	<b>NFPA 704</b>	<b>HMIS</b>
Health:	Moderate	Insignificant
Flammability:	Slight	Slight
Reactivity:	Insignificant	Insignificant

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**Lonestar Industries, LLC.**

**REBAR**





P.O. Box 36795  
Tucson, Arizona 85740

### MATERIAL SAFETY DATA SHEET

Page 1 of 3  
REBAR

For more specific details contact J D Russell Company Corporate Offices at 520 742-6194

#### \*\*\*\*\*GENERAL INFORMATION\*\*\*\*\*

PRODUCT NAME: REBAR

Creation Date: 4/12/00

Distributed by:  
GEORGIA-PACIFIC  
133 PEACHTREE STREET, N.E.  
ATLANTA, GA 30303

Telephone 404 652-5119

Manufactured by :  
NUCOR STEEL  
PO BOX 100 WEST CEMETERY ROAD  
PLYMOUTH, UT 84330

Telephone 435 458-2300  
EMERGENCY TELEPHONE  
435 458-2300

#### \*\*\*\*\*PRODUCT IDENTIFICATION\*\*\*\*\*

IDENTIFICATION NAME: CARBON AND ALLOY STEEL(S)

#### \*\*\*\*\*HAZARDOUS INGREDIENTS/ SARA III INFORMATION\*\*\*\*\*

COMPONENT	% BY WEIGHT	CAS NO	OSHA PEL mg/m3	ACGIH TLV/TWA mg/m3
Iron	94-98		10	5
Chromium	0.0-1.2		1.0	0.5
Nickel	0.0-1.0		1.05	0.1
Manganese	0.3-1.6		5	1.0
Molybdenum	0.00-0.35		5	5
Copper	0.1-1.0		0.1	0.2
Silicon	0.0-2.0		Not Established	10
Carbon	0.05-1.00		Not Established	Not Established
Cadmium	<0.1		0.1	0.05

PEL – Permissible  
Exposure Limit

TLV – Threshold  
Limit Value

#### \*\*\*\*\*PHYSICAL DATA\*\*\*\*\*

Boiling Point:	N/A	Vapor Pressure:	N/A
Appearance and Odor:	Odorless Solid	Specific Gravity:	7.8
Odor	None	Vapor Density:	N/A
Melting Point:	2800° F	Evaporation Rate:	N/A
Solubility in Water:		% Volatile by Volume:	N/A

REVISION DATE: 041800

**MATERIAL SAFETY DATA SHEET**

Page 2 of 3

REBAR

## \*\*\*\*\*FIRE AND EXPLOSION HAZARD DATA\*\*\*\*\*

Flash Point: None  
 Flammable limits in air by volume: LEL: N/A UEL: N/A  
 Extinguishing Media: No Fire or Explosion Hazard  
 Special Firefighting Procedures: N/A  
 Unusual Fire and Explosion Hazards: N/A

## \*\*\*\*\*REACTIVITY DATA\*\*\*\*\*

Stability: Stable  
 Conditions to avoid:  
 Incompatibility (Materials to Avoid): None  
 Hazardous decomposition or byproducts Metal Fumes And Certain Noxious Gases May Be Produced During Burning Or Welding  
 Hazardous Polymerization: Will Not Occur

## \*\*\*\*\*HEALTH HAZARD DATA\*\*\*\*\*

Route(s) of Entry	INHALATION? YES	SKIN? NO	INGESTION? YES
Health Hazards (Acute and Chronic)	Prolonged, Repeated Exposure To Fumes Or Dust Generated During Cutting Welding Or Grinding Operations May Cause Impairment Of Lung Function, Pneumonitis, "Metal Fume Fever."		
Carcinogenicity	N/A		
Medical Conditions Generally Aggravated by Exposure	Dermatitis, Pulmonary Disease, Speech Disorders.		
Signs and Symptoms of Exposure	Irritation Of The Nose, Throat Or Eyes; Cough, Headache, Nausea, Fever.		
EMERGENCY AND FIRST AID PROCEDURES:	In Case Of Overexposure, Move Person From Contaminated Area To Fresh Air. If Eyes Are Irritated, Flush With Water. Seek Medical Aid If Necessary.		

## \*\*\*\*\*PRECAUTIONS FOR SPILLS OR LEAKS\*\*\*\*\*

Steps to be taken in case material is released or spilled: N/A

Waste Disposal Method: In Accordance With Federal, State And Local Regulation:

Precautions To Be Taken in Handling and Storage: No Special Handling Precautions Required

Other Precautions: N/A

**MATERIAL SAFETY DATA SHEET**

Page 3 of 3

REBAR

## \*\*\*\*\*SPECIAL PROTECTION INFORMATION\*\*\*\*\*

Respiratory Protection: Use NIOSH Approved Dust fume Respirator If Contaminant Levels Exceed The PE Or TLV.

<b>Ventilation:</b>	
<b>Local Exhaust</b>	Allow For Adequate Ventilation
<b>Mechanical (General)</b>	When Required
<b>Special</b>	None
<b>Other</b>	None
<b>Eye Protection:</b>	Use Face Shield And Appropriate Eye Protection When Cutting, Welding Or Grindi
<b>Protective Gloves:</b>	Use Gloves When Cutting, Welding Or Grinding
<b>Work/Hygienic Practices:</b>	Remove Combustibles From Area When Cutting Or Welding
<b>Other:</b>	Use Welders Apron When Welding

\*\*\*\*\*OTHER INFORMATION\*\*\*\*\*

This MSDS Is Based Upon The Corresponding MSDS Created By Nucor Steel And Georgia Pacific

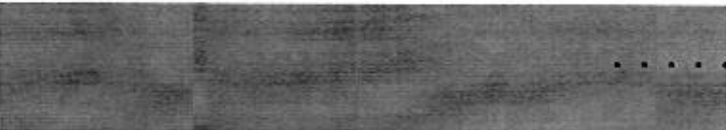
**DISCLAIMER:** The information provided in this MSDS Sheet was obtained from sources, which we believe are reliable. However, the information is provided without any representation or warranty, expressed or implies regarding the accuracy or correctness.

The conditions or methods of handling, storage, use and disposal of the products are beyond our control and may be beyond our knowledge. For this and other reason, we do no assume any responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage , use or disposal of the product.



.....  
**Lonestar Industries, LLC.**

**RUBBER CONTROL JOINT**





**Material Safety Data Sheet**  
(Page 1 of 2)

**Rubber Control Joint**

**Section 1 - Hazards**

313 Chemical  
Irritant

**Section 2 - Product Identification**

Chemical Name: Blended EPDM compound  
CAS Number: N/A  
Chemical Family: Blended EPDM compound

**Section 3 - Hazardous Ingredients**

Zinc oxide CAS# 1314-13-2  
Carbon black CAS# 1333-86-4  
Phenolic Resin CAS# Not Available – Probable Carcinogen

**Section 4 - Physical Data**

Appearance: Amber, white or gray rubbery solid  
Specific Gravity: Varies by compound  
Melting Point: N/A  
Vapor Pressure: N/A  
Boiling Point: N/A  
Solubility (H<sub>2</sub>O): Insoluble in water

**Section 5 - Fire and Explosion Hazard Data**

Flashpoint: N/D  
Auto ignition: N/D  
Temperature: N/D  
Flammable Limits in Air: N/D  
Extinguishing Media: Water, protein foams and ABC dry powder  
Special Firefighting  
Procedures:

Positive-pressure self-contained breathing apparatus (SCBA) must be used. No personnel may expose himself to vapors or smoke without SCBA. Rubber is a Class A combustible that produces toxic combustion products.

**Section 6 - Reactivity Data**

Stability: Stable at ambient temperature and pressure  
Incompatibility: None known  
Hazardous Polymerization: Will not occur  
Decomposition Products: Combustion products include carbon monoxide, carbon dioxide and small amounts of aromatic and aliphatic hydrocarbons. Smoke from all burning rubber must be considered toxic.

**Section 7 - Health Hazard Data**

Threshold Limit Value: N/D  
Toxic Level: N/D

Specific Hazard(s): All rubber blends may emit processing vapors that are toxic. Good ventilation is needed. Prolonged and/or repeated contact with skin may cause irritation and inhalation of vapors during processing can irritate eyes and respiratory tract.

Primary Routes of Entry: Inhalation of processing vapors

First Aid Procedures: Inhalation: remove to fresh air. Skin contact: wash with soap and water.

Toxicology Information: None generated on this material, but the components possess irritant potential. This product is not listed as carcinogenic by IARC, NTP or OSHA.

**Section 8 - Storage, Spill and Leak Procedures**

Storage: Store away from sources of heat and light

Spills: Clean up in a manner consistent of good housekeeping. Handle as a solid waste. Do not flush into public sewer or water system.

Disposal: Dispose of in accordance with Federal, State and local regulations. This product is not defined as hazardous by current provisions of RCRA (40CFR261)

**Section 9 - Special Protection Information**

Ventilation Requirements: Local exhaust ventilation is required for all processing operations.

Personal Protection

Equipment: Avoid skin contact by use of personal protective equipment and good personal hygiene. In absence of adequate ventilation for hot processing vapors and/or where particulate limits are exceeded, use NOISH-certified respiratory protection as required.

**Section 10 - Special Precautions**

Unusual Hazards: Emits acrid vapors when exposed to flames. Toxic gases will form during combustion and/or degradation.

Excessive Heat: May ignite at excessive processing temperatures and will produce toxic vapors during combustion and pyrolysis.

Combustibility: Rubber is a Class A combustible. When this material burns or degrades toxic gases and vapors are liberated.

