

### 1. Product and Company Identification

**Material name** S-333  
**Version #** 00  
**Issue date** 20-August-2013  
**Revision date** 20-August-2013  
**Supersedes date** -  
**CAS #** Mixture  
**Product code** 904-0005  
**Product use** Industrial Leak Sealant.  
**Manufacturer information**  
**Manufacturer/Supplier** Team Industrial Services, Inc.  
**Address** 200 Hermann Drive, Alvin, Texas 77511, US  
**Emergency telephone number** CHEMTREC - 24 HOURS  
 USA: CHEMTREC: 800-424-9300  
 International: 703-527-3887 (Collect)

### 2. Hazards Identification

**Physical state** Wet trowable mortar.  
**Appearance** Gray/Brown mixture of coarse to fine particles.  
**Emergency overview** WARNING  
 Cancer hazard - can cause cancer. Causes severe eye irritation. Causes skin and respiratory tract irritation.  
**OSHA regulatory status** This product is hazardous according to OSHA 29 CFR 1910.1200.  
**Potential health effects**  
**Routes of exposure** Eye contact. Skin contact. Inhalation.  
**Eyes** Causes severe eye irritation.  
**Skin** Causes skin irritation.  
**Inhalation** Causes respiratory tract irritation.  
**Ingestion** Ingestion may cause irritation and malaise.  
**Chronic effects** Cancer hazard - can cause cancer. Prolonged and routine inhalation of fine quartz dust can lead to the lung disease known as silicosis. Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases.  
**Signs and symptoms** Irritation of eyes and mucous membranes. Skin irritation. Cough. Irritation of nose and throat. Ingestion may cause irritation and malaise.  
**Potential environmental effects** The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

### 3. Composition / Information on Ingredients

Components	CAS #	Percent
Mullite	1302-93-8	45-70
Silicic acid, sodium salt	1344-09-8	10-30
Cristobalite	14464-46-1	1-5
Quartz	14808-60-7	1-5
Silica, fume	69012-64-2	1-5

**Composition comments** All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

## 4. First Aid Measures

### First aid procedures

<b>Eye contact</b>	Do not rub eyes. Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
<b>Skin contact</b>	Remove contaminated clothing and wash skin with soap and water. Get medical attention if irritation develops or persists.
<b>Inhalation</b>	Move to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately.
<b>Ingestion</b>	Immediately rinse mouth and drink plenty of water. Only induce vomiting at the instruction of medical personnel. Get medical attention if any discomfort occurs.

### Notes to physician

Treat symptomatically.

### General advice

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. In case of shortness of breath, give oxygen. Keep victim warm.

## 5. Fire Fighting Measures

### Flammable properties

No unusual fire or explosion hazards noted.

### Extinguishing media

**Suitable extinguishing media** Water spray, foam, dry powder or carbon dioxide.

**Unsuitable extinguishing media** No restrictions known.

### Protection of firefighters

**Specific hazards arising from the chemical** During fire, gases hazardous to health may be formed.

**Protective equipment and precautions for firefighters** Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

### Fire fighting equipment/instructions

Use standard firefighting procedures and consider the hazards of other involved materials. Cool material exposed to heat with water spray and remove it if no risk is involved.

### Hazardous combustion products

Carbon oxides. Silicon oxides.

## 6. Accidental Release Measures

### Personal precautions

Avoid inhalation of dust and contact with skin and eyes. Avoid prolonged and repeated contact. See Section 8 of the MSDS for Personal Protective Equipment.

### Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

### Methods for containment

Prevent entry into waterways, sewer, basements or confined areas.

### Methods for cleaning up

Collect and dispose of spillage as indicated in section 13 of the MSDS.

### Other information

Clean up in accordance with all applicable regulations.

## 7. Handling and Storage

### Handling

Mechanical ventilation or local exhaust ventilation is required. Avoid inhalation of vapors/dust and contact with skin and eyes. Avoid prolonged exposure. Wear appropriate personal protective equipment. Wash thoroughly after handling. Observe good industrial hygiene practices.

