

# SAFETY DATA SHEET



**Date Prepared :** 4/18/2014  
**MSDS No :** 79  
**Date Revised :** 3/26/2015  
**Revision No :** 4

## 1. PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT CODE:** Bonstone Last Patch Limestone, Part A (all colors)

### MANUFACTURER

Bonstone Materials Corporation  
 707 Swan Drive  
 Mukwonago, WI 53149  
**Emergency Contact:** Mike Beckmann  
**Emergency Phone:** 262-363-9877  
**E-Mail:** info@bonstone.com

### 24 HR. EMERGENCY TELEPHONE NUMBERS

Chemtrec: 1-800-424-9300

## 2. HAZARDS IDENTIFICATION

### GHS CLASSIFICATIONS

#### Health:

Skin Sensitization, Category 1A  
 Eye Irritation, Category 2A

#### Environmental:

Acute Hazards to the Aquatic Environment, Category 2  
 Chronic Hazards to the Aquatic Environment, Category 2

### GHS LABEL



Environment



Exclamation  
 mark

**SIGNAL WORD:** WARNING

### HAZARD STATEMENTS

H317: May cause an allergic skin reaction.  
 H411: Toxic to aquatic life with long lasting effects.

### PRECAUTIONARY STATEMENTS

#### Prevention:

P261: Avoid breathing dust/fume/gas/mist/vapours/spray.  
 P272: Contaminated work clothing should not be allowed out of the workplace.  
 P273: Avoid release to the environment.  
 P280: Wear protective gloves/protective clothing/eye protection/face protection.

**Response:**

P391: Collect spillage.

P302+P352: IF ON SKIN: Wash with plenty of soap and water.

P333+P313: If skin irritation or rash occurs: Get medical advice/attention.

P362: Take off contaminated clothing and wash before reuse.

**Disposal:**

P501: Dispose of contents/container in accordance with all local/regional/national/international regulations.

**EMERGENCY OVERVIEW**

**IMMEDIATE CONCERNS:** 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 in certain occupations such as sandblasters. Silicosis is a form of disabling pulmonary fibrosis, which can be progressive and may lead to death.

**POTENTIAL HEALTH EFFECTS**

**EYES:** Irritating, and may injure eye tissue if not removed promptly.

**SKIN:** May cause skin irritation.

**INGESTION:** Harmful if swallowed.

**INHALATION:** Dust and processing vapors may cause respiratory tract irritation.

**CARCINOGENICITY:** Cancer hazard.

**MEDICAL CONDITIONS AGGRAVATED:** Persons with existing pulmonary disorders must avoid breathing any dust generated during the use of this product.

**3. COMPOSITION / INFORMATION ON INGREDIENTS**

Chemical Name	Wt.%	CAS
Branched polyether/polyester resin	Trade secret	
Castor Oil	Trade secret	8001-79-4
Silica, Amorphous	Trade secret	7631-86-9
Aluminum Oxide	Trade secret	1344-28-1
Calcium Oxide	Trade secret	1305-78-8
Sodium Oxide	Trade secret	1313-59-3
Potassium Oxide	Trade secret	12136-45-7
Polymeric benzotriazole	Trade secret	104810-48-2
Polymeric benzotriazole	Trade secret	104810-47-1
Poly(oxy-1,2-ethanediyl), A-hydro-w-hydroxy-	Trade secret	25322-68-3
Titanium Dioxide	Trade secret	13463-67-7
Silica, Crystalline	> 0.1	14808-60-7

**4. FIRST AID MEASURES**

**EYES:** Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.

**SKIN:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Thoroughly wash or discard clothing and shoes before reuse.

**INGESTION:** If swallowed, do NOT induce vomiting. Give victim a glass of water or milk. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

**INHALATION:** Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained

personnel. Seek immediate medical attention.

## **SIGNS AND SYMPTOMS OF OVEREXPOSURE**

**CHRONIC EFFECTS:** Possible cancer hazard based on tests with laboratory animals.

## **5. FIRE FIGHTING MEASURES**

**GENERAL HAZARD:** During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

**FIRE FIGHTING PROCEDURES:** Use alcohol foam, dry chemical, carbon dioxide, or water spray when fighting fires involving this material. Firefighters and others who may be exposed to products of combustion should wear full firefighting turnout gear and self-contained breathing apparatus. Firefighting equipment should be thoroughly decontaminated after use.