MSDS Prepared by: Industrial Hazards Data, Inc.  
MSDS Date: April 29, 1994  
MSDS Review Date: April 17, 2009

.....  
**Lonestar Industries, LLC.**

**SAND**



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# All Purpose Sand

## MATERIAL SAFETY DATA SHEET

### HMIS Label

HEALTH	2'
FIRE	0
PHYSICAL HAZARD	0
PPE	X

### SECTION 1 – IDENTITY

Distributed by: TXI Operations, LP  
Address: 1341 W Mockingbird Lane  
Dallas, TX 75247

Product Name: All Purpose Sand (TXI009)

Chemical Name: Silica Sand

Common Name: All Purpose Sand

Formula: Predominantly SiO<sub>2</sub>

Trade Name and Synonyms: All Purpose Sand, Play Sand, Silica Sand, Quartz Sand, Concrete Sand, Mason Sand, Asphalt Sand, Filter Media, Foundry Sand

MSDS prepared: August 1998

Emergency Phone (Chemtrec): 800-424-9300

Outside USA: 703-527-3887

Telephone for information: Nancy Garnett  
972-647-3824

Chemical Family: Silicate

Last revised: September 2004

### SECTION 2 – HAZARDOUS INGREDIENTS

Hazardous Component	CAS#	%Typical	TLV (Units)	PEL (Units)
Quartz	14808-60-7	50-100	0.05 mg/m <sup>3*</sup>	<u>10 mg/m<sup>3*</sup></u> %SiO <sub>2</sub> + 2
				<u>30 mg/m<sup>3**</sup></u> %SiO <sub>2</sub> + 2

\*Respirable Fraction

\*\*Total dust

PEL: Permissible Exposure Limit established by the Occupational Safety and Health Administration (OSHA).

TLV: Threshold Limit Value established by the American Conference of Governmental Industrial Hygienists (ACGIH).

This material, if it becomes a waste, is not classified as a RCRA hazardous waste (40 CFR 261).

### SECTION 3 – PHYSICAL DATA

<b>Bolling Point</b> NA	<b>Specific Gravity (H<sub>2</sub>O=1)</b> 2.6-2.7	<b>Vapor Pressure (mmHg)</b> NA
<b>Percent Volatile by Volume</b> 0	<b>Vapor Density (Air=1)</b> NA	<b>Evaporation Rate (n-Butyl Acetate)</b> NA
<b>Percent Soluble in Water</b> Negligible (<0.1%)	<b>Reactivity in Water</b> Will not evolve flammable or toxic gases	
<b>Appearance and Odor</b> Light colored, grainy sand, no odor.		

### SECTION 4 – FIRE AND EXPLOSION DATA

Flash Point: Will not ignite

Extinguishing Media: NA

Unusual Fire and Explosion Hazards: None

Special Fire Fighting Procedures: This material, sand, may be used to smother fires

Flammable Limits in Air (% by Volume):

Lower: N/A Upper: N/A

Auto Ignition Temperature: NA

## SECTION 5 – HEALTH INFORMATION

### Signs and Symptoms of Exposure

**Acute Overexposure:** Inhalation- Congestion of nasal passages and respiratory systems. Eye- Excessive dust may cause severe abrasion of the cornea.

**Chronic Overexposure:** Excessive exposure, by inhalation, to dusts of this material, over an extended period of time may result in the development of pulmonary diseases including pneumoconiosis, silicosis, or lung cancer. Dust can cause inflammation to the lining tissue of the interior of the nose and inflammation of the cornea.

**Medical Conditions Generally Aggravated by Exposure:** Respiratory disorders or diseases may be aggravated by exposure

Chemical/Component Listed as Carcinogen:	<u>NTP</u>	<u>IARC</u>	<u>OSHA</u>
Quartz	YES	YES	NO

**Other Exposure Limits:** None

### Emergency & First Aid Procedures for Indicated Routes of Entry

Eyes: Rinse with copious amounts of water for 15 minutes. Do not rub eyes. If irritation persists, seek medical assistance.

Ingestion: Seek medical assistance immediately.

Inhalation: Remove to fresh air. If breathing is difficult, seek medical assistance immediately.

## SECTION 6 – REACTIVITY DATA

**Stability:** Stable

**Conditions to Avoid:** None known

**Incompatibility (materials to avoid):** None known

**Hazardous Polymerization:** Will not occur

**Hazardous Decomposition or Combustion Products:** None known

## SECTION 7 – SPILL OR LEAK PROCEDURES

### Steps to be Taken in Case Material is Leaked or Spilled

Wear personal protective equipment to prevent eye exposures. Use respiratory protection as necessary. Material not contaminated may be re-used. Avoid generation of excessive dusts.

### Waste Disposal Method

Consult federal, state and local regulations. As packaged, not classified as a hazardous waste under 40 CFR 261.

## SECTION 8 – PERSONAL PROTECTION INFORMATION

### Respiratory Protection

Not required under normal conditions. Select appropriate respirator based on the level of airborne contamination and presence of sufficient oxygen. Use only NIOSH/MSHA approved respirators. Follow OSHA respiratory regulations (29 CFR 1910.134) to ensure employee training and protection are adequate.

**Ventilation:** Use in well ventilated area.

**Protective Gloves:** Gloves to protect against abrasion.

**Eye Protection:** Goggles, or safety glasses with face shield.

**Other Protective Clothing or Equipment:** Prevent exposure to the eyes.

## SECTION 9 – SPECIAL PRECAUTIONS

### Precautions to be Taken in Handling & Storing

Store in a manner to prevent accumulation of airborne dust.

**Other Precautions:** None determined.

### Other Information

Reasonable care has been taken in the preparation of this information, but the manufacturer nor preparer of the MSDS makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use.

9/2003 revision prepared by: Michele Smith, CIH, Caldwell Engineering; PO Box 851325, Richardson, TX 75085; 972-889-7200.

9/2004 revision prepared by: Nancy Garnett, TXI Operations, LP. Some information used in the generation of this MSDS was obtained from existing TXI MSDSs.



.....  
**Lonestar Industries, LLC.**

**STAINLESS STEEL**



**Hohmann & Barnard, Inc.**  
**Material Safety Data Sheet**  
**\*\*\* Stainless Steel \*\*\***

Hohmann & Barnard, Inc.  
 30 Rasons Court  
 Hauppauge, NY 11788  
 September 2007

PRODUCT NAME: Stainless Steel  
 Chemical Name: Examples; 303, 304, 316, 410

Manufacturer's Name: Hohmann & Barnard, Inc.  
 631-234-0600

Date Prepared: 9/19/2007

### Section I - Ingredients

Material/Component	CAS Number	% Weight	Exposure Limits	
			OSHA PEL (mg/m <sup>3</sup> )	ACGIH TLV (mg/m <sup>3</sup> )
<b>Base Metal</b>				
Iron (Fe)	7439-89-6	39-81	10 (Fe <sub>2</sub> O <sub>3</sub> Fume)	5 (Fe <sub>2</sub> O <sub>3</sub> Fume)
<b>Alloying Elements</b>				
Carbon (C)	7440-44-0	0.5 max	None Listed	None Listed
Manganese (Mn)	7439-96-5	10.0 max	5.0 as Mn	1.0 as Mn
Phosphorous (P)	7723-14-0	0.001-0.2	0.1 as P	0.1 as P
Sulfur (S)	7704-34-9	0.001-0.35	13 (Sulfur Dioxide)	5 (Sulfur Dioxide)
Silicon (Si)	7440-21-3	2.0 max	None Listed	None Listed
Chromium (Cr)	7440-47-3	10-27	1.0 as Cr	0.5 as Cr
Nickel (Ni)	7440-02-0	0-22	1.0 as Ni	1.0 as Ni
Selenium (Se)	7782-49-2	0-0.35	0.2 as Se	0.2 as Se
Columbium (Cb)	7440-03-1			
Tantalum (Ta)	7440-25-7	10 x C % W <sub>1</sub>	5.0 as Ta	5.0 as Ta
Copper (Cu)	7440-50-8	0.04-4	0.2 as Cu	0.2 as Cu
Molybdenum (Mo)	7439-98-7	0-4	5.0 Soluble Compds	5.0 Soluble Compds
Aluminum (Al)	7429-90-5	0-2	None Listed	5.0 as Welded Fumes
Titanium (Ti)	7440-32-6	0.70 max	15 (Ti O <sub>2</sub> )	10 as Total Dust

NOTE: The above listing is a summary of elements used to alloy stainless steel. Various grades of steel will contain different combinations of these elements. Trace elements may also be present in minute amounts.

### Section II - Physical Data

**Material** (at normal conditions): Solid  
**Appearance and Odor:** Gray-Black with Metallic Lustre - Odorless  
**Acidity / Alkalinity:** ph = NA  
**Melting Point:** 2700°F  
**Boiling Point:** NA  
**Specific Gravity** (H<sub>2</sub>O=1): Approx 8

**Solubility in water** (% by weight): NA

**Vapor Pressure:** NA

### **Section III - Personal Protective Equipment**

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#### ***Respiratory Protection***

NIOSH approved dust/mist/fume respirator should be used during welding or burning if OSHA PEL or TLV is exceeded.

#### ***Hands, Arms and Body***

Use appropriate clothing such as welders aprons & gloves when welding or burning. Check local codes.

#### ***Eyes and Face***

Safety glasses should always be worn when grinding or cutting; face shields should be worn when welding or burning.

#### ***Other Clothing and Equipment***

As required for protection depending on the operation and safety codes.

