

## 1. Product and Company Identification

**Material name** VALVE PACK 12  
**Version #** 00  
**Issue date** 19-August-2013  
**Revision date** 19-August-2013  
**Supersedes date** -  
**Chemical name** Coated fiber  
**Chemical description** Fibrous Resin Mixture  
**CAS #** Mixture  
**Product code** 901-0022  
**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** Black pliable semi-solid. Odorless.  
**Emergency overview** CAUTION!  
 May cause eye and skin 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. Ingestion. Inhalation.  
**Eyes** May cause eye irritation.  
**Skin** May cause skin irritation.  
**Inhalation** High concentrations: May cause respiratory tract irritation.  
**Ingestion** No harmful effects expected in amounts likely to be ingested by accident.  
**Chronic effects** Prolonged or frequent contact may cause redness, itching and eczema/chaps.  
**Signs and symptoms** Direct contact with eyes may cause temporary irritation. Defats the skin.  
**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
Graphite dust	7782-42-5	25-50
Molybdenum disulphide	1317-33-5	25-50
Synthetic hydrocarbons	None established	10-25
Carbon fiber	7440-44-0	5-10

**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** Flush thoroughly with water. If irritation occurs, get medical assistance.

<b>Skin contact</b>	Wash area with soap and water. Get medical attention if irritation develops or persists.
<b>Inhalation</b>	Remove victim to fresh air. Get medical attention if symptoms persist.
<b>Ingestion</b>	Rinse mouth and drink plenty of water. Only induce vomiting at the instruction of medical personnel. Get medical attention if any discomfort occurs.
<b>Notes to physician</b>	Treat symptomatically.
<b>General advice</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

## 5. Fire Fighting Measures

<b>Flammable properties</b>	This product is not flammable. Will burn if involved in a fire.
<b>Extinguishing media</b>	
<b>Suitable extinguishing media</b>	Water spray, foam, dry powder or carbon dioxide.
<b>Unsuitable extinguishing media</b>	No restrictions known.
<b>Protection of firefighters</b>	
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed.
<b>Protective equipment and precautions for firefighters</b>	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.
<b>Fire fighting equipment/instructions</b>	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.
<b>Hazardous combustion products</b>	None known.

## 6. Accidental Release Measures

<b>Personal precautions</b>	Avoid inhalation of vapors and contact with skin and eyes. See Section 8 of the MSDS for Personal Protective Equipment.
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground.
<b>Methods for containment</b>	Prevent entry into waterways, sewer, basements or confined areas.
<b>Methods for cleaning up</b>	Collect and dispose of spillage as indicated in Section 13 of the MSDS.
<b>Other information</b>	Clean up in accordance with all applicable regulations.

## 7. Handling and Storage

<b>Handling</b>	Provide adequate ventilation. Avoid inhalation of vapors and contact with skin and eyes. Observe good industrial hygiene practices.
<b>Storage</b>	Store in closed original container in a dry place.

## 8. Exposure Controls / Personal Protection

### Occupational exposure limits

#### US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Carbon fiber (CAS 7440-44-0)	TWA	2 mg/m <sup>3</sup>	Respirable fraction.
Graphite dust (CAS 7782-42-5)	TWA	2 mg/m <sup>3</sup>	Respirable fraction.
Molybdenum disulphide (CAS 1317-33-5)	TWA	3 mg/m <sup>3</sup>	Respirable fraction.
OIL MIST (MINERAL) (CAS SEQ100910)	TWA	10 mg/m <sup>3</sup> 5 mg/m <sup>3</sup>	Inhalable fraction. Inhalable fraction.

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

Components	Type	Value	Form
Carbon fiber (CAS 7440-44-0)	PEL	5 mg/m <sup>3</sup> 15 mg/m <sup>3</sup>	Respirable fraction. Total dust.

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

Components	Type	Value	Form
Graphite dust (CAS 7782-42-5)	PEL	5 mg/m <sup>3</sup>	Respirable fraction.
Molybdenum disulphide (CAS 1317-33-5)	PEL	15 mg/m <sup>3</sup>	Total dust.
OIL MIST (MINERAL) (CAS SEQ100910)	PEL	15 mg/m <sup>3</sup>	Total dust.
		5 mg/m <sup>3</sup>	Mist.

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

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

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

Components	Type	Value	Form
Carbon fiber (CAS 7440-44-0)	TWA	2 mg/m <sup>3</sup>	Respirable.
Graphite dust (CAS 7782-42-5)	TWA	2 mg/m <sup>3</sup>	Respirable.
Molybdenum disulphide (CAS 1317-33-5)	TWA	3 mg/m <sup>3</sup>	Respirable.
		10 mg/m <sup>3</sup>	Total
OIL MIST (MINERAL) (CAS SEQ100910)	STEL	10 mg/m <sup>3</sup>	Mist.
	TWA	5 mg/m <sup>3</sup>	Mist.

**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/m <sup>3</sup>	Respirable.
Graphite dust (CAS 7782-42-5)	TWA	2 mg/m <sup>3</sup>	Respirable.
Molybdenum disulphide (CAS 1317-33-5)	TWA	3 mg/m <sup>3</sup>	Respirable.
		10 mg/m <sup>3</sup>	Inhalable

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

Components	Type	Value	Form
Carbon fiber (CAS 7440-44-0)	TWA	2 mg/m <sup>3</sup>	Respirable fraction.
Graphite dust (CAS 7782-42-5)	TWA	2 mg/m <sup>3</sup>	Respirable fraction.
Molybdenum disulphide (CAS 1317-33-5)	TWA	10 mg/m <sup>3</sup>	Inhalable fraction.