## **6. ACCIDENTAL RELEASE MEASURES**

**GENERAL PROCEDURES:** Contain spill with dike to prevent entry into sewers.

**RELEASE NOTES:** Notify authorities if any exposures to the general public or environment occurs or is likely to occur.

**SPECIAL PROTECTIVE EQUIPMENT:** Remove contaminated clothing and wash before reuse.

**COMMENTS:** If recovery is not feasible, admix with dry soil, sand or non-reactive absorbent and place in an appropriate chemical waste container. Transfer to containers by suction, preparatory for later disposal. Place in metal containers for recovery or disposal. Flush area with water spray. Clean-up personnel must be equipped with self-contained breathing apparatus and butyl rubber protective clothing. For large spills, recover spilled material with a vacuum truck.

## **7. HANDLING AND STORAGE**

**GENERAL PROCEDURES:** Avoid contact with eyes, skin, and clothing.

**HANDLING:** Wash hands before eating and wash before reuse.

**STORAGE:** Store in a tightly closed container.

**COMMENTS:** Follow all MSDS/label precautions even after container is emptied because they may retain product residues.

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

**EXPOSURE GUIDELINES**

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)							
		EXPOSURE LIMITS					
		OSHA PEL		ACGIH TLV		Supplier OEL	
Chemical Name		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Silica, Amorphous	TWA	NL	6 mg/m <sup>3</sup>	NL	10 mg/m <sup>3</sup>	NL	NL
	STEL	NL	NL	NL	6 mg/m <sup>3</sup>	NL	NL
Aluminum Oxide	TWA	NL ppm	10 mg/m <sup>3</sup>	NL ppm	10 mg/m <sup>3</sup>	NL ppm	NL mg/m <sup>3</sup>
	STEL	NL ppm	NL mg/m <sup>3</sup>	NL ppm	NL mg/m <sup>3</sup>	NL ppm	NL mg/m <sup>3</sup>
Titanium Dioxide	TWA	NL <sup>[1]</sup>	10 <sup>[1]</sup>	NL	10	NL	NL
	STEL	NL	NL	NL	NL	NL	NL
Silica, Crystalline	TWA	NL ppm <sup>[1]</sup>	(0.1) mg/m <sup>3</sup> <sup>[1]</sup>	NL ppm	(0.1) mg/m <sup>3</sup>	NL ppm	NL mg/m <sup>3</sup>
	STEL	NL ppm	NL mg/m <sup>3</sup>	NL ppm	NL mg/m <sup>3</sup>	NL ppm	NL mg/m <sup>3</sup>

**Footnotes:**  
1. NL = Not Listed

**ENGINEERING CONTROLS:** If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

**PERSONAL PROTECTIVE EQUIPMENT**

**EYES AND FACE:** For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear splash-proof goggles.

**RESPIRATORY:** A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

**WORK HYGIENIC PRACTICES:** Provide readily accessible eyewash stations and safety showers. Wash at the end of each work shift and before eating, smoking, or using the toilet.

**COMMENTS:** Avoid breathing any (dust, vapor, mist, gas) that may be generated when grinding cured material.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Chemical Name	Flash Point (°C)	Boiling Point (°C)	Freezing Point (°C)	Auto Ignition (°C)	Solubility in Water	Specific Gravity
Castor Oil	491					1.25
Polymeric benzotriazole	226	166	-40	405	7.7 ppm in water at 20C (68F)	1.17
Polymeric benzotriazole	237	166	-40	405		1.17
Titanium Dioxide			1000			4
Silica, Crystalline		2230	1710			2.65

**PHYSICAL STATE:** Semisolid

**APPEARANCE:** Grayish, semi-solid, near-gel material

**COLOR:** Various

**PERCENT VOLATILE:** 0

**FLAMMABLE LIMITS:** 0 to 0

**BOILING POINT:** (4046°F) to (4046°F)

**SOLUBILITY IN WATER:** Negligible

**SPECIFIC GRAVITY:** 2.621

**(VOC):** = 0 (no VOC's)

## 10. STABILITY AND REACTIVITY

**HAZARDOUS POLYMERIZATION:** Will not occur under normal conditions.

**STABILITY:** Stable.

**CONDITIONS TO AVOID:** Oxidizing materials.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Carbon Dioxide and carbon Monoxide may form when heated to decomposition.