### **Section IV - Emergency Medical Procedures**

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#### ***Inhalation***

Remove to fresh air; if condition continues, consult physician.

#### ***Eye Contact***

Immediately flush well with running water to remove particulate; get medical attention.

#### ***Skin Contact***

If irritation develops, remove clothing and wash well with soap and water. If condition persists, seek medical attention.

#### ***Ingestion***

If significant amounts of metal are ingested, seek medical attention.

### **Section V - Health/Safety Information**

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#### **HEALTH**

Steel products in the natural state do not present an inhalation, ingestion, or contact health hazard. However, operations such as welding, burning, sawing, brazing, grinding, and possibly machining, which results in elevating the temperature of the product to or above its melting point or results in the generation of airborne particulates may present hazards. The above operations should be performed in well ventilated areas. The major exposure hazard is inhalation.

#### ***Effects of overexposure are as follows:***

**Acute:** Excessive inhalation of all metallic fumes and dusts may result in irritation of eyes, nose and throat. Also high concentrations of fumes and ducts of

iron-oxide, manganese, copper & selenium may result in metal fume fever. Typical symptoms consist of a metallic taste in the mouth, dryness and irritation of the throat, chills and fever, and usually last from 12 to 48 hours.

**Chronic:** Chronic and prolonged inhalation of high concentrations of fumes or dust of the following elements may lead to the conditions listed opposite the elements:

*Iron (iron-oxide):* Pulmonary effects, siderosis

*Manganese:* Bronchitis, pneumonitis, lack of coordination, central nervous system.

*Chromium:* Various forms of dermatitis, inflammation and/or ulceration of upper respiratory tract, and possibly cancer of nasal passages and lungs. Based on available information, there does not appear to be any evidence that exposure to welding fume induces human cancer.

*Nickel:* SAME AS CHROMIUM

*Selenium:* Nasal and bronchial irritation, gastro-intestinal disturbances, garlic odor of breath.

*Copper:* Pulmonary effects, nasal and paranasal sinus, skin and liver.

*Vanadium:* May affect lungs. May affect blood pressure as vanadium pentoxide.

*Cobalt:* Inhalation of cobalt dust may cause an asthma-like disease with cough and dyspnea.

*Molybdenum:* Pain in joints, hands, knees and feet.

Medical conditions generally aggravated by exposure would be dermatitis and pulmonary disease or disorders.

**Occupational Exposure Limits: See Ingredients (Section I)**

Chromium and Nickel have been identified by the International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP) as potential carcinogens.

**FIRE AND EXPLOSION**

**Flash Point:** NA

**Auto Ignition Temperature:** NA

**Extinguishing Method:** NA

**Extinguishing Method Not to be used:** NA

**Fire and Explosion Hazards:** Steel products in their natural state do not present a fire or explosion hazard.

**Flammable Units in Air:**

Lower: NA

Upper: NA

**REACTIVITY**

**Stability:** Stable

**Incompatibility (Materials to Avoid):** Stable under normal conditions to use, storage and transport. Reacts with strong acids to form hydrogen gas. At temperatures above melting point, metallic oxide fumes may be liberated.

**Conditions to Avoid:** Non-ventilated areas when cutting, welding, burning or brazing; avoid generation of airborne dust and fumes.

**Keep Area Well Ventilated**

**Hazardous Decomposition Products:** Metallic oxides

**Section VI - Environmental**

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**Spill or Leak procedures**

*Special Precautions:* NA - Use good housekeeping practices to prevent accumulation of dust and to keep airborne dust to a minimum, Avoid breathing metal fumes or dust.

*Waste Disposal Method:* Dust, etc. - follow federal, state, and local regulations regarding disposal.

**Section VII - Additional Information**

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The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any representation or warranty, express or implied regarding the accuracy or correctness. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.

.....  
**Lonestar Industries, LLC.**

**WATERPROOFING SEALER**







Date de préparation: 04-janv.-2010

Date de révision: 29-déc.-2009

Numéro de révision: 0

## 1. IDENTIFICATION DU PRODUIT ET DE LA SOCIETE

Code du produit  
Nom commercial

C860-NOPG  
PRIME A PELL 200

Communiquer avec le fabricant  
Numéro de téléphone d'appel  
d'urgence

Tnemec Company, Inc. 6800 Trajet D'entreprise, Kansas-City, MO 64120-1372  
800-535-5053 (INFOTRAC) - TNE MEC REGULATORY DEPT: 816-474-3400

## 2. IDENTIFICATION DES DANGERS

### APERÇU DES URGENCES

#### AVERTISSEMENT!

VAPEUR ET LIQUIDE COMBUSTIBLES.  
NOCIF EN CAS D'INHALATION.  
NOCIF OU FATAL EN CAS D'INGESTION.  
PEUVENT AFFECTER LE CERVEAU OU LE SYSTEME NERVEUX ET PROVOQUER DES ETOURDISSEMENTS,  
UNE MIGRAINE OU DES NAUSEES.  
PEUT CAUSER UNE IRRITATION DES YEUX, DE LA PEAU, DU NEZ, DE LA GORGE ET DES VOIES  
RESPIRATOIRES.

#### Effets potentiels sur la santé

Voies majeures d'exposition

Contact avec les yeux, Inhalation, Contact avec la peau.

#### Effets aigus

Yeux  
Peau  
Inhalation  
Ingestion

Peut provoquer une irritation légère.  
Irritant pour la peau.  
Irritant pour les voies respiratoires.  
Peut être nocif par ingestion.

#### Effets chroniques

AVIS: Les rapports ont associé une surexposition professionnelle répétée et prolongée aux solvants à des dommages permanents au cerveau et au système nerveux. L'emploi abusif intentionnel consistant à concentrer et à inhaler le contenu peut être nocif ou fatal.

Consulter la section 11 pour des données toxicologiques supplémentaires.

Conditions médicales aggravées

Système nerveux central. Troubles rénaux. Troubles cutanés.

Interactions avec d'autres produits  
chimiques

La consommation d'alcool peut augmenter les effets toxiques.

Effets potentiels sur l'environnement Voir section 12 pour des informations écologiques additionnelles

Effets sur l'organe-cible

Système nerveux central, Yeux, Reins, Appareil respiratoire, Peau

### 3. COMPOSITION/INFORMATION SUR LES COMPOSANTS

#### Composants dangereux

Composant	No. CAS	% en poids
ALIPHATIC HYDROCARBON MIXTURE	8052-41-3	92.4182
SILICONE RESIN SOLUTION		5 - 10

### 4. PREMIERS SOINS

<b>Contact avec les yeux</b>	Bien rincer à l'eau abondante pendant au moins 15 minutes.
<b>Contact avec la peau</b>	Laver immédiatement et abondamment avec de l'eau et du savon.
<b>Ingestion</b>	En cas d'ingestion, ne pas provoquer de vomissement. Appeler un médecin immédiatement.
<b>Inhalation</b>	Amener la victime à l'air libre. Oxygène ou respiration artificielle si nécessaire.

### 5. MESURES DE LUTTE CONTRE L'INCENDIE

<b>Indice d'inflammabilité</b>	Des matières combustibles.
<b>Moyen d'extinction approprié</b>	Utiliser des moyens d'extinction appropriés aux conditions locales et à l'environnement voisin. Un contact avec l'eau peut provoquer une déflagration. Utilisation: Dioxyde de carbone (CO2) - Mousse - Poudre d'extinction
<b>Produits de décomposition dangereux</b>	Oxydes de carbone, hydrocarbures.

#### Dangers spécifiques provenant de la substance chimique

La décomposition par la chaleur peut provoquer le dégagement de gaz et de vapeurs irritants. En cas d'incendie et/ou d'explosion, ne pas respirer les fumées.

#### Équipement de protection et précautions pour les pompiers

Les récipients fermés peuvent être refroidis par eau pulvérisée. En cas d'incendie, porter un appareil respiratoire autonome. Tenir à l'écart de la chaleur/des étincelles/des flammes nues/des surfaces chaudes. Peut engendrer une augmentation de la chaleur et de la pression dans des récipients fermés. Les vapeurs de solvants sont plus lourdes que l'air et elles peuvent se répandre sur le sol. La distance de retour de flamme peut être considérable.

### 6. MESURES A PRENDRE EN CAS DE DÉVERSEMENT ACCIDENTEL

<b>Précautions individuelles</b>	Éviter le contact avec la peau, les yeux et les vêtements. Utiliser un équipement de protection individuelle. Enlever toute source d'inflammation.
<b>Précautions pour la protection de l'environnement</b>	Éviter un déversement ou une fuite supplémentaire, si cela est possible sans danger. Ne pas déverser dans des eaux de surface ou dans les égouts.
<b>Méthodes de nettoyage</b>	En cas de renversement, retenir le matériau renversé et l'enlever avec un produit absorbant inerte. Mettre au rebut le produit absorbant contaminé, le conteneur et le contenu inutilisé conformément aux réglementations locales, de l'Etat et fédérales.
<b>Autres informations</b>	Sans objet

## 7. MANIPULATION ET STOCKAGE

### Manipulation

Fermer le conteneur après chaque utilisation. Éviter le contact avec la peau, les yeux et les vêtements. Ne pas manger, boire ou fumer en manipulant ce produit. S'il y a un risque d'éclaboussures, porter lunettes de protection chimique. Porter des gants/des vêtements de protection. Ne pas brûler les fûts vides ou les exposer au chalumeau. Dans le cas de mélanges, consulter les étiquettes et les fiches techniques santé-sécurité de tous les constituants. Se laver à fond après manipulation.

