TEAM® Industrial Services

SAFETY DATA SHEET

1. Product and Company Identification

Material name	**SEALANT 18X-SF**
Version #	01
Issue date	02-27-13
Revision date	02-27-13
Supersedes date	12-12-11
Chemical name	Polyolefin Resin
Chemical description	Fibrous Resin Mixture
CAS #	Mixture
Product code	800-0039
Product use	Industrial Leak Sealant
Manufacturer information	
Manufacturer/Supplier	Team Industrial Services, Inc. 200 Hermann Drive, Alvin, Texas 77511
Emergency Contact	CHEMTREC - 24 HOURS USA: CHEMTREC: 800-424-9300 International: 703-527-3887 (Collect)

2. Hazards Identification

Physical state	Liquid.
Appearance	Black pliable semi-solid with solvent odor.
Emergency overview	WARNING Combustible liquid. Harmful if swallowed. Causes skin and eye irritation. May cause central nervous system effects.
OSHA regulatory status	This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).
Potential health effects	
Routes of exposure	Eye contact. Ingestion. Inhalation. Skin contact.
Eyes	May cause eye irritation.
Skin	May cause skin irritation. Prolonged or repeated contact may dry skin and cause dermatitis. The product contains organic solvents which may be absorbed into the body by skin contact and cause permanent damage to the nervous system, including the brain.
Inhalation	Vapors may cause drowsiness and dizziness. When cured: Elevated temperatures or mechanical action may form dust and fumes which may be irritating to the respiratory tract.
Ingestion	Harmful if swallowed. Components of the product may be absorbed into the body by ingestion. High concentrations: Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.
Target organs	Central nervous system. Eyes. Skin.
Chronic effects	May adversely affect the developing fetus based on animal data. Danger of serious damage to health by prolonged exposure.
Signs and symptoms	Irritation of eyes and mucous membranes. Symptoms include itching, burning, redness and tearing.
Potential environmental effects	The product contains a substance which is harmful to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Aluminum oxide	1344-28-1	25-50
Graphite	7782-42-5	10-25
Carbon fiber	7440-44-0	<5

Components	CAS #	Percent
Toluene	108-88-3	<5
Polymer	25034-71-3	25-50
Dicumyl peroxide	80-43-3	<5

Composition comments All concentrations are in percent by weight.

4. First Aid Measures

First aid procedures

Eye contact Flush thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical attention if irritation develops or persists.

Skin contact Remove contaminated clothing and shoes. Flush thoroughly with water for at least 15 minutes. If irritation occurs, get medical assistance.

Inhalation Move to fresh air. Get medical attention if any discomfort occurs.

Ingestion Rinse mouth thoroughly with water and give large amounts of milk or water, if person is conscious. Only induce vomiting at the instruction of medical personnel. If vomiting occurs, keep head low so that stomach content does not get into the lungs. Get medical attention immediately.

Notes to physician Be aware that symptoms of chemical pneumonia (shortness of breath) may occur several hours after exposure.

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 Combustible liquid. Intensive heat and fire may release toxic and corrosive gases.

Extinguishing media

Suitable extinguishing media Extinguish with foam, carbon dioxide, dry powder or water fog.

Unsuitable extinguishing media No restrictions known.

Protection of firefighters

Specific hazards arising from the chemical Solvent vapors may form explosive mixtures with air. By heating and fire, corrosive vapors/gases may be formed.

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

Fire fighting equipment/instructions In the event of fire, cool tanks with water spray. Move containers from fire area if you can do it without risk.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

Hazardous combustion products Carbon oxides.

6. Accidental Release Measures

Personal precautions Ventilate closed spaces before entering. Avoid inhalation of vapors and contact with skin and eyes. Wear appropriate protective equipment and clothing during clean-up. See Section 8 of the MSDS for Personal Protective Equipment.

Environmental precautions Prevent further leakage or spillage if safe to do so. Do not contaminate water.

Methods for containment Stop the flow of material, if this is without risk. Prevent entry into waterways, sewers, basements or confined areas.

Methods for cleaning up Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. After removal flush contaminated area thoroughly with water. This material and its container must be disposed of as hazardous waste.

Never return spills to original containers for re-use.

Other information Clean up in accordance with all applicable regulations.

7. Handling and Storage

Handling

Pregnant or breastfeeding women must not handle this product. Avoid inhalation of vapors and contact with skin and eyes. The product is combustible, and heating may generate vapors which may form explosive vapor/air mixtures. Ground container and transfer equipment to eliminate static electric sparks. Use non-sparking tools and explosion-proof equipment. Use only with adequate ventilation. Wear approved safety goggles. Wear protective gloves and appropriate clothing to prevent skin contact. Avoid generation and spreading of dust. Observe good industrial hygiene practices.