## 11. TOXICOLOGICAL INFORMATION

### ACUTE

Chemical Name	ORAL LD <sub>50</sub> (rat)	DERMAL LD <sub>50</sub> (rabbit)	INHALATION LC <sub>50</sub> (rat)
Polymeric benzotriazole	> 5000 mg/kg (rat)	> 2000 mg/kg	> 5.8 mg/l
Polymeric benzotriazole	> 5000 mg/kg (rat)	> 2000 mg/kg	> 5.8 mg/l
Titanium Dioxide	> 7500 mg/kg (rat)		

**CHRONIC:** Silicosis, lung cancer, autoimmune and chronic kidney diseases, tuberculosis, and nonmalignant respiratory diseases.

### CARCINOGENICITY

Chemical Name	NTP Status	IARC Status	OSHA Status	Other
Silica, Crystalline	Yes	Y1=Carcinogenic to humans	No	ACGIH: A2=Confirmed human carcinogen

**IARC:** Suspect cancer hazard.

**Notes:** The International Agency for Research on Cancer (IARC) has concluded that crystalline silica, inhaled in the form of quartz or cristobalite from occupational sources, is carcinogenic to humans (Group 1). [IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, "Silica, Some Silicates, Coal Dust and para--Aramid Fibriils," Vol. 68, 1997.] The National Toxicology Program (NTP) has concluded that respirable crystalline silica, primarily quartz dusts occurring in industrial and occupational settings, is known to be a human carcinogen.

### COMMENTS: SILICOSIS:

The major concern is silicosis, caused by the inhalation and retention of respirable crystalline silica dust. Silicosis can exist in several forms, chronic (or ordinary), accelerated, or acute.

Chronic or ordinary silicosis (often referred to as simple silicosis) is the most common form of silicosis, and can occur after many years of exposure to relatively low levels of airborne respirable crystalline silica dust. It is further defined as either simple or complicated silicosis.

Simple silicosis is characterized by lung lesions (shown as radiographic opacities) less than 1 cm in diameter, primarily in the upper lung zones. Often, simple silicosis is not associated with symptoms, detectable changes in lung function or disability.

Simple silicosis may be progressive and may develop into complicated silicosis or progressive massive fibrosis (PMF). Complicated silicosis or PMF is characterized by lung lesions (shown as radiographic opacities) greater than 1 cm in diameter. Although there may be no symptoms associated with complicated silicosis or PMF, symptoms, if present, are shortness of breath, wheezing, coughing and sputum production. Complicated silicosis or PMF may be associated with decreased lung function and may be disabling. Advanced complicated silicosis or PMF may lead to death. Advanced complicated silicosis or PMF can result in heart disease secondary to the lung disease.

Accelerated silicosis can occur with exposure to high concentrations of respirable crystalline silica over a relatively short period; the lung lesions can appear within five years of initial exposure. Progression can be rapid. Accelerated silicosis is similar to chronic or ordinary silicosis, except that lung lesions appear earlier and progression is more rapid.

Acute silicosis can occur with exposures to very high concentrations of respirable crystalline silica over a very short time period, sometimes as short as a few months. The symptoms of acute silicosis include progressive shortness of breath, fever, cough, and weight loss. Acute silicosis is fatal.

#### CANCER:

IARC--The International Agency for Research on Cancer ("IARC") concluded there was "sufficient evidence in humans for the carcinogenicity of crystalline silica in the forms of quartz or cristobalite from occupational sources", and that there is "sufficient evidence in experimental animals for the carcinogenicity of quartz and cristobalite". The overall IARC evaluation was that "crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1)". The IARC evaluation noted that "carcinogenicity was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs".

NTP-- The National Toxicology Program's Eleventh Annual Report on Carcinogens classifies "silica, crystalline (respirable size)" as a known human carcinogen.

#### AUTOIMMUNE DISEASES:

Several studies have reported excess cases of several autoimmune disorders-- scleroderma, systemic lupus erythematosus, rheumatoid arthritis-- among silica-exposed workers.

#### TUBERCULOSIS:

Individuals with silicosis are at increased risk to develop pulmonary tuberculosis, if exposed to persons with tuberculosis.