### Stockage

Eloigner de la chaleur, des étincelles et des flammes. Utiliser uniquement dans un endroit équipé d'une installation résistant au feu. Empêcher l'accumulation de vapeurs en ouvrant toutes les fenêtres et les portes pour produire des courants d'air.

## 8. MESURES DE CONTRÔLE DE L'EXPOSITION/PROTECTION INDIVIDUELLE

### Directives au sujet de l'exposition

Composant	ACGIH TLV	OSHA PEL	Quebec TWAEV	Ontario TWAEV	Mexico OEL (TWA)
ALIPHATIC HYDROCARBON MIXTURE	TWA: 100 ppm	TWA: 100 ppm TWA: 525 mg/m <sup>3</sup> TWA: 2900 mg/m <sup>3</sup> TWA: 500 ppm	TWA: 525 mg/m <sup>3</sup> TWA: 100 ppm	TWA: 525 mg/m <sup>3</sup>	TWA: 523 mg/m <sup>3</sup> TWA: 100 ppm STEL: 1050 mg/m <sup>3</sup> STEL: 200 ppm

**Mesures d'ordre technique** Assurer une ventilation adéquate, surtout dans les endroits clos

### Protection individuelle

**Protection de la peau**

Vêtement léger de protection, Tablier, Gants imperméables

**Protection du visage/des yeux**

Lunettes de sécurité avec protections latérales

**Protection respiratoire**

**Utiliser uniquement avec une ventilation adéquate.** Ne pas respirer la poussière, les vapeurs ou la brume de vaporisation. Veillez à ce que de l'air frais entre pendant l'application et le séchage. En cas de larmoiement, migraine ou étourdissement ou si l'appareil de contrôle de la qualité de l'air démontre que les niveaux de vapeurs / brumes sont supérieurs aux limites acceptables, portez un masque respiratoire approprié et bien ajusté (approuvé par NIOSH) pendant et après l'application. Suivez les instructions du fabricant pour l'utilisation du masque respiratoire.

**Considérations d'hygiène générale**

A manipuler conformément aux normes d'hygiène industrielle et aux consignes de sécurité. Éviter de respirer la poussière produite par le découpage, le sablage, ou le meulage.

## 9. PROPRIETES PHYSIQUES ET CHIMIQUES

Point d'éclair	39°C / 102.0°F
Méthode	Pensky Martens - Closed Cup
Point/intervalle d'ébullition	154 - 202°C / 310.0 - 395.0°F
Supérieure Limites de explosion	Pas d'information disponible
Inférieure Limites d'explosivité	Pas d'information disponible
Taux d'évaporation	Pas d'information disponible
Pression de vapeur	Pas d'information disponible
Densité gazeuse	Pas d'information disponible
Densité	.77954
Densité	6.48694
Teneur (%) en COV (composés organiques volatils)	6.067
% de matières volatiles en poids	93.5180
% volatil en volume	95.5065

## 10. STABILITÉ ET RÉACTIVITÉ

## 10. STABILITÉ ET RÉACTIVITÉ

Stabilité chimique	Stable	Conditions à éviter	Chaleur, flammes et étincelles.
Produits incompatibles	Oxydants forts. Acides.	Possibilité de réactions dangereuses	Néant dans des conditions normales de traitement

## 11. INFORMATIONS TOXICOLOGIQUES

### Toxicité aiguë

#### Information sur les composants

Irritation	Pas d'information disponible
Corrosivité	Pas d'information disponible
Sensibilisation	Pas d'information disponible

### Toxicité chronique

**Cancérogénicité** Le tableau ci-dessous indique si chaque agence a listé tout ingrédient comme carcinogène

effets mutagènes	Pas d'information disponible
Effets reproductifs	Pas d'information disponible
Effets sur le développement	Pas d'information disponible
Tératogénicité	Pas d'information disponible
Effets sur l'organe-cible	Système nerveux central, Yeux, Reins, Appareil respiratoire, Peau.
Renseignements sur le perturbateur endocrinien	Pas d'information disponible

## 12. INFORMATIONS ÉCOLOGIQUES

### Écotoxicité

## 13. CONSIDÉRATIONS RELATIVES À L'ÉLIMINATION

<b>Méthodes d'élimination</b>	Conserver le récipient bien fermé. En cas de renversement, retenir le matériau renversé et l'enlever avec un produit absorbant inerte. Mettre au rebut le produit absorbant contaminé, le conteneur et le contenu inutilisé conformément aux réglementations locales, de l'Etat et fédérales
<b>Emballages contaminés</b>	Les récipients vides doivent être mis à la disposition des usines locales pour leur recyclage, leur récupération ou leur élimination

## 14. INFORMATIONS RELATIVES AU TRANSPORT

**DOT** Ground Transportation Only. Call TNEMEC Traffic Department - 816-474-3400 for other modes of Transportation.  
**Proper Shipping Name** UN1263, PAINT RELATED MATERIAL, 3, PGIII, ERG 128

## 15. INFORMATIONS RÉGLEMENTAIRES

## 15. INFORMATIONS RÉGLEMENTAIRES

### Inventaires internationales

TSCA	Est conforme à (aux)
DSL/NDL	Est conforme à (aux)
EINECS/ELINCS	N'est pas conforme à (aux)
Chine	N'est pas conforme à (aux)
ENCS	N'est pas conforme à (aux)
KECL	N'est pas conforme à (aux)
PICCS	N'est pas conforme à (aux)
AICS	N'est pas conforme à (aux)

### Réglementations fédérales des Etats-Unis

#### SARA 313

#### Classification de danger SARA 311/312

Risque chronique pour la santé	non
Risque aigu pour la santé	oui
Risque d'incendie	oui
Risque d'échappement soudain de la pression	non
Danger de réaction	non

### CERCLA

#### Réglementations des Etats

#### Proposition 65 de la Californie

Ce produit contient les substances suivantes qui sont incluses dans la proposition 65 :

#### State Right-to-Know

Composant	Massachusetts	New Jersey	Pennsylvanie	Illinois	Rhode Island
ALIPHATIC HYDROCARBON MIXTURE	X	X	X		X

### Autres réglementations internationales

#### Canada

Ce produit a été classé conformément aux critères de danger du règlement sur les produits contrôlés (RPC) et la fiche signalétique contient tous les renseignements requis par le RPC.

#### Classe de dangers du SIMDUT

B3 Liquide combustible

D2B Matières toxiques



Composant	NPRI
ALIPHATIC HYDROCARBON MIXTURE	Part 5 Substance

#### Légende

INRP - Inventaire national des rejets de polluants

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<b>16. AUTRES INFORMATIONS</b>
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Date de révision: 29-déc.-2009

Sommaire Pas d'information disponible

HMIS	Santé 2	Inflammabilité 2	Reactivity 1
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**Clause de non-responsabilité**

Pour des renseignements précis au sujet des normes d'hygiène et de sécurité au travail, veuillez consulter le Code of Federal Regulations, section 29, article 1910.

À notre connaissance, les renseignements contenus dans les présentes sont précis. Toutefois, ni Tnemec Company ni aucune de ses filiales n'assument une responsabilité quelconque pour l'exactitude ou la complétude des renseignements contenus dans les présentes. La détermination finale de la pertinence de tout produit est la responsabilité de l'utilisateur uniquement. Tous les produits peuvent présenter des risques inconnus pour la santé et doivent être utilisés avec prudence. Même si certains risques sont décrits ici, nous ne pouvons garantir que ceux-ci sont les seuls risques qui existent.

Risques secondaires



.....  
**Lonestar Industries, LLC.**

**WATER REPELLENT ADMIXTURE**



**W. R. GRACE**  
**MATERIAL SAFETY DATA SHEET**

Product Name: DRY-BLOCK II Mortar Admixture  
MSDS ID Number: MP-90422

MSDS Date: 04/14/2008

**SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

**Product Name:** DRY-BLOCK II Mortar Admixture  
**MSDS Number:** MP-90422  
**Cancelled MSDS Number:** MP-90358  
**MSDS Date:** 04/14/2008  
**Chemical Family Name:** Masonry Dispersion  
**Product Use:** Masonry Water Repellent and Strength.  
**Chemical Formula:** Mixture-NA  
**CAS # (Chemical Abstracts Service Number):** Mixture-NA

**Manufactured by:**

W.R.Grace & Co.-Conn. 62 Whittemore Avenue Cambridge, MA 02140	Grace Canada, Inc. 294 Clements Road West Ajax, Ontario L1S 3C6
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**In Case of Emergency Call:**

In USA: (617) 876-1400 In Canada: (905) 683-8561

**SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS**

Ingredient	CAS#	Percent (max)
Calcium stearate	001592-23-0	10-25
Proprietary Additives	NJ801415105	1-10
Sodium hydroxide	001310-73-2	< 1

**SECTION 3 - HAZARDS IDENTIFICATION**

**Emergency Overview:**

**Caution!**  
Causes eye irritation.  
Causes respiratory tract irritation.  
May be harmful if ingested.

**HMIS Rating:**

Health: 2  
Flammability: 1  
Reactivity: 0  
Personal Protective Equipment: B (See Section 8)

**Potential Health Effects:**

**Inhalation:** Causes respiratory tract irritation.  
**Eye Contact:** Eye contact causes irritation.  
**Skin Contact:** Acute skin contact is not expected to result in adverse effects.  
Prolonged skin contact can result in irritation causing redness and itching.  
May cause sensitization.  
**Skin Absorption:** Not expected to be harmful if absorbed through the skin.  
**Ingestion:** Harmful if ingested.  
Effects include: Pain, diarrhea and digestive tract irritation.

