

SAFETY DATA SHEET**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Trade name or designation of the mixture Valve Pack 4
Registration number -
Synonyms None.
Product code 901-0004
Issue date 24-January-2013
Version number 00
Revision date 24-January-2013
Supersedes date -

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Industrial Leak Sealant
Uses advised against None known.

1.3. Details of the supplier of the safety data sheet**Supplier**

Company name Team Industrial Services, Inc.
Address Postbus 37 4380 AA Vlissingen 3237
The Netherlands
Telephone +31 (0) 118 48 58 00
Fax +31 (0) 118 48 58 86
e-mail Not available.
Contact person Not available.

1.4. Emergency telephone number +1 703-527-3887

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture**

Classification according to Directive 67/548/EEC or 1999/45/EC as amended

Classification Carc. Cat. 3;R40, N;R51/53

Classification according to Regulation (EC) No 1272/2008 as amended

Health hazards

Carcinogenicity Category 2 H351 - Suspected of causing cancer.

Environmental hazards

Hazardous to the aquatic environment, long-term aquatic hazard Category 2 H411 - Toxic to aquatic life with long lasting effects.

Hazard summary

Physical hazards Not classified for physical hazards.
Health hazards Limited evidence of a carcinogenic effect. Not classified for health hazards. However, occupational exposure to the mixture or substance(s) may cause adverse health effects.
Environmental hazards Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Specific hazards Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases.
Main symptoms Direct contact with eyes may cause temporary irritation.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains: Perchloroethylene

Hazard pictograms



Signal word	Warning
Hazard statements	H351 - Suspected of causing cancer. H411 - Toxic to aquatic life with long lasting effects.
Precautionary statements	
Prevention	P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P281 - Use personal protective equipment as required.
Response	P308 + P313 - IF exposed or concerned: Get medical advice/attention.
Storage	P405 - Store locked up.
Disposal	P501 - Dispose of contents/container in accordance with local/regional/national/international regulations.
Supplemental label information	Not applicable.
2.3. Other hazards	Not a PBT or vPvB substance or mixture.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Polyfluoroethylene	50-80	9002-84-0	-	-	
Classification:	DSD: -				
	CLP: -				
Perchloroethylene	25-50	127-18-4 204-825-9	-	602-028-00-4	
Classification:	DSD: Carc. Cat. 3;R40, N;R51/53				
	CLP: Carc. 2;H351, Aquatic Chronic 2;H411				
Butene, homopolymer	10-25	9003-29-6 500-004-7	-	-	
Classification:	DSD: -				
	CLP: -				

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

SECTION 4: First aid measures

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

4.1. Description of first aid measures

Inhalation	Remove victim to fresh air. Get medical attention if symptoms persist.
Skin contact	Wash area with soap and water. Get medical attention if irritation develops or persists.
Eye contact	Flush thoroughly with water. If irritation occurs, get medical assistance.
Ingestion	Rinse mouth and drink plenty of water. Only induce vomiting at the instruction of medical personnel. Get medical attention if any discomfort occurs.

4.2. Most important symptoms and effects, both acute and delayed Direct contact with eyes may cause temporary irritation.

4.3. Indication of any immediate medical attention and special treatment needed Treat symptomatically.

SECTION 5: Firefighting measures

General fire hazards The product is not flammable.

5.1. Extinguishing media

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

Unsuitable extinguishing media	No restrictions known.
5.2. Special hazards arising from the substance or mixture	During fire, gases hazardous to health may be formed.
5.3. Advice for firefighters	
Special protective equipment 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.
Special fire fighting procedures	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.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Avoid prolonged and repeated contact. See Section 8 for personal protective equipment.

For emergency responders Use personal protection as recommended in section 8 of the SDS.

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

6.3. Methods and material for containment and cleaning up Collect and dispose of spillage as indicated in section 13.

6.4. Reference to other sections For personal protection, see section 8. For waste disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling Provide adequate ventilation. Avoid prolonged and repeated contact. Observe good industrial hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities Store in closed original container in a dry place.

7.3. Specific end use(s) Industrial Leak Sealant

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Austria. MAK List

Components	Type	Value
Perchloroethylene (CAS 127-18-4)	MAK	345 mg/m ³
	STEL	50 ppm
		1380 mg/m ³ 200 ppm

Belgium. Exposure Limit Values.