#### KIDNEY DISEASE:

Several studies have reported excess cases of kidney diseases, including end-stage renal disease, among silica-exposed workers.

#### NON-MALIGNANT RESPIRATORY DISEASES:

There are studies that disclose an association between dusts found in various mining occupations and non-malignant respiratory diseases, particularly among smokers. It is unclear whether the observed associations exist only with underlying silicosis, only among smokers, or result from exposure to mineral dusts generally (independent of the presence or absence of crystalline silica, or the level of crystalline silica in the dust).

## 12. ECOLOGICAL INFORMATION

**COMMENTS:** No information.

## 13. DISPOSAL CONSIDERATIONS

**DISPOSAL METHOD:** Recover, reclaim or recycle when practical. Dispose of in accordance with federal, state and local regulations. Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information incomplete, inaccurate, or otherwise inappropriate. Furthermore, state and local waste disposal requirements be be more restrictive or otherwise different from federal laws and regulations.

**14. TRANSPORT INFORMATION****COMMENTS:** Not regulated by DOT**15. REGULATORY INFORMATION****UNITED STATES****SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)****311/312 HAZARD CATEGORIES:** Immediate health hazard, delayed health hazard.**TSCA (TOXIC SUBSTANCE CONTROL ACT)**

Chemical Name	CAS
Aluminum Oxide	1344-28-1
Poly(oxy-1,2-ethanediyl), A-hydro-w-hydroxy-	25322-68-3
Silica, Crystalline	14808-60-7

**TSCA STATUS:** This product and/or all of it's components is/are listed on the TSCA Inventory.**STATES WITH SPECIAL REQUIREMENTS**

Chemical Name	Requirements
Castor Oil	NJ, PA, CN: Castor Oil is on the Right-to-Know list for these states.
Silica, Amorphous	MA, NJ, PA: Amorphous Silica is on the Right-to-Know list for these states.
Aluminum Oxide	PA, CN, NJ: Aluminum Oxide is on the Right-to-know lists for these states.
Calcium Oxide	PA, CN, MA, NJ: Calcium Oxide is on the Right-to-know lists for these states.
Sodium Oxide	NJ, PA: Sodium Oxide is on the Right-to-Know list for these states.
Potassium Oxide	NJ, PA: Potassium Oxide is on the Right-to-Know list for these states.
Polymeric benzotriazole	NJ: New Jersey Right-to-Know: The following is required composition information: Common Name: Polymeric benzotriazole derivative CASRN: 104810-48-2
Polymeric benzotriazole	NJ: New Jersey Right-to-Know: The following is required composition information: Common Name: Polymeric benzotriazole derivative CASRN: 104810-47-1
Poly(oxy-1,2-ethanediyl), A-hydro-w-hydroxy-	NJ: New Jersey Right-to-Know: The following is required composition information: Chemical Name: Poly (oxy-1,2-ethanediyl), alpha-hydro-omega-hydroxy- Common Name: Polyethylene Glycol CASRN: 25322-68-3
Titanium Dioxide	MA, NJ, PA, RI: TiO2 is on the Right-to-Know list for these states.
Silica, Crystalline	CA, MA, PA: Crystalline Silica is on the Right-to-know lists for these states.

**CALIFORNIA PROPOSITION 65**

Chemical Name	Wt. %	Listed
Silica, Crystalline	> 0.1	Cancer

**16. OTHER INFORMATION**

**REASON FOR ISSUE:** No product changes--this revision is strictly to update the MSDS current date.

**APPROVED BY:** Mike Beckmann     **TITLE:** President

**Date Revised:** 3/26/2015

**INFORMATION CONTACT:** Mike Beckmann

**REVISION SUMMARY:** This SDS replaces the 4/18/2014 SDS. Revised: **Section 2:** .

**MANUFACTURER DISCLAIMER:** The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or any process, unless specified in the text.