**SECTION 4 - FIRST AID MEASURES:**

**Skin Contact:** Wash with soap and water.  
If discomfort or irritation persists, consult a physician.  
Remove contaminated clothing and wash before reuse.  
**Eye Contact:** Flush eyes with water for at least 15 minutes while holding eyelids open.  
If discomfort or irritation persists, consult a physician.  
**Ingestion:** Do not induce vomiting.  
Never give anything by mouth to an unconscious person.  
If discomfort or irritation persists, consult a physician.  
**Inhalation:** If symptoms develop, get fresh air. If symptoms persist, consult a physician.  
If breathing has stopped, give artificial respiration then oxygen if needed.

**W. R. GRACE**  
**MATERIAL SAFETY DATA SHEET**

Product Name: DRY-BLOCK II Mortar Admixture  
MSDS ID Number: MP-90422

MSDS Date: 04/14/2008

**SECTION 5 - FIRE AND EXPLOSION HAZARD DATA**

**Flash Point:** >200F  
**Flash Point Method:** Estimated  
**Lower Explosion Limit:** Not Available  
**Upper Explosion Limit:** Not Available  
**Auto-Ignition Temperature:** Not Available

**NFPA Rating:**

**Health:** 1  
**Flammability:** 1  
**Reactivity:** 0

**Extinguishing Media:** In case of fire, use water spray, dry chemical, Carbon dioxide or foam.  
**Special Fire Fighting Procedures:** Wear self-contained breathing apparatus and complete personal protective equipment when potential for exposure to vapors or products of combustion exist. Water may be used to cool containers to prevent pressure build-up and possible auto-ignition or explosion. Avoid breathing hazardous vapors or products of combustion, keep upwind. Isolate area and keep unnecessary people away. Prevent run-off from fire control or dilution from entering streams or drinking water supplies.

**SECTION 6 - ACCIDENTAL RELEASE MEASURES:**

**Spills/Leaks:** Use proper personal protective equipment. Do not flush to sewer or allow to enter waterways. Keep unnecessary people away.  
Contain and/or absorb spill with inert material (i.e. sand, vermiculite) then place in a suitable container. For large spills, dike area and pump waste material into closed containers for disposal or reclamation.

**SECTION 7 - HANDLING AND STORAGE**

**Precautionary Measures:**  
Avoid contact with eyes, skin and clothing.  
Do not take internally.  
Practice good personal hygiene to avoid ingestion.  
Use only with adequate ventilation.  
Wash clothing before reuse.  
**FOR PROFESSIONAL USE ONLY. KEEP OUT OF CHILDREN'S REACH.**

**SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTIVE EQUIPMENT**

**EXPOSURE GUIDELINES (US)**

Ingredient	ACGIH TLV			OSHA PEL			
	TWA	STEL	Ceiling	TWA	STEL	Ceiling	Substance Specific and Mineral Dust PELs
Calcium stearate	-	-	-	-	-	-	-
Proprietary Additives	-	-	-	-	-	-	-
Sodium hydroxide	-	-	2 mg/m3 Ceiling	2 mg/m3 TWA	-	-	-

**EXPOSURE GUIDELINES (CANADA)**

Employers should consult local Provincial regulatory limits for exposure guidelines which may vary locally.

**Engineering Controls:** Not generally required.

**Personal Protective Equipment:**

**Respiratory Protection:** Respiratory protection is not normally required. However, a chemical cartridge respirator with organic vapor cartridge and a prefilter for dusts/mists is required at or above the applicable exposure limits (Consult above Exposure Guidelines). If no limits exist, use an approved respirator whenever a vapor or mist is generated or if respiratory irritation occurs. Supplied air respirator (SCBA) is required at exposure levels above the capabilities of a chemical cartridge respirator.

**Skin Protection:** Rubber or other impervious gloves should be worn to prevent skin contact.

**W. R. GRACE**  
**MATERIAL SAFETY DATA SHEET**

Product Name: DRY-BLOCK II Mortar Admixture  
MSDS ID Number: MP-90422

MSDS Date: 04/14/2008

**Eye Protection:** At minimum, safety glasses with side shields should be worn where exposure to excessive dust or spray is likely.

**Work/Hygienic Practices:** Use good personal hygiene practices.

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

Physical State:	Liquid
Appearance/Odor:	Milky white dispersion.
Odor Threshold: (ppm)	Not Determined
pH:	8.0 - 9.0
Vapor Pressure: (Mm Hg)	~55
Vapor Density: (Air = 1)	Not Determined
Solubility In Water:	Complete
Specific Gravity: (Water = 1)	1.011 - 1.041
Evaporation Rate: (Butyl Acetate = 1)	Not Determined
Boiling Point:	Not Determined
Viscosity:	Unknown
Bulk Density: (Pounds/Cubic Foot)(Pcf)	Not Applicable
% Volatiles: (70°F)(21°C)	~65% Water (max)

**SECTION 10 - STABILITY AND REACTIVITY**

Chemical Stability:	Stable
Conditions To Avoid:	Oxidizing materials.
Hazardous Polymerization:	Will not polymerize.
Hazardous Decomposition Products:	Carbon dioxide and Carbon monoxide.

**SECTION 11 - TOXICOLOGICAL INFORMATION**

**Ingredient(No data unless listed.)**                      **CAS Number**                      **LD50 and LC50**

**Carcinogenicity:**

Ingredient	IARC Group 1	IARC Group 2A	IARC Group 2B	NTP Known	NTP Suspect	OSHA
Calcium stearate	No	No	No	No	No	No
Proprietary Additives	No	No	No	No	No	No

Mutagenicity:	Not applicable.
Teratogenicity:	Not applicable.
Reproductive Toxicity:	Not applicable.

**SECTION 12 - ECOLOGICAL INFORMATION**

Environmental Fate:	No data available for product.
Ecotoxicity:	No data available for product.

**SECTION 13 - DISPOSAL CONSIDERATIONS**

**Waste Disposal Procedures:** Consult all regulations (federal, state, provincial, local) or a qualified waste disposal firm when characterizing waste for disposal. According to EPA (40 CFR § 261), waste of this product is not defined as hazardous. Dispose of waste in accordance with all applicable regulations.

**SECTION 14 - TRANSPORTATION INFORMATION**

Proper Shipping Name:	Not Applicable
UN/NA Number:	Not Applicable
Domestic Hazard Class:	Nonhazardous
Surface Freight Classification:	Concrete or Masonry Plasticizer
Label/Placard Required:	Not Applicable

**SECTION 15 - REGULATORY INFORMATION**

**REGULATORY CHEMICAL LISTS:**

**CERCLA (Comprehensive Response Compensation and Liability Act):**

**(None present unless listed below)**

**W. R. GRACE**  
**MATERIAL SAFETY DATA SHEET**

Product Name: DRY-BLOCK II Mortar Admixture  
 MSDS ID Number: MP-90422

MSDS Date: 04/14/2008

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt %</u>	<u>CERCLA RQ</u>
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**SARA Title III (Superfund Amendments and Reauthorization Act)**

**SARA Section 312/Tier I & II Hazard Categories:**

Health Immediate (acute)	Yes
Health Delayed (chronic)	No
Flammable	No
Reactive	No
Pressure	No

**302 Reportable Ingredients (Identification Threshold 1%):**

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt %</u>	<u>SARA 302 TPQ</u>
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**313 Reportable Ingredients (Chemicals present below reporting threshold are exempt):**

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt %</u>
Ethylene oxide	000075-21-8	.0001
Methyl alcohol	000067-56-1	.00024
Tetrahydro-3,5-dimethyl-2H-1,3,5-thiadiazine-2-thione	000533-74-4	.02144

**National Volatile Organic Compound Emission Standards For Architectural Coatings:**

Volatile Organic Content: (gr/L) 0

**WHMIS Classification(s):** D2 B

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR). This MSDS contains all the information required by the CPR.

**State Regulatory Information:**

**California Proposition 65:** WARNING! This product contains substances known to the state of California to cause cancer, birth defects or other reproductive harm.

**Massachusetts Hazardous Substance List(Identification threshold 0.0001%(1ppm)):**

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt %</u>
Ethylene oxide	000075-21-8	.0001

**New Jersey Hazardous Substance List(Identification threshold (0.1%)):**

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt %</u>
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**Pennsylvania Hazardous Substance List(Identification threshold 0.01%):**

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt %</u>
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**CHEMICAL INVENTORY STATUS:**

All chemicals in this product are listed or exempt from listing in the following countries:

US	CANADA		EUROPE	AUSTRALIA	JAPAN	KOREA	PHILIPPINES
TSCA	DSL	NDSL	EINECS/ELINCS	AICS	ENCS	ECL	PICCS
Yes	No	Yes	Not Determined	Not Determined	Not Determined	Not Determined	Not Determined

**SECTION 16 - OTHER INFORMATION**

**Non-Hazardous Ingredient Disclosure:**

<u>Chemical Name</u>	<u>CAS Number</u>
Water	007732-18-5
Proprietary	NJ801415105

Prepared by: EH&S Department  
 Approved by: EH&S Department  
 Approved Date: 04/14/2008

**Disclaimer:**

"The data included herein are presented in accordance with various environment, health and safety regulations. It is the responsibility of a recipient of the data to remain currently informed on chemical hazard information, to design and update its own program and to comply with all national, federal, state and local laws and regulations applicable to safety, occupational health, right-to-know and environmental protection."