Components	Type	Value
Perchloroethylene (CAS 127-18-4)	STEL	695 mg/m ³
	TWA	100 ppm
		172 mg/m ³ 25 ppm

Bulgaria. OELs. Regulation No 13 on protection of workers against risks of exposure to chemical agents at work

Components	Type	Value
Perchloroethylene (CAS 127-18-4)	TWA	120 mg/m ³

Cyprus. OELs. Control of factory atmosphere and dangerous substances in factories regulation, PI 311/73, as amended.

Components	Type	Value
Perchloroethylene (CAS 127-18-4)	TWA	670 mg/m ³
		100 ppm

Czech Republic. OELs. Government Decree 361

Components	Type	Value
Perchloroethylene (CAS 127-18-4)	Ceiling	750 mg/m ³
	TWA	250 mg/m ³

Denmark. Exposure Limit Values

Components	Type	Value
Perchloroethylene (CAS 127-18-4)	TLV	70 mg/m ³
		10 ppm

Estonia. OELs. Occupational Exposure Limits of Hazardous Substances. (Annex of Regulation No. 293 of 18 September 2001)

Components	Type	Value
Perchloroethylene (CAS 127-18-4)	STEL	170 mg/m ³
	TWA	25 ppm
		70 mg/m ³ 10 ppm

Finland. Workplace Exposure Limits

Components	Type	Value
Perchloroethylene (CAS 127-18-4)	TWA	70 mg/m ³
		10 ppm

France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984

Components	Type	Value
Perchloroethylene (CAS 127-18-4)	VME	335 mg/m ³
		50 ppm

Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace

Components	Type	Value
Perchloroethylene (CAS 127-18-4)	AGW	138 mg/m ³
		20 ppm

Greece. OELs (Decree No. 90/1999, as amended)

Components	Type	Value
Perchloroethylene (CAS 127-18-4)	STEL	1000 mg/m ³
	TWA	150 ppm
		335 mg/m ³ 50 ppm

Hungary. OELs. Joint Decree on Chemical Safety of Workplaces

Components	Type	Value
Perchloroethylene (CAS 127-18-4)	STEL	50 mg/m ³
	TWA	50 mg/m ³

Iceland. OELs. Regulation 154/1999 on occupational exposure limits

Components	Type	Value
Perchloroethylene (CAS 127-18-4)	TWA	70 mg/m ³
		10 ppm

Ireland. Occupational Exposure Limits

Components	Type	Value
Perchloroethylene (CAS 127-18-4)	STEL	678 mg/m ³
		100 ppm

Ireland. Occupational Exposure Limits

Components	Type	Value
	TWA	170 mg/m3 25 ppm

Italy. OELs

Components	Type	Value
Perchloroethylene (CAS 127-18-4)	STEL	100 ppm
	TWA	25 ppm

Latvia. OELs. Occupational exposure limit values of chemical substances in work environment

Components	Type	Value
Perchloroethylene (CAS 127-18-4)	TWA	10 mg/m3

Lithuania. OELs. Limit Values for Chemical Substances, General Requirements (Hygiene Norm HN 23:2007)

Components	Type	Value
Perchloroethylene (CAS 127-18-4)	STEL	170 mg/m3
	TWA	25 ppm 70 mg/m3 10 ppm

Norway. Administrative Norms for Contaminants in the Workplace

Components	Type	Value
Perchloroethylene (CAS 127-18-4)	TLV	40 mg/m3 6 ppm

Poland. MACs. Minister of Labour and Social Policy Regarding Maximum Allowable Concentrations and Intensities in Working Environment

Components	Type	Value
Perchloroethylene (CAS 127-18-4)	STEL	170 mg/m3
	TWA	85 mg/m3

Portugal. VLEs. Norm on occupational exposure to chemical agents (NP 1796)

Components	Type	Value
Perchloroethylene (CAS 127-18-4)	STEL	100 ppm
	TWA	25 ppm

Romania. OELs. Protection of workers from exposure to chemical agents at the workplace

Components	Type	Value
Perchloroethylene (CAS 127-18-4)	STEL	100 mg/m3
	TWA	14 ppm 50 mg/m3 7 ppm

Slovakia. OELs. Decree of the government of the Slovak Republic concerning protection of health in work with chemical agents

Components	Type	Value
Perchloroethylene (CAS 127-18-4)	TWA	172 mg/m3 25 ppm

Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working (Official Gazette of the Republic of Slovenia)

Components	Type	Value
Perchloroethylene (CAS 127-18-4)	TWA	345 mg/m3 50 ppm

Spain. Occupational Exposure Limits

Components	Type	Value
Perchloroethylene (CAS 127-18-4)	STEL	689 mg/m3
	TWA	100 ppm 172 mg/m3 25 ppm