# SAFETY DATA SHEET



Date Prepared : 4/18/2014

MSDS No : 60

Date Revised : 3/26/2015

Revision No : 4

## 1. PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT CODE:** Last Patch Limestone Part B

### MANUFACTURER

Bonstone Materials Corporation  
 707 Swan Drive  
 Mukwonago, WI 53149  
**Emergency Contact:** Mike Beckmann  
**Emergency Phone:** 262-363-9877  
**E-Mail:** info@bonstone.com

### 24 HR. EMERGENCY TELEPHONE NUMBERS

Chemtrec: 1-800-424-9300

## 2. HAZARDS IDENTIFICATION

### GHS CLASSIFICATIONS

#### Health:

Respiratory Sensitization, Category 1  
 Skin Sensitization, Category 1

### GHS LABEL



Exclamation  
 mark



Health  
 hazard

**SIGNAL WORD:** DANGER

### HAZARD STATEMENTS

H317: May cause an allergic skin reaction.  
 H319: Causes serious eye irritation.  
 H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
 H402: Harmful to aquatic life.

### PRECAUTIONARY STATEMENTS

#### Prevention:

P261: Avoid breathing dust/fume/gas/mist/vapours/spray.  
 P264: Wash hands thoroughly after handling.  
 P272: Contaminated work clothing should not be allowed out of the workplace.  
 P273: Avoid release to the environment.  
 P280: Wear protective gloves/protective clothing/eye protection/face protection.  
 P285: In case of inadequate ventilation wear respiratory protection.

**Response:**

P302+P352: IF ON SKIN: Wash with plenty of soap and water.

P304+P341: IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing.

P363: Wash contaminated clothing before reuse.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P333+P313: If skin irritation or rash occurs: Get medical advice/attention.

P337+P313: If eye irritation persists: Get medical advice/attention.

P342+P311: If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

P391: Collect spillage.

**Disposal:**

P501: Dispose of contents/container in accordance with all local/regional/national/international regulations.

**EMERGENCY OVERVIEW**

**IMMEDIATE CONCERNS:** Single dose toxicity is low to moderate. If vomiting occurs, liquid can be aspirated into lungs, causing chemical pneumonia/systemic effects. Psychotropic, CNS, and gastrointestinal effects possible.

**POTENTIAL HEALTH EFFECTS**

**EYES:** Irritating, and may injure eye tissue if not removed promptly.

**SKIN:** May cause skin irritation. Allergic reactions are possible.

**SKIN ABSORPTION:** May be absorbed through the skin in harmful amounts.

**INGESTION:** Irritating to mouth, throat and stomach.

**INHALATION:** Irritating to the nose, throat and respiratory tract.

**IRRITANCY:** Harmful by inhalation, contact with skin/eyes, and if swallowed.

**SENSITIZATION:** May cause skin sensitization, an allergic reaction which becomes evident on exposure to this material.

**3. COMPOSITION / INFORMATION ON INGREDIENTS**

Chemical Name	Wt. %	CAS
Homopolymer of hexamethylene diisocyanate	Trade secret	28182-81-2
1,6-hexamethylene Diisocyanate	Trade secret	822-06-0

**4. FIRST AID MEASURES**

**EYES:** Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.

**SKIN:** Immediately wash skin with soap and plenty of water. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

**INGESTION:** Get medical attention immediately.

**INHALATION:** Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.

**SIGNS AND SYMPTOMS OF OVEREXPOSURE**

**EYES:** Causes eye irritation.

**SKIN:** Contact causes skin irritation.

**INGESTION:** Ingestion of this material can cause mouth, throat, esophageal, and gastrointestinal tract irritation.

**INHALATION:** May cause respiratory sensitization or asthma in susceptible individuals. Excessive exposure may cause irritation upper respiratory tract.

**CHRONIC EFFECTS:** Prolonged or repeated overexposure may cause lung damage.

## 5. FIRE FIGHTING MEASURES

**GENERAL HAZARD:** During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

**FIRE FIGHTING PROCEDURES:** Use alcohol foam, dry chemical, carbon dioxide, or water spray when fighting fires involving this material. Firefighters and others who may be exposed to products of combustion should wear full firefighting turnout gear and self-contained breathing apparatus. Firefighting equipment should be thoroughly decontaminated after use.

## 6. ACCIDENTAL RELEASE MEASURES

**RELEASE NOTES:** Notify authorities if any exposures to the general public or environment occurs or is likely to occur.

**SPECIAL PROTECTIVE EQUIPMENT:** Remove contaminated clothing and wash before reuse.

**COMMENTS:** If recovery is not feasible, admix with dry soil, sand or non-reactive absorbent and place in an appropriate chemical waste container. Transfer to containers by suction, preparatory for later disposal. Place in metal containers for recovery or disposal. Flush area with water spray. Clean-up personnel must be equipped with self-contained breathing apparatus and butyl rubber protective clothing. For large spills, recover spilled material with a vacuum truck.