### Storage

Keep in a cool, well-ventilated place. Keep away from food, drink and animal feeding stuffs. Store locked up. Store away from incompatible materials (See Section 10).

## 8. Exposure Controls / Personal Protection

### Occupational exposure limits

#### US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Cristobalite (CAS 14464-46-1)	TWA	0.025 mg/m <sup>3</sup>	Respirable fraction.
Mullite (CAS 1302-93-8)	TWA	1 mg/m <sup>3</sup>	Respirable fraction.
Quartz (CAS 14808-60-7)	TWA	0.025 mg/m <sup>3</sup>	Respirable fraction.

**US. OSHA Table Z-3 (29 CFR 1910.1000)**

Components	Type	Value	Form
Cristobalite (CAS 14464-46-1)	TWA	0.15 mg/m <sup>3</sup>	Total dust.
		0.05 mg/m <sup>3</sup>	Respirable.
Quartz (CAS 14808-60-7)	TWA	1.2 millions of particle	Respirable.
		0.3 mg/m <sup>3</sup>	Total dust.
		0.1 mg/m <sup>3</sup>	Respirable.
Silica, fume (CAS 69012-64-2)	TWA	2.4 millions of particle	Respirable.
		0.8 mg/m <sup>3</sup>	
		20 millions of particle	

**Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)**

Components	Type	Value	Form
Cristobalite (CAS 14464-46-1)	TWA	0.025 mg/m <sup>3</sup>	Respirable particles.
Quartz (CAS 14808-60-7)	TWA	0.025 mg/m <sup>3</sup>	Respirable.
		0.025 mg/m <sup>3</sup>	Respirable particles.

**Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)**

Components	Type	Value	Form
Cristobalite (CAS 14464-46-1)	TWA	0.025 mg/m <sup>3</sup>	Respirable fraction.
Mullite (CAS 1302-93-8)	TWA	1 mg/m <sup>3</sup>	Respirable.
Quartz (CAS 14808-60-7)	TWA	0.025 mg/m <sup>3</sup>	Respirable fraction.
Silica, fume (CAS 69012-64-2)	TWA	4 mg/m <sup>3</sup>	Total fume.
		1.5 mg/m <sup>3</sup>	Respirable fume.

**Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)**

Components	Type	Value	Form
Cristobalite (CAS 14464-46-1)	TWA	0.05 mg/m <sup>3</sup>	Respirable.
Mullite (CAS 1302-93-8)	TWA	1 mg/m <sup>3</sup>	Respirable fraction.
Quartz (CAS 14808-60-7)	TWA	0.1 mg/m <sup>3</sup>	Respirable.
Silica, fume (CAS 69012-64-2)	TWA	2 mg/m <sup>3</sup>	Respirable.

**Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)**

Components	Type	Value	Form
Cristobalite (CAS 14464-46-1)	TWA	0.05 mg/m <sup>3</sup>	Total dust.
Quartz (CAS 14808-60-7)	TWA	0.1 mg/m <sup>3</sup>	Respirable dust.
Silica, fume (CAS 69012-64-2)	TWA	2 mg/m <sup>3</sup>	Respirable dust and/or fume.

**Mexico. Occupational Exposure Limit Values**

Components	Type	Value	Form
Cristobalite (CAS 14464-46-1)	TWA	0.05 mg/m <sup>3</sup>	
Quartz (CAS 14808-60-7)	TWA	0.1 mg/m <sup>3</sup>	
Silica, fume (CAS 69012-64-2)	TWA	3 mg/m <sup>3</sup>	Respirable dust.
		10 mg/m <sup>3</sup>	Inhalable particulate.

**Engineering controls** Mechanical ventilation or local exhaust ventilation is required. Provide easy access to water supply and eye wash facilities. Observe occupational exposure limits and minimize the risk of inhalation of dust.