Storage

Store in tightly closed original container in a dry, cool and well-ventilated place. Keep away from food, drink and animal feedingstuffs.

8. Exposure Controls / Personal Protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Aluminum oxide (CAS 1344-28-1)	TWA	1 mg/m3	Respirable fraction.
Carbon fiber (CAS 7440-44-0)	TWA	2 mg/m3	Respirable fraction.
Graphite (CAS 7782-42-5)	TWA	2 mg/m3	Respirable fraction.
Toluene (CAS 108-88-3)	TWA	20 ppm	

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

Components	Type	Value	Form
Aluminum oxide (CAS 1344-28-1)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
Carbon fiber (CAS 7440-44-0)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
Graphite (CAS 7782-42-5)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.

US. OSHA Table Z-2 (29 CFR 1910.1000)

Components	Type	Value
Toluene (CAS 108-88-3)	Ceiling	300 ppm
	TWA	200 ppm

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

Components	Type	Value
Carbon fiber (CAS 7440-44-0)	TWA	15 millions of particle
Graphite (CAS 7782-42-5)	TWA	15 millions of particle

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

Components	Type	Value	Form
Aluminum oxide (CAS 1344-28-1)	TWA	10 mg/m3	
Carbon fiber (CAS 7440-44-0)	TWA	2 mg/m3	Respirable.
Graphite (CAS 7782-42-5)	TWA	2 mg/m3	Respirable.
Toluene (CAS 108-88-3)	TWA	188 mg/m3	
		50 ppm	

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

Components	Type	Value	Form
Aluminum oxide (CAS 1344-28-1)	TWA	1 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
Carbon fiber (CAS 7440-44-0)	TWA	2 mg/m3	Respirable.
Graphite (CAS 7782-42-5)	TWA	2 mg/m3	Respirable.
Toluene (CAS 108-88-3)	TWA	20 ppm	

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

Components	Type	Value	Form
Aluminum oxide (CAS 1344-28-1)	TWA	1 mg/m3	Respirable fraction.
Carbon fiber (CAS 7440-44-0)	TWA	2 mg/m3	Respirable fraction.
Graphite (CAS 7782-42-5)	TWA	2 mg/m3	Respirable fraction.
Toluene (CAS 108-88-3)	TWA	20 ppm	

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

Components	Type	Value	Form
Aluminum oxide (CAS 1344-28-1)	TWA	10 mg/m3	Total dust.
Carbon fiber (CAS 7440-44-0)	TWA	2 mg/m3	Respirable dust.
Graphite (CAS 7782-42-5)	TWA	2 mg/m3	Respirable dust.
Toluene (CAS 108-88-3)	TWA	188 mg/m3 50 ppm	

Mexico. Occupational Exposure Limit Values

Components	Type	Value
Aluminum oxide (CAS 1344-28-1)	TWA	10 mg/m3
Carbon fiber (CAS 7440-44-0)	TWA	10 mg/m3
Graphite (CAS 7782-42-5)	TWA	10 mg/m3
Toluene (CAS 108-88-3)	TWA	188 mg/m3 50 ppm

Engineering controls Provide adequate ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of vapors.

Personal protective equipment

Eye / face protection Wear approved safety goggles.

Skin protection Wear protective gloves. Polyvinyl alcohol gloves are recommended. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. Suitable gloves can be recommended by the glove supplier. Wear appropriate chemical resistant clothing to prevent any possibility of 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. 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. Private clothes and working clothes should be kept separately.

9. Physical & Chemical Properties

Appearance Black pliable semi-solid with solvent odor.

Physical state Liquid.

Form Pliable semi-solid.

Color Black.

Odor Solvent.

Odor threshold Not available.

pH	Not available.
Vapor pressure	6.0 mm Hg @ 68 F
Vapor density	Not available.
Boiling point	230 °F (110 °C)
Melting point/Freezing point	Not available.
Solubility (water)	Negligible.
Specific gravity	0.9
Flash point	198 °F (92.2 °C) Closed Cup
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Auto-ignition temperature	Not available.
Evaporation rate	1 (Butyl acetate=1)
Other data	
Flash point class	Combustible IIIA

10. Chemical Stability & Reactivity Information

Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Flames and sparks.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Carbon oxides.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information

Toxicological data

Components	Species	Test Results
Carbon fiber (CAS 7440-44-0)		
Acute		
Oral		
LD50	Rat	> 10000 mg/kg
Graphite (CAS 7782-42-5)		
Acute		
Oral		
LD50	Rat	> 10000 mg/kg
Toluene (CAS 108-88-3)		
Acute		
Dermal		
LD50	Rabbit	14.1 ml/kg
Inhalation		
LC50	Rat	49000 mg/m³, 4 Hours
Oral		
LD50	Rat	636 mg/kg

Sensitization	Not a skin sensitizer.
Acute effects	Harmful if swallowed. May cause skin and eye irritation. May cause central nervous system effects.
Local effects	Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Components of the product may be absorbed into the body by inhalation, ingestion and through the skin.