# Material Safety Data Sheet

RainBloc® for Mortar

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## RainBloc® for Mortar

ACM Chemistries, Inc.  
P.O. Box 920430  
Norcross, GA 30010

Phone: (770) 417-3490  
Emergency Phone: (800) 424-9300  
Effective Date: 7/1/06

### SECTION 1: COMPOSITION / INFORMATION ON INGREDIENTS

<u>Ingredient</u>	<u>Max. % By Wt.</u>	<u>Exposure Limits</u>		
		<u>OSHA</u>	<u>ACGIH</u>	<u>OTHER</u>
Calcium Stearate Cas# 001592-23-0	25-50%	None Established	None Established	None Established
Diethanolamine Cas # 00111-42-2	1%	3 ppm – TWA (Vacated)	0.5 ppm – TWA * Skin	NIOSH – REL 3 PPM
Triethanolamine Cas# 00102-71-6	1-10%	None Established	5.0 mg/m <sup>3</sup> - TLV	None Established
Nonhazardous Proprietary Ingredients	25-50%	None Established	None Established	None Established

### SECTION 2: HAZARDS IDENTIFICATION

#### *Emergency Overview*

Off white to beige liquid with fatty acid odor. May cause skin and eye irritation. May be harmful if swallowed. No significant immediate hazards for emergency response are known

#### HMIS Rating:

Health: 1  
Flammability: 1  
Reactivity: 0

#### Potential Health Effects:

EYE: May cause irritation

SKIN CONTACT: Prolonged contact may cause irritation resulting in dermatitis.



# Material Safety Data Sheet

RainBloc<sup>®</sup> for Mortar

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## SECTION 2: HAZARDS IDENTIFICATION (CONT.)

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SKIN ABSORPTION: No Data

INGESTION: May cause gastrointestinal irritation, nausea, vomiting, and diarrhea. Liver and kidney damage from chronic overexposure has been demonstrated in laboratory animals.

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: No Data

CANCER INFORMATION: Listed as a carcinogen by:

IARC:	NO	NTP:	NO
OSHA:	NO	ACGIH:	NO

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## SECTION 3: FIRST AID

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EYES: Immediately flush with plenty of water for at least 15 minutes, holding eyelids apart to ensure flushing of the entire surface. Washing within one minute is essential to achieve maximum effectiveness. Seek medical attention if irritation should develop.

SKIN: Wash thoroughly with soap and water, remove contaminated clothing and footwear. Wash clothing before reuse. Seek medical attention if irritation should develop.

INHALATION: Remove to fresh air.

INGESTION: Do not induce vomiting unless directed by medical personnel. If vomiting should occur spontaneously, keep airway clear. Seek medical attention.

NOTES TO PHYSICIAN: None

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## SECTION 4: FIRE FIGHTING MEASURES

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### FLAMMABLE PROPERTIES:

Flash Point: >200 °F  
Autoignition Temp.: NAV

Flammable Limits in Air, % By Volume:  
LFL: NAV UFL: NAV

Extinguishing Media: Water spray, Carbon Dioxide, Foam, Dry Chemical

Fire or Explosion Hazards: None

# Material Safety Data Sheet

RainBloc<sup>®</sup> for Mortar

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## SECTION 4: FIRE FIGHTING MEASURES (CONT.)

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### Fire Fighting Procedures:

Keep people away. Isolate fire and deny unnecessary entry. Cool exposed containers with water spray. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Burning liquids may be extinguished by dilution with water. Do not use direct water stream. May spread fire.

### Protective Equipment for Fire Fighters:

Wear positive-pressure, self-contained breathing apparatus (SCBA) and protective fire fighting clothing (firefighting helmet, coat, pants, boots, and gloves). If protective equipment is not available, fight fire from a protected location or safe distance.

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## SECTION 5: ACCIDENTAL RELEASE MEASURES

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Stop leaks. Clean up spill immediately. Contain large spills and remove using a vacuum truck. Soak up small spills with absorbent material and place in labeled waste container for disposal. Spills of solutions are extremely slippery so all residue must be removed promptly. Wear adequate personal protective clothing and equipment.

Spill reporting requirements and reportable quantities vary by region. In case of any spill or release, consult Sections 5, 12, and 14 of the MSDS and all applicable state and local regulations.

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## SECTION 6: HANDLING AND STORAGE INFORMATION

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- Avoid contact with eyes, skin, and clothing.
- Wash thoroughly after handling.
- Avoid breathing vapors or spray mist.
- Use with adequate ventilation.
- Keep container closed when not in use.
- For PROFESSIONAL USE ONLY. KEEP OUT OF CHILDREN'S REACH.

---

## SECTION 7: EXPOSURE CONTROLS / PERSONAL PROTECTION

---

### Ventilation:

Local exhaust:	Recommended when appropriate to control exposures.
Mechanical:	Recommended when appropriate to control exposures.
Special:	Not applicable.
Other:	Not applicable.

# Material Safety Data Sheet

RainBloc<sup>®</sup> for Mortar

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## SECTION 7: EXPOSURE CONTROLS / PERSONAL PROTECTION (CONT.)

---

### Respiratory Protection:

None required under normal conditions of use.

### Skin Protection:

Impervious rubber gloves should be worn to prevent prolonged or repeated contact.

### Eye Protection:

Wear goggles to protect against splashing.

### Other Protective Clothing or Equipment:

Wear appropriate clothing to prevent skin contact.

### Work / Hygienic Practices:

Use good hygiene practices and observe precautions

**Special Note:** This product contains a small quantity of Ethoxylated compound. Trace quantities of Ethylene oxide may be present as a result. Ethylene oxide vapor may build up in the head space of storage containers or tanks. The possibility of exposure to Ethylene oxide vapor above the OSHA Action Level (0.5 ppm) must be addressed during non-routine tasks such as cleaning of storage tanks. Consult the OSHA Ethylene Oxide Standard 29 CFR 1910.1041 for appropriate procedures.

---

## SECTION 8: PHYSICAL AND CHEMICAL PROPERTIES

---

Boiling Point: Not Determined      Specific Gravity (H<sub>2</sub>O=1): Approx. 1.1

Vapor Pressure (mm Hg): Not Determined      % Volatiles:      Approx. 60  
(As Water)

Vapor Density (Air=1): Not Determined      Evaporation Rate: Not Determined  
(Butyl Acetate=1)

Solubility in Water: Complete      pH:      8.0 – 10.0

Bulk Density:      N/A

Appearance and Odor:      Off white to beige dispersion.

Odor Threshold:      None

---

## SECTION 9: STABILITY AND REACTIVITY

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Stable under normal conditions (yes or no):      YES

# Material Safety Data Sheet

RainBloc<sup>®</sup> for Mortar

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## SECTION 9: STABILITY AND REACTIVITY (CONT.)

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Conditions or Materials to avoid: Avoid contact with strong oxidizing agents and acids.

Hazardous Decomposition or Byproducts: If dried and burned, carbon monoxide, nitrous oxides, and sulfur dioxides.

Hazardous Polymerization: Will not occur.

---

## SECTION 10: TOXICOLOGICAL INFORMATION

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<u>Ingredient</u>	<u>Toxicity Data: LD<sub>50</sub> &amp; LC<sub>50</sub></u>	
Diethanolamine	LD <sub>50</sub> (oral, rat)	710 mg/kg
Triethanolamine	LD <sub>50</sub> (oral, rat)	8 g/kg
Proprietary Ingredients	None available at this time	

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## SECTION 11: ECOLOGICAL INFORMATION

---

None available at this time

---

## SECTION 12: DISPOSAL CONSIDERATIONS

---

Consult all regulations (federal, state, local) or a qualified waste disposal firm when characterizing waste for disposal. Dispose of waste in accordance with all applicable regulations.

According to the US EPA (40 CFR S 261.3) waste of this product is not defined as hazardous. However, individual ingredients may be subject to local disposal restrictions.

---

## SECTION 13: TRANSPORT INFORMATION

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<u>DOT Proper Shipping Name:</u>	Not applicable
<u>Hazard Class:</u>	Nonhazardous
<u>Identification #:</u>	Not applicable
<u>Label(s) Required:</u>	Not applicable
<u>Surface Freight Classification:</u>	Concrete or Masonry Plasticizer

# Material Safety Data Sheet

RainBloc® for Mortar

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## SECTION 14: REGULATORY INFORMATION (not meant to be all inclusive – selected regulations represented)

**NOTICE:** The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, expressed or implied is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state, provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state, provincial, and local laws and regulations. See other sections for health and safety information.

### SARA Title III Reporting Information:

Tier I & II Hazard Categories: Delayed Health Hazard

Contains Extremely Hazardous – SARA III Section 302 Ingredient: NO

Contains Toxic Chemical Release – SARA III Section 313 Ingredient: YES  
Comments: Contains less than 1% Diethanolamine: NOT REPORTABLE

### Other Government Reporting Requirements:

All Ingredients contained in this product are included on the US EPA Toxic Substance Control Act (TSCA) inventory or exempt from listing on the TSCA inventory.

### DISCLAIMER OF LIABILITY

The information on this MSDS was obtained from sources which are believed reliable. However, the information is provided without any warranty express or implied, regarding its correctness. The conditions or methods of handling, storage, use, and disposal of the product are beyond our control and beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expense arising out of or in any way connected with the storage, handling, use, or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

.....  
**Lonestar Industries, LLC.**

**WEEPS**



.....