## Personal protective equipment

<b>Eye / face protection</b>	Wear approved safety glasses or goggles.
<b>Skin protection</b>	Wear protective gloves. Wear suitable protective clothing.
<b>Respiratory protection</b>	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA 29 CFR 1910.134. If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection.
<b>General hygiene considerations</b>	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Observe any medical surveillance requirements.

## 9. Physical & Chemical Properties

<b>Appearance</b>	Gray/Brown mixture of coarse to fine particles.
<b>Physical state</b>	Wet trowable mortar.
<b>Form</b>	Paste.
<b>Color</b>	Gray-brown.
<b>Odor</b>	Not available.
<b>Odor threshold</b>	Not available.
<b>pH</b>	7 - 9
<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Boiling point</b>	Not Applicable.
<b>Melting point/Freezing point</b>	Not available.
<b>Solubility (water)</b>	Insoluble (in water).
<b>Specific gravity</b>	Mixture
<b>Flash point</b>	Not applicable.
<b>Flammability limits in air, upper, % by volume</b>	Not available.
<b>Flammability limits in air, lower, % by volume</b>	Not available.
<b>Auto-ignition temperature</b>	Not applicable.
<b>Evaporation rate</b>	Not Applicable.
<b>Viscosity</b>	Not applicable.
<b>Percent volatile</b>	0 %
<b>Partition coefficient (n-octanol/water)</b>	Not applicable.
<b>Other data</b>	
<b>Explosive properties</b>	Not applicable.
<b>Oxidizing properties</b>	Not applicable.

## 10. Chemical Stability & Reactivity Information

<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Conditions to avoid</b>	Avoid dust formation.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	Carbon oxides. Silicon oxides.
<b>Possibility of hazardous reactions</b>	Will not occur.

## 11. Toxicological Information

### Toxicological data

Components	Species	Test Results
Silica, fume (CAS 69012-64-2)		
<b>Acute</b>		
<i>Oral</i>		
LD50	Rat	> 22500 mg/kg
Silicic acid, sodium salt (CAS 1344-09-8)		
<b>Acute</b>		
<i>Oral</i>		
LD50	Rat	1280 mg/kg
<b>Sensitization</b>	Not a skin sensitizer.	
<b>Acute effects</b>	Ingestion may cause irritation and malaise.	
<b>Local effects</b>	Causes severe eye irritation. Causes skin and respiratory tract irritation.	
<b>Chronic effects</b>	Prolonged and routine inhalation of fine quartz dust can lead to the lung disease known as silicosis.	
<b>Carcinogenicity</b>	Cancer hazard - can cause cancer.	
<b>ACGIH Carcinogens</b>		
Cristobalite (CAS 14464-46-1)		A2 Suspected human carcinogen.
Mullite (CAS 1302-93-8)		A4 Not classifiable as a human carcinogen.
Quartz (CAS 14808-60-7)		A2 Suspected human carcinogen.
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>		
Cristobalite (CAS 14464-46-1)		1 Carcinogenic to humans.
Quartz (CAS 14808-60-7)		1 Carcinogenic to humans.
Silica, fume (CAS 69012-64-2)		3 Not classifiable as to carcinogenicity to humans.
<b>US NTP Report on Carcinogens: Known carcinogen</b>		
Cristobalite (CAS 14464-46-1)		Known To Be Human Carcinogen.
Quartz (CAS 14808-60-7)		Known To Be Human Carcinogen.
<b>Mutagenicity</b>	No data available.	
<b>Reproductive effects</b>	No data available.	
<b>Symptoms and target organs</b>	Irritation of eyes and mucous membranes. Skin irritation. Cough. Irritation of nose and throat.	