## 7. HANDLING AND STORAGE

**GENERAL PROCEDURES:** Avoid contact with eyes, skin, and clothing.

**HANDLING:** Contents may develop pressure upon prolonged storage.

**STORAGE:** Keep containers tightly closed, and stored in a cool, dry, well ventilated place.

**COMMENTS:** Follow all MSDS/label precautions even after container is emptied because they may retain product residues.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### EXPOSURE GUIDELINES

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)				
			EXPOSURE LIMITS	
			ACGIH TLV	
Chemical Name			ppm	mg/m <sup>3</sup>
1,6-hexamethylene Diisocyanate	TWA		0.005	

### PERSONAL PROTECTIVE EQUIPMENT

**EYES AND FACE:** For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear splash-proof goggles.

**RESPIRATORY:** A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

**WORK HYGIENIC PRACTICES:** Provide readily accessible eyewash stations and safety showers. Wash at the end of each work shift and before eating, smoking, or using the toilet.

**OTHER USE PRECAUTIONS:** Where contact is likely, wear chemical resistant gloves, a chemical suit, rubber boots, and chemical safety goggles plus a face shield.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Chemical Name	Flash Point (°C)	Specific Gravity
Homopolymer of hexamethylene diisocyanate	460	1.168
1,6-hexamethylene Diisocyanate	460	1.168

**PHYSICAL STATE:** Liquid

**APPEARANCE:** Light colored liquid.

**COLOR:** Clear

**PERCENT VOLATILE:** 0

**FLASHPOINT AND METHOD:** (460°F)

**FLAMMABLE LIMITS:** 0 to 0

**SOLUBILITY IN WATER:** Negligible

**SPECIFIC GRAVITY:** 1.168

**(VOC):** = 0 (no VOC's)

## 10. STABILITY AND REACTIVITY

**HAZARDOUS POLYMERIZATION:** May occur.

**STABILITY:** Stable.

**CONDITIONS TO AVOID:** Contact with moisture or other materials which react with isocyanates, or temperatures above 400 F, may cause polymerization.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Nitrogen oxides, carbon dioxide, and carbon monoxide.

**INCOMPATIBLE MATERIALS:** Strong bases, strong oxidizing agents, heat, open flame, amines, direct contact with water.

## 11. TOXICOLOGICAL INFORMATION

### ACUTE

Chemical Name	ORAL LD <sub>50</sub> (rat)	DERMAL LD <sub>50</sub> (rabbit)	INHALATION LC <sub>50</sub> (rat)
Homopolymer of hexamethylene diisocyanate		> 2000 mg/kg (rabbit)	
1,6-hexamethylene Diisocyanate	738	593	60

**SKIN EFFECTS:** May cause severe injury to skin following prolonged or repeated contact, and may cause skin sensitization or other allergic responses.

## 12. ECOLOGICAL INFORMATION

**COMMENTS:** No information.

## 13. DISPOSAL CONSIDERATIONS

**DISPOSAL METHOD:** Recover, reclaim or recycle when practical. Dispose of in accordance with federal, state and local regulations. Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information incomplete, inaccurate, or otherwise inappropriate. Furthermore, state and local waste disposal requirements be be more restrictive or otherwise different from federal laws and regulations.

## 14. TRANSPORT INFORMATION

**COMMENTS:** Not regulated by DOT

**15. REGULATORY INFORMATION****UNITED STATES****SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)****EPCRA SECTION 313 SUPPLIER NOTIFICATION**

Chemical Name	Wt. %	CAS
1,6-hexamethylene Diisocyanate	Trade secret	822-06-0

**TSCA (TOXIC SUBSTANCE CONTROL ACT)**

**TSCA STATUS:** This product and/or all of its components is/are listed on the TSCA Inventory.

**16. OTHER INFORMATION**

**REASON FOR ISSUE:** No product changes--this revision is strictly to update the MSDS current date.

**APPROVED BY:** Mike Beckmann    **TITLE:** President

**Date Revised:** 3/26/2015

**INFORMATION CONTACT:** Mike Beckmann

**REVISION SUMMARY:** This SDS replaces the 4/18/2014 SDS. Revised: **Section 2:** .

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