

1. Product and Company Identification

Material name S-4000
Version # 00
Issue date 19-August-2013
Revision date 19-August-2013
Supersedes date -
CAS # Mixture
Product code 900-0062
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 Solid.
Appearance Brownish thick fibrous paste.
Emergency overview When cured: Mechanical processing may generate dust.
OSHA regulatory status This product is not hazardous according to OSHA 29CFR 1910.1200.
Potential health effects
Routes of exposure Eye contact. Skin contact. Ingestion. Inhalation.
Eyes May cause temporary eye irritation.
Skin Prolonged or repeated skin contact may cause irritation.
Inhalation Dust may cause irritation. However due to the physical form of the product inhalation of dust is not relevant.
Ingestion No harmful effects expected in amounts likely to be ingested by accident.
Chronic effects Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases.
Signs and symptoms Direct contact with eyes may cause temporary irritation.
Potential environmental effects The product components are 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
Aluminum Silicate	1332-58-7	>1
Carbon fiber	7440-44-0	>1
Tetraborate pentahydrate	12179-04-3	0.3 - <4.5

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
Eye contact Do not rub eyes. Flush thoroughly with water. If irritation occurs, get medical assistance.
Skin contact Wash area with soap and water. Get medical attention if irritation develops or persists.
Inhalation Remove victim to fresh air. Get medical attention if symptoms persist.

Ingestion	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.

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	None known.

6. Accidental Release Measures

Personal precautions	Avoid inhalation of dust. 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	Provide adequate ventilation. Avoid inhalation of dust. Avoid prolonged and repeated contact. Observe good industrial hygiene practices.
Storage	Store in closed original container in a dry place. Keep away from open flames.

8. Exposure Controls / Personal Protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Aluminum Silicate (CAS 1332-58-7)	TWA	2 mg/m ³	Respirable fraction.
Carbon fiber (CAS 7440-44-0)	TWA	2 mg/m ³	Respirable fraction.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Aluminum Silicate (CAS 1332-58-7)	PEL	5 mg/m ³	Respirable fraction.
Carbon fiber (CAS 7440-44-0)	PEL	15 mg/m ³	Total dust.
		5 mg/m ³	Respirable fraction.
		15 mg/m ³	Total dust.

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

Components	Type	Value
Carbon fiber (CAS 7440-44-0)	TWA	15 millions of particle

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

Components	Type	Value	Form
Aluminum Silicate (CAS 1332-58-7)	TWA	2 mg/m3	Respirable.
Carbon fiber (CAS 7440-44-0)	TWA	2 mg/m3	Respirable.

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

Components	Type	Value	Form
Aluminum Silicate (CAS 1332-58-7)	TWA	2 mg/m3	Respirable.
Carbon fiber (CAS 7440-44-0)	TWA	2 mg/m3	Respirable.

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

Components	Type	Value	Form
Aluminum Silicate (CAS 1332-58-7)	TWA	2 mg/m3	Respirable fraction.
Carbon fiber (CAS 7440-44-0)	TWA	2 mg/m3	Respirable fraction.

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

Components	Type	Value	Form
Aluminum Silicate (CAS 1332-58-7)	TWA	5 mg/m3	Respirable dust.
Carbon fiber (CAS 7440-44-0)	TWA	2 mg/m3	Respirable dust.

Mexico. Occupational Exposure Limit Values

Components	Type	Value
Aluminum Silicate (CAS 1332-58-7)	STEL	20 mg/m3
Carbon fiber (CAS 7440-44-0)	TWA	10 mg/m3
	TWA	10 mg/m3

Engineering controls Provide adequate ventilation. Observe occupational exposure limits and minimize the risk of inhalation of dust.

Personal protective equipment

Eye / face protection Risk of contact: Wear approved safety glasses or goggles.

Skin protection Where skin contact is likely, wear chemical impervious gloves. In accordance with good industrial hygiene practices, precautions should be taken to avoid skin contact.