Chronic effects Danger of serious damage to health by prolonged exposure. Organic solvents may be absorbed into the body by inhalation and ingestion and cause permanent damage to the nervous system, including the brain.

Carcinogenicity Not classified.

ACGIH Carcinogens

Aluminum oxide (CAS 1344-28-1)	A4 Not classifiable as a human carcinogen.
Toluene (CAS 108-88-3)	A4 Not classifiable as a human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

Toluene (CAS 108-88-3)	3 Not classifiable as to carcinogenicity to humans.

Epidemiology None known.

Mutagenicity Not available.

Neurological effects May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue) and/or damage.

Reproductive effects May adversely affect the developing fetus based on animal data.

Teratogenicity No data available to indicate product or any components present at greater than 0.1% may cause birth defects.

Symptoms and target organs Coughing. Irritation of eyes and mucous membranes. Symptoms include itching, burning, redness and tearing.

12. Ecological Information

Ecotoxicological data

Components		Species	Test Results
Toluene (CAS 108-88-3)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	5.46 - 9.83 mg/l, 48 hours
Fish	LC50	Coho salmon,silver salmon (Oncorhynchus kisutch)	5.5 mg/l, 96 hours

Ecotoxicity The product contains a substance which is harmful to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

Environmental effects An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Persistence and degradability The product contains inorganic compounds which are not biodegradable.

Bioaccumulation / Accumulation No data available on bioaccumulation.

Partition coefficient

Toluene (CAS 108-88-3)	2.73

Mobility in environmental media The product contains substances which are insoluble in water and which sediment in water systems. The product contains volatile organic compounds (VOC) which will evaporate easily from all surfaces.

13. Disposal Considerations

Waste codes Not regulated.

Disposal instructions Dispose of this material and its container to hazardous or special waste collection point. 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.

Waste from residues / unused products Dispose of in accordance with local regulations.

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied.

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.

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

Not regulated.

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

Toluene (CAS 108-88-3)

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration

Aluminum oxide (CAS 1344-28-1)	1.0 %
Toluene (CAS 108-88-3)	1.0 %

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

Aluminum oxide (CAS 1344-28-1)	Listed.
Toluene (CAS 108-88-3)	Listed.

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

Toluene: 1000

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

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

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

No

Section 311/312 (40 CFR 370)

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

B3 - Combustible Liquids
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)	Yes
Canada	Domestic Substances List (DSL)	Yes
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)	Yes

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

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

State regulations

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

Aluminum oxide (CAS 1344-28-1)	Listed.
Carbon fiber (CAS 7440-44-0)	Listed.
Graphite (CAS 7782-42-5)	Listed.
Toluene (CAS 108-88-3)	Listed.

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

Toluene (CAS 108-88-3)	Listed.

US - California Proposition 65 - CRT: Listed date/Developmental toxin

Toluene (CAS 108-88-3)	Listed: January 1, 1991 Developmental toxin.

US - California Proposition 65 - CRT: Listed date/Female reproductive toxin

Toluene (CAS 108-88-3)	Listed: August 7, 2009 Female reproductive toxin.

US - New Jersey RTK - Substances: Listed substance

Aluminum oxide (CAS 1344-28-1)	Listed.
Carbon fiber (CAS 7440-44-0)	Listed.
Graphite (CAS 7782-42-5)	Listed.
Toluene (CAS 108-88-3)	Listed.

US. Massachusetts RTK - Substance List

Aluminum oxide (CAS 1344-28-1)	Listed.
Graphite (CAS 7782-42-5)	Listed.
Toluene (CAS 108-88-3)	Listed.

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

Aluminum oxide (CAS 1344-28-1)	500 lbs
Toluene (CAS 108-88-3)	500 lbs

US. Pennsylvania RTK - Hazardous Substances

Aluminum oxide (CAS 1344-28-1)	Listed.
Graphite (CAS 7782-42-5)	Listed.
Toluene (CAS 108-88-3)	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: 2*
Flammability: 2
Physical hazard: 0
Personal protection: I

NFPA ratings

Health: 2
Flammability: 2
Instability: 0

Disclaimer

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