**Hohmann & Barnard, Inc.**  
**Material Safety Data Sheet**  
**\*\*\* Round Weep Holes & PTA Tubes \*\*\***

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Hohmann & Barnard, Inc.  
30 Reasons Court  
Hauppauge, NY 11788  
December 2005

**Section I Product Identification**

Trade Name: #341 Round Weep Holes & PTA Tubes  
Synonyms: Pellets Rigid Vinyl Compound  
Chemical Family: Rigid Poly Vinyl Chloride  
CAS Number: Compound 9002-86-2 (for the base polymer)  
HMIS Rating: Health-O Flammability-O Reactivity-I Personal Protection-A

**Section II Hazardous Ingredients**

Rigid PVC compounds may contain one or more of the following ingredients that by themselves may be considered "hazardous".

Organometallic Stabilizers Titanium Dioxide  
Acrylic Polymers/Styrenic  
Polymers Inorganic Fillers  
Pigments

Note that use of the word "hazardous" is as required and defined in the OSHA Hazard Communication Standard (20 CFR 1910, 1200) and does not necessarily imply that the materials are hazardous of the levels and/or in the physical forms used.

The exact compositions of Prime PVC rigid PVC formulations are "Trade Secrets", as defined in section (1) of the above standard. If more detailed information is required, please contact Hohmann & Barnard, Inc.

**Section III physical Data**

Boiling Point: N/A  
Vapor Pressure: N/A  
Vapor Density: N/A  
Solubility in Water: N/A  
Appearance and Odor: Roughly cylindrical pellets or beads with no appreciable odor.

Specific Gravity: 1.30-1.50  
Melting Point: 300°F  
Evaporation Rate: N/A  
% Volatiles: Nil

**Section IV Fire and Explosion Hazard Data**

Rigid PVC compounds are self-extinguishing and will not support combustion. When exposed to sufficient heat from other burning materials, the compounds may thermally decompose. See Section V below.

If PVC compounds are present in a fire lighting situation, use of a NIOSH approved self-contained breathing apparatus with a full face mask is required.

Fire fighting procedures may include the use of water spray, fog or foam, dry chemicals or carbon dioxide. However, the presence of other materials and/or equipment in the area should be considered in selecting an appropriate fire fighting medium.

**IMPORTANT:** The information contained herein is believed to be accurate. It is offered for your consideration, investigation and verification. The user assumes all risk of use, storage and handling regulations Prime PVC makes no warranty, express or implied, concerning the accuracy or completeness of the above information or the merchantability and fitness of tile product.

## **Section V Reactivity Data**

Under normal conditions, rigid PVC compounds are quite stable and inert. When materials based on PVC resin are exposed to heat for a period of time, they may thermally decompose. The onset of decomposition is accelerated by higher temperatures (e.g. above 400°F). Such thermal decomposition will produce primarily hydrogen chloride gas plus smaller quantities of carbon monoxide, carbon dioxide and smoke.

Hydrogen Chloride is an extremely hygroscopic acid gas. That means it will dissolve instantly in any available water, including perspiration, tears or saliva to form hydrochloric acid. Exposure to small amounts of hydrogen chloride will cause irritation of the skin, eyes and the membranes in the mouth and nose. Exposure to large quantities of hydrogen chloride can cause disruption of breathing due to displacement of oxygen and to the body's instinctive suppression of the inhalation reflex.

If thermal degradation should occur, use of a NIOSH approved self-contained breathing apparatus with a full face mask is required for any employees exposed to the hydrogen chloride will be minimized by isolating any material that has begun to degrade and then cooling it by any practical means, including water spray.

Mechanical ventilation should be used to clear enclosed spaces of fumes.

## **Section VI Health Hazard Data**

In pelletized form rigid PVC compounds present no known acute or chronic health hazards. Routes of entry via skin, inhalation or ingestion are improbable. If ingestion should occur consult a physician.

If thermal degradation of the PVC should occur, exposure to the resulting hydrogen chloride fumes should be minimized (see Section V above). Direct exposure to sufficient quantities of hydrogen chloride may cause breathing difficulties. Move the individual to fresh air and provide appropriate first aid. Exposure to large quantities of hydrogen chloride may result in acute and/or chronic health problems. Treatment by a physician is recommended. In smaller quantities, hydrogen chloride is primarily an irritant to the eyes, mucous membranes and skin. Washing the skin with soap and water and flushing the eyes with clean, cool water is usually sufficient. If the irritation persists, see a physician.

## **Section VII Precautions for Safe Handling and Use**

Because of the physical form of the pelletized PVC compound spilled material should be swept or vacuumed up immediately to avoid slips and falls.

Rigid PVC pellets would not normally be considered "Hazardous Waste" and therefore could be disposed of via landfill. The user is responsible for complying with federal, state and local disposal regulations. If the material is supplied in boxes, or bags, the material should be stored in a sprinkled area, since the containers themselves may be combustible.

In addition, safe stacking practices should be observed. Stacking boxes or pelletized bags more than two layers high is not recommended.

### **Section VIII Control Measures**

As supplied, pelletized rigid PVC does not require the use of special protective equipment. However, normal industrial hygiene practices suggest that gloves and/or safety glasses be used in the workplace, especially if there is a possibility of exposure to the hot PVC polymer.

#### **IMPORTANT NOTE: Incompatible Materials**

Polyvinyl Chloride compound should not come in contact with acetal or acetal copolymers in elevated temperature processing equipment. The two materials are not compatible and will react in violent decomposition when mixed under conditions of heat and pressure.

**Hohmann & Barnard, Inc.**  
**Material Safety Data Sheet**  
**\*\*\* Quadro-Vent \*\*\***

Hohmann & Barnard, Inc.  
 30 Rasons Court  
 Hauppauge, NY 11788

**Section 1. General Information**

1.1	Chemical characterization	Polypropylene copolymer
1.2	Appearance	Solid, granulated
1.3	Color	Natural
1.4	Odor	None

**Section 2. Physical and Technical Safety Data**

2.1	Melting point	175°C
2.2	Specific gravity (H <sub>2</sub> O=1)	0.9 g/cm <sup>3</sup>
2.3	Vapor pressure	Non-volatile
2.4	Viscosity	-----
2.5	Solubility in water	Insoluble
2.6	pH	-----
2.7	Flash point	440°C
2.8	Ignition temperature	490°C
2.9	Explosion limits	-----
2.10	Thermal decompositon	Will decompose at temperatures in excess of 300°C.
2.11	Hazardous decomposition product	Oxides of carbon.
2.12	Hazardous reactions	Keep away from strong oxidizing agents.
2.13	Other information	-----

**Section 3. Transport Regulations**

UN number	Not hazardous or restricted item under these regulations.
ICAO air	
IMO sea	
ADR road	

**Section 4. Regulations**

4.1	Labelling	Not classified as dangerous for labelling purpose.
4.2	Worker exposure limits	None.
4.3	Other	-----

**Section 5. Protective Measures for Storage and Handling**

5.1	Technical precaution	Non hazardous and non toxic material.
5.2	Personal protection	It is not required.
5.3	Industrial hygiene	Should cause no problems in handling so long as good industrial hygiene procedures are adhered to.
5.4	Protection against fire and explosion	This product does not constitute an explosion hazard but will burn in the event of fire.
5.5	Disposal	Wastes should be burned in a suitable incinerator or recycle.

**Section 6. Measures to be Taken in Accidents and Fire**

6.1	After spillage / leakage	Sweep up.
6.2	Suitable fire extinguishers	Water, foam, dry powder, carbon dioxide.
6.3	First aid - skin	Wash contaminated area with soap and water.
	eye	Wash the eyes with clean water.
	inhalation	The risk is not considered.
	ingestion	The risk is not considered.
6.4	Other information	-----

**Section 7. Toxicology**

Non toxic material.

**Section 8. Ecological Data**

No data available.

.....  
**Lonestar Industries, LLC.**

**WIRE REINFORCEMENT**





# Material Safety Data Sheet

(Page 1 of 2)

## Steel Wire Rod, Rebar, Wire Mesh

### Section I

Manufacturer's Name: Connecticut Steel Corporation  
35 Toelles Road, P. O. Box 928  
Wallingford, CT 06492

Emergency Telephone #: 203-265-0615  
Telephone # for Information: 203-265-0615

Date Prepared: October 2002

Date Reviewed: April 2009

### Section II - Hazardous Ingredients/Identity Information (All %'s listed as maximums.)

Hazardous Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (Optional)
Iron, Fe, FeO	10mg/m <sup>3</sup>	5mg/m <sup>3</sup>	as dust/fume	99 (max)
Manganese, Mn	5mg/m <sup>3</sup>	0.2mg/m <sup>3</sup>	as Mn	1.7
Carbon, C	-	-		0.90
Chromium, Cr	1mg/m <sup>3</sup>	0.5mg/m <sup>3</sup>	as metal	0.35
Nickel, Ni	1mg/m <sup>3</sup>	1.5mg/m <sup>3</sup>	as metal	0.35
Copper, Cu	1mg/m <sup>3</sup>	1mg/m <sup>3</sup>	as dust	0.5
Silicon, Si	15mg/m <sup>3</sup>	10mg/m <sup>3</sup>	as dust	0.75
Molybdenum, Mo	15mg/m <sup>3</sup>	10mg/m <sup>3</sup>	as incl.	0.20
Lead, Pb	0.05mg/m <sup>3</sup>	0.05mg/m <sup>3</sup>	as dust	<0.01
Zinc, Zn	10mg/m <sup>3</sup>	10mg/m <sup>3</sup>	as dust	0.01
Cadmium, Cd	0.005mg/m <sup>3</sup>	0.01mg/m <sup>3</sup>	as Cd	<0.1
Cobalt, Co	0.1mg/m <sup>3</sup>	0.002mg/m <sup>3</sup>	as Co	<0.1

### Section III - Physical/Chemical Characteristics

Boiling Point	5430 F	Specific Gravity (H <sub>2</sub> O - 1)	N/A
Vapor Pressure (mm Hg.)	N/A	Melting Point	2800 F
Vapor Density (AIR - 1) N/A		Evaporation Rate (Butyl Acetate-1)	N/A
Solubility in Water	N/A		

Appearance and Odor: Odorless metallic solids, available as wire rod, rebar or welded wire mesh.