Respiratory protection 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.

General hygiene considerations 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.

9. Physical & Chemical Properties

Appearance Brownish thick fibrous paste.

Physical state Solid.

Form Paste.

Color	Brownish.
Odor	Mild odor.
Odor threshold	Not available.
pH	11.5
Vapor pressure	Not available.
Vapor density	Not available.
Boiling point	Not available.
Melting point/Freezing point	Not available.
Solubility (water)	Not available.
Specific gravity	1.3 (uncured) (H ₂ O =1)
Flash point	> 400.0 °F (> 204.4 °C) Cleveland Open Cup
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Auto-ignition temperature	1050 °F (565.56 °C)

10. Chemical Stability & Reactivity Information

Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Oxidizers. Acids.
Hazardous decomposition products	Thermal decomposition may lead to release of irritating gases and vapors.
Possibility of hazardous reactions	Hazardous polymerization does not occur. Hazardous reactions do not occur.

11. Toxicological Information

Toxicological data

Components	Species	Test Results
Aluminum Silicate (CAS 1332-58-7)		
Acute		
<i>Dermal</i>		
LD50	Rat	> 5000 mg/kg
<i>Oral</i>		
LD50	Rat	> 5000 mg/kg
Carbon fiber (CAS 7440-44-0)		
Acute		
<i>Oral</i>		
LD50	Rat	> 10000 mg/kg
Sensitization	Not a skin sensitizer.	
Acute effects	May cause discomfort if swallowed.	
Local effects	May cause eye irritation on direct contact. Prolonged or repeated skin contact may cause irritation.	
Chronic effects	Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases.	
Carcinogenicity	The carcinogenic effect is caused by inhalation of dust particles. Due to the form of the product, exposure to the potentially carcinogenic components is not expected.	
ACGIH Carcinogens		
Aluminum Silicate (CAS 1332-58-7)	A4 Not classifiable as a human carcinogen.	
Reproductive effects	The product contains a small amount of substance that is suspected of damaging fertility or the unborn child.	
Symptoms and target organs	Direct contact with eyes may cause temporary irritation.	

12. Ecological Information

Ecotoxicity	The product is not expected to be hazardous to the environment.
Environmental effects	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Persistence and degradability	No data available.
Bioaccumulation / Accumulation	No data available.
Partition coefficient	No data available.
Mobility in environmental media	No data available.

13. Disposal Considerations

Waste codes	Not regulated.
Disposal instructions	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 not hazardous according to OSHA 29CFR 1910.1200.
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 hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.
WHMIS status	Controlled
WHMIS classification	D2A - Other Toxic Effects-VERY 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)	Yes
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
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	Yes
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

Carbon fiber (CAS 7440-44-0) Listed.

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

Refractories, Fibers, Aluminosilicate (CAS 142844-00-6) Listed.

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

Refractories, Fibers, Aluminosilicate (CAS 142844-00-6) Listed: July 1, 1990 Carcinogenic.

US - New Jersey RTK - Substances: Listed substance

Aluminum Silicate (CAS 1332-58-7) Listed.

Carbon fiber (CAS 7440-44-0) Listed.

US. Massachusetts RTK - Substance List

Aluminum Silicate (CAS 1332-58-7) Listed.

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

Not regulated.

US. Pennsylvania RTK - Hazardous Substances

Aluminum Silicate (CAS 1332-58-7) Listed.

16. Other Information

Further information

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

I - Safety Glasses, Gloves, Dust, Vapor Respirator

HMIS® ratings

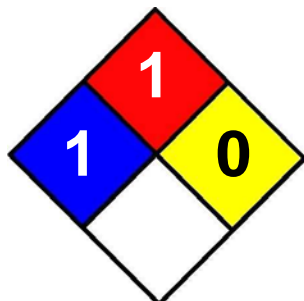
Health: 1

Flammability: 1

Physical hazard: 0

Personal protection: I

NFPA Ratings



Disclaimer

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