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

Components	Type	Value	Form
Carbon fiber (CAS 7440-44-0)	TWA	2 mg/m <sup>3</sup>	Respirable dust.
Graphite dust (CAS 7782-42-5)	TWA	2 mg/m <sup>3</sup>	Respirable dust.
Molybdenum disulphide (CAS 1317-33-5)	TWA	10 mg/m <sup>3</sup>	
OIL MIST (MINERAL) (CAS SEQ100910)	STEL	10 mg/m <sup>3</sup>	Mist.
	TWA	5 mg/m <sup>3</sup>	Mist.

## Mexico. Occupational Exposure Limit Values

Components	Type	Value	Form
Carbon fiber (CAS 7440-44-0)	TWA	10 mg/m3	
Graphite dust (CAS 7782-42-5)	TWA	10 mg/m3	
Molybdenum disulphide (CAS 1317-33-5)	STEL	20 mg/m3	
OIL MIST (MINERAL) (CAS SEQ100910)	TWA	10 mg/m3	
	STEL	10 mg/m3	Mist.
	TWA	5 mg/m3	Mist.

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

### 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

<b>Appearance</b>	Black pliable semi-solid. Odorless.
<b>Physical state</b>	Solid.
<b>Form</b>	Pliable semi-solid.
<b>Color</b>	Black. <b>Odor</b> Odorless.
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not applicable.
<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Boiling point</b>	Not available.
<b>Melting point/Freezing point</b>	Not available.
<b>Solubility (water)</b>	Slightly in water
<b>Specific gravity</b>	Not available.
<b>Flash point</b>	285.0 °F (140.6 °C) Cleveland Closed Cup
<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 available.
<b>Other data</b>	
<b>Flammability (solid, gas)</b>	Not applicable.

## 10. Chemical Stability & Reactivity Information

<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Conditions to avoid</b>	None known.

<b>Incompatible materials</b>	None known.
<b>Hazardous decomposition products</b>	None known.
<b>Possibility of hazardous reactions</b>	Will not occur.

## 11. Toxicological Information

### Toxicological data

Components	Species	Test Results
Carbon fiber (CAS 7440-44-0)		
<b>Acute</b>		
<i>Oral</i>		
LD50	Rat	> 10000 mg/kg
Graphite dust (CAS 7782-42-5)		
<b>Acute</b>		
<i>Oral</i>		
LD50	Rat	> 10000 mg/kg
<i>Other</i>		
LD50	Mouse	440 mg/kg
Molybdenum disulphide (CAS 1317-33-5)		
<b>Acute</b>		
<i>Inhalation</i>		
LC50	Rat	> 2820 mg/m <sup>3</sup> , 4 hours
<b>Sensitization</b>	Not a skin sensitizer.	
<b>Acute effects</b>	May cause discomfort if swallowed.	
<b>Local effects</b>	May cause skin and eye irritation.	
<b>Chronic effects</b>	Prolonged or frequent contact may cause redness, itching and eczema/chaps.	
<b>Carcinogenicity</b>	Not classified.	
<b>ACGIH Carcinogens</b>		
Molybdenum disulphide (CAS 1317-33-5)		A3 Confirmed animal carcinogen with unknown relevance to humans.
<b>Symptoms and target organs</b>	Direct contact with eyes may cause temporary irritation. Defats the skin.	

## 12. Ecological Information

<b>Ecotoxicity</b>	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.
<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>	The product is slightly soluble in water.

## 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.
<b>Contaminated packaging</b>	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

OSHA Process Safety Standard: This material is not known to be hazardous by the OSHA Highly Hazardous Process Safety Standard, 29 CFR 1910.119.

### 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 - No  
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

Non-controlled

## 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)	Yes
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
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
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).

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** This product does not contain 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.
Graphite dust (CAS 7782-42-5)	Listed.
Molybdenum disulphide (CAS 1317-33-5)	Listed.

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

Not listed.

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

Carbon fiber (CAS 7440-44-0)	Listed.
Graphite dust (CAS 7782-42-5)	Listed.

**US. Massachusetts RTK - Substance List**

Graphite dust (CAS 7782-42-5)	Listed.
Molybdenum disulphide (CAS 1317-33-5)	Listed.

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

Not regulated.

**US. Pennsylvania RTK - Hazardous Substances**

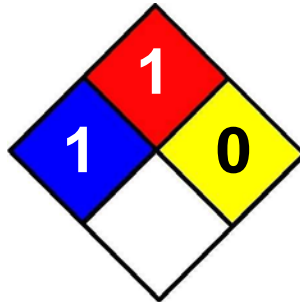
Graphite dust (CAS 7782-42-5)	Listed.
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## 16. Other Information

**Further information** B - Safety Glasses, Gloves  
HMIS® is a registered trade and service mark of the NPCA.

**HMIS® ratings** Health: 1  
Flammability: 1  
Physical hazard: 0  
Personal protection: B

**NFPA Ratings**



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