### Section IV - Fire and Explosion Hazard Data

Flash Point (Method used):	N/A
Flammable Limits:	N/A
Extinguishing Media:	For molten metal, use dry powder or sand
Special Fire Fighting Procedures:	Do not use water on molten metal

Unusual Fire and Explosion Hazards: Steel products do not present fire or explosion hazards under normal conditions. Metal particles can burn. High concentrations of metal fines in air may have an explosion hazard.

## **Section V - Reactivity Data**

Stability: Unstable \_\_\_ Stable X

Conditions to Avoid: Steel at temperatures above the melting point may liberate fumes containing oxides of iron and other metallic elements. Avoid generating fumes.

Incompatibility (Materials to Avoid): Strong Acids

Hazardous Decomposition or Byproducts: Metal fumes may be produced during welding, burning, grinding and machining.

Hazardous Polymerization: May occur \_\_\_ Will not occur X

## **Section VI - Health Hazard Data**

Route(s) of Entry: Inhalation? n/a Skin? n/a Ingestion? n/a (see below)

Health Hazards (Acute and Chronic): Steel products in their solid state do not produce inhalation, skin or ingestion hazards. However, welding, cutting, brazing, grinding and machining may cause dust or fumes to be released which could be harmful if inhaled.

Carcinogenicity: NTP? n/a IARC Monographs? n/a OSHA Regulated? n/a

Signs and Symptoms of Exposure: Dust or particles may cause pain, tearing and redness of eyes, burning, itching of skin, irritation of nose, throat and lungs.

Medical Conditions (generally aggravated by exposure): Diseases of skin may be aggravated by exposure. Also disorders of the respiratory system may be aggravated.

Emergency First Aid Procedures: In case of overexposure to dust or fumes, flush eyes with water for 15 minutes. Wash skin with soap and water. Remove to fresh air.

## **Section VII - Precautions for Safe Handling and Use**

Steps to be taken in case material is released or spilled: Avoid inhalation, eye or skin contact with dust. Keep fine dust from ignition sources.

Waste Disposal Method: Dispose of used or unused product in accordance with applicable federal, state and local regulations.

Precautions to be taken in handling and storing: Store away from strong oxidizers. Dust and powders may form explosive mixtures with air. Avoid breathing dust or fumes.

Other precautions: Store under normal temperature and pressure.

## **Section VIII - Control Measures**

Respiratory Protection (Specify Type): Use dust/fume/mist respirator when excessive exposure to dust or fume.

Ventilation: Local Exhaust – use to control airborne dust

Protective Gloves: Use appropriate gloves when handling steel.

Eye Protection: Use safety glasses or goggles.

Other Protective Clothing or Equipment: Use face shield when cutting or welding steel.

Work/Hygienic Practices: Good personal hygiene practices should be followed, including cleaning exposed skin with soap and water.

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**MSDS FOR ZINC METAL: SPECIAL HIGH GRADE, HIGH GRADE****ZC-M002**

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**SECTION I - GENERAL INFORMATION****NAME:** ZINC METAL**MANUFACTURER:**  
HORSEHEAD CORPORATION  
300 Frankfort Road  
Monaca, PA 15061  
724-774-1020**TRANSPORTATION EMERGENCY:**  
**CHEMTREC:** 800-424-9300**TRADE NAME AND SYNONYMS:** Special high grade or high grade zinc**CHEMICAL FAMILY:** Nonferrous Heavy Metal**CAS NO.:** 7440-66-6**FORMULA:** Zn**DOT HAZARD CLASS:** Not listed     **UN NO.:** NAIF\***NA NO.:** NAIF\***ISSUE DATE:** 2/25/88**REVISION DATE:** 4/6/05

\* NAIF - No applicable information found.

**SECTION II - INGREDIENTS**

<u>MATERIAL</u>	<u>CAS NO.</u>	<u>%</u>
ZINC	7440-66-6	99.9

**SECTION III PHYSICAL DATA****BOILING POINT (760 MM HG):** 1665° F**MELTING POINT:** 788° F**SPECIFIC GRAVITY:** 7.12**EVAPORATION RATE (=1):** N/A**VAPOR DENSITY (air = 1):** N/A**SOLUBILITY IN WATER:** Negligible**PERCENT VOLATILE BY VOLUME (%):** N/A**VAPOR PRESSURE AT 909° F:** 0.13kPa**APPEARANCE AND ODOR:** Silver-white, or Bluish-white metal

**SECTION IV - FIRE AND EXPLOSION HAZARD DATA**

Zinc does not introduce a serious fire hazard in sheets, castings, or other massive forms because of the difficulty of ignition, although once ignited (above 1665° F), large pieces burn vigorously.

**FLASH POINT (METHOD USED):** N/A

**NFPA FIRE RATING**

<b>FLAMMABLE LIMITS:</b>	LEL: N/A	HEALTH	0
	UEL: N/A	FLAMMABILITY	0
		REACTIVITY	0

**EXTINGUISHING MEDIA:** Smother and cool with a suitable dry extinguishing agent (class D fires) such as dry powder (Ansul Met-L-X), zinc oxide or dry sand. Water should not be used; however wherever it is necessary to cool exposures, extreme caution should be taken to prevent contact with molten zinc or burning zinc products.

**SPECIAL FIRE FIGHTING PROCEDURES:** Use NIOSH/MSHA approved self-contained breathing apparatus.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Heating of metal beyond boiling point results in evolution of zinc vapors, which immediately reacts with air to form zinc oxide fume. Slabs must be completely dry before charging into molten metal to prevent a steam explosion.

**SECTION V - HEALTH HAZARD DATA**

<u>MATERIAL</u>	<u>FORM</u>	<u>OSHA-PEL</u>	<u>ACGIH-TLV</u>	
		TWA mg/m <sup>3</sup>	TWA mg/m <sup>3</sup>	STEL mg/m <sup>3</sup>
ZINC	Oxide Fume	5	2	10

**ROUTES OF ENTRY**

**PRIMARY:** Inhalation, if material has been heated above the boiling point, driving off zinc fume.

**SECONDARY:** Ingestion of dusts.

**EFFECTS OF SHORT TERM OVEREXPOSURE:**

**ZINC:** Inhalation of high levels of zinc vapor (zinc oxide fumes) may result in tightness of chest, metallic taste, cough, dizziness, fever, chills, headache, nausea, and dry throat. Overexposure may produce symptoms known as metal fume fever or "zinc shakes"; an acute, self-limiting condition without recognized complications. Symptoms of metal fume fever include: chills, fever, muscular pain, nausea and vomiting.

**MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:** Inhalation of dust may be an irritant to pre-existing respiratory conditions.

**EMERGENCY AND FIRST AID PROCEDURES:** Symptoms resulting from inhalation overexposure usually disappear within 24 hours. Symptomatic treatment, such as bed rest and possibly aspirin is recommended to provide relief from fever and chills. In all cases, consult physician for medical attention.

**EFFECTS OF LONG TERM OVEREXPOSURE:**

**ZINC:** Chronic exposure to zinc may cause respiratory tract irritation with nasopharyngitis and laryngitis.

**CARCINOGENIC ASSESSMENT:**

**NTP?** No

**IARC MONOGRAPH?** No

**OSHA?** No

**SECTION VI - REACTIVITY DATA**

**STABILITY:** ( ) Unstable  
(X) Stable

**CONDITIONS TO AVOID:** None

**INCOMPATIBILITY (MATERIALS TO AVOID):** Avoid contact with acids and alkalis.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Zinc boils off as vapor at elevated temperatures.

**HAZARDOUS POLYMERIZATION:** ( ) May occur  
(X) Will not occur

**SECTION VII - SPILL OR LEAK PROCEDURES**

**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:** Material should be contained for recycling.

**WASTE DISPOSAL METHOD:** Material may be recycled or disposed of in accordance with Federal, State, and Local Environmental Regulations. This material may be regulated under CERCLA, TSCA, SARA, and/or RCRA Regulations.

**SECTION VIII - SPECIAL PROTECTION INFORMATION**

**RESPIRATORY PROTECTION (SPECIFY TYPE):** Use NIOSH/MSHA approved type respirator for protection against dust and metal fume.

**VENTILATION:** Local exhaust or other ventilation that will reduce dust concentrations to less than permissible exposure limits.

**PROTECTIVE GLOVES:** Recommended to prevent skin irritation in hypersensitive individuals.

**EYE PROTECTION:** Use safety eyewear for protection against airborne particulate matter.

**OTHER PROTECTIVE EQUIPMENT:** To prevent burns from contact with molten metal, appropriate protective garments should be worn. Such garments may include aprons, face shields, leggings, etc., depending on conditions of use.

### **SECTION IX - SPECIAL PRECAUTIONS**

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:** Store in a dry location, separate from acids and alkalis. Keep metal dry so it does not contain any moisture when ready for use.

**OTHER PRECAUTIONS:** Damp slabs placed in molten metal may result in a steam explosion. Always practice good personal hygiene when working in areas where this material exists.

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