Sweden. Occupational Exposure Limit Values

Components	Type	Value
Perchloroethylene (CAS 127-18-4)	STEL	170 mg/m3
	TWA	25 ppm 70 mg/m3 10 ppm

Switzerland. SUVA Grenzwerte am Arbeitsplatz

Components	Type	Value
Perchloroethylene (CAS 127-18-4)	STEL	690 mg/m3
	TWA	100 ppm 345 mg/m3 50 ppm

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value
Perchloroethylene (CAS 127-18-4)	STEL	689 mg/m3
	TWA	100 ppm 345 mg/m3 50 ppm

Biological limit values

France. Biological indicators of exposure (IBE) (National Institute for Research and Security (INRS, ND 2065))

Components	Value	Determinant	Specimen	Sampling time
Perchloroethylene (CAS 127-18-4)	7 mg/l	Acide trichloroacétique	Urine	*
	1 mg/l	Perchloroéthylène	Blood	*

* - For sampling details, please see the source document.

Germany. TRGS 903, BAT List (Biological Limit Values)

Components	Value	Determinant	Specimen	Sampling time
Perchloroethylene (CAS 127-18-4)	1 mg/l	Tetrachlorethen	Blood	*

* - For sampling details, please see the source document.

Hungary. Chemical Safety at Workplace Ordinance Joint Decree No. 25/2000 (Annex 2): Permissible limit values of biological exposure (effect) indices

Components	Value	Determinant	Specimen	Sampling time
Butene, homopolymer (CAS 9003-29-6)	25 %	red blood cell or total blood acetylcholinesterase activity (EC. 3.1.1.7.)	Reduction from individual baseline activity in red blood cells	*
Perchloroethylene (CAS 127-18-4)	25 %	red blood cell or total blood acetylcholinesterase activity (EC. 3.1.1.7.)	Reduction from individual baseline activity in red blood cells	*

* - For sampling details, please see the source document.

Switzerland. BAT-Werte (Biological Limit Values in the Workplace as per SUVA)

Components	Value	Specimen	Sampling time
Perchloroethylene (CAS 127-18-4)	7 mg/l	Urine	*
	1 mg/l	Blood	*

* - For sampling details, please see the source document.

Recommended monitoring procedures Follow standard monitoring procedures.

Derived no-effect level (DNEL) Not available.

Predicted no effect concentrations (PNECs) Not available.

8.2. Exposure controls

Appropriate engineering controls Provide adequate ventilation. Observe occupational exposure limits and minimise the risk of inhalation of dust.

Individual protection measures, such as personal protective equipment

General information Personal protective equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

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

Skin protection

- Hand protection Wear protective gloves.

- Other 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.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

Hygiene measures 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.

Environmental exposure controls Environmental manager must be informed of all major releases.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance Gray pliable semi-solid with ether like odor.

Physical state Solid.

Form Pliable semi-solid.

Colour Grey. **Odour**

Ether-like.

Odour threshold Not available.

pH Not applicable.

Melting point/freezing point Not available.

Initial boiling point and boiling range 248,9 °C (480 °F)

Flash point 200,6 °C (393 °F)

Evaporation rate Not applicable.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Vapour pressure Not applicable.

Vapour density Not applicable.

Relative density 0,85

Solubility(ies) Slightly soluble in water.

Partition coefficient (n-octanol/water)	No data available.
Decomposition temperature	Not available.
Viscosity	Not applicable.
Explosive properties	Not available.
Oxidizing properties	Not available.
9.2. Other information	No relevant additional information available.

SECTION 10: Stability and reactivity

10.1. Reactivity	The product is non-reactive under normal conditions of use, storage and transport.
10.2. Chemical stability	Material is stable under normal conditions.
10.3. Possibility of hazardous reactions	Will not occur.
10.4. Conditions to avoid	None in particular.
10.5. Incompatible materials	None known.
10.6. Hazardous decomposition products	None known.

SECTION 11: Toxicological information

General information Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure

Ingestion	May cause discomfort if swallowed.
Inhalation	Dust may irritate throat and respiratory system and cause coughing.
Skin contact	Prolonged skin contact may cause irritation.
Eye contact	Direct contact with eyes may cause temporary irritation.

Symptoms May cause redness and pain.

11.1. Information on toxicological effects

Acute toxicity May cause discomfort if swallowed.

Components	Species	Test results
Perchloroethylene (CAS 127-18-4)		
Acute		
<i>Inhalation</i>		
LC50	Rat	4100 mg/l, 6 Hours
<i>Oral</i>		
LD50	Rat	2400