## 12. Ecological Information

### Ecotoxicological data

Components	Species	Test Results
Silicic acid, sodium salt (CAS 1344-09-8)		
<b>Aquatic</b>		
Crustacea	EC50	Water flea ( <i>Daphnia magna</i> ) 247 mg/l, 4.2 days
Fish	LC50	Western mosquitofish ( <i>Gambusia affinis</i> ) 1800 mg/l, 96 hours
<b>Ecotoxicity</b>	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.	
<b>Environmental effects</b>	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.	
<b>Persistence and degradability</b>	No data available.	
<b>Bioaccumulation / Accumulation</b>	No data available.	
<b>Partition coefficient</b>	No data available.	
<b>Mobility in environmental media</b>	No data available.	

## 13. Disposal Considerations

<b>Waste codes</b>	Not regulated.
<b>Disposal instructions</b>	Disposal recommendations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal. Recover and reclaim or recycle, if practical.

**Contaminated packaging**

Dispose product packaging in accordance with local authority requirements taking into account characteristics of the packaging material.

**14. Transport Information****DOT**

Not regulated as a hazardous material by DOT.

**IATA**

Not regulated as dangerous goods.

**IMDG**

Not regulated as dangerous goods.

**TDG**

Not regulated as dangerous goods.

**15. Regulatory Information****US federal regulations**

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.  
All components are on the U.S. EPA TSCA Inventory List.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

**CERCLA (Superfund) reportable quantity (lbs) (40 CFR 302.4)**

None

**Superfund Amendments and Reauthorization Act of 1986 (SARA)****Hazard categories**

Immediate Hazard - Yes  
Delayed Hazard - Yes  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

**Section 302 extremely hazardous substance (40 CFR 355, Appendix A)**

No

**SARA 311/312 Hazardous chemical**

Yes

**Drug Enforcement Administration (DEA) (21 CFR 1308.11-15)**

Not controlled

**Canadian regulations**

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

**WHMIS status**

Controlled

**WHMIS classification**

D2A - Other Toxic Effects-VERY TOXIC  
D2B - Other Toxic Effects-TOXIC

**WHMIS labeling****Inventory status**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No

Country(s) or region	Inventory name	On inventory (yes/no)*
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

#### State regulations

WARNING: This product contains a chemical known to the State of California to cause cancer.

#### US - California Hazardous Substances (Director's): Listed substance

Silica, fume (CAS 69012-64-2) Listed.

#### US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Cristobalite (CAS 14464-46-1) Listed.

Quartz (CAS 14808-60-7) Listed.

#### US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Cristobalite (CAS 14464-46-1) Listed: October 1, 1988 Carcinogenic.

Quartz (CAS 14808-60-7) Listed: October 1, 1988 Carcinogenic.

#### US - New Jersey RTK - Substances: Listed substance

Cristobalite (CAS 14464-46-1) Listed.

Quartz (CAS 14808-60-7) Listed.

#### US. Massachusetts RTK - Substance List

Cristobalite (CAS 14464-46-1) Listed.

Quartz (CAS 14808-60-7) Listed.

Silica, fume (CAS 69012-64-2) Listed.

#### US. New Jersey Worker and Community Right-to-Know Act

Not regulated.

#### US. Pennsylvania RTK - Hazardous Substances

Cristobalite (CAS 14464-46-1) Listed.

Quartz (CAS 14808-60-7) Listed.

Silica, fume (CAS 69012-64-2) Listed.

## 16. Other Information

#### Further information

HMIS® is a registered trade and service mark of the NPCA.

E - Safety Glasses, Gloves, Dust Respirator

#### HMIS® ratings

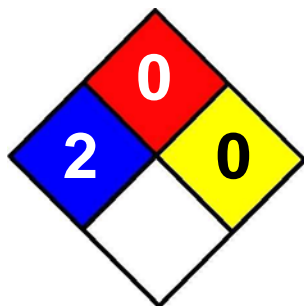
Health: 2\*

Flammability: 0

Physical hazard: 0

Personal protection: E

#### NFPA Ratings



#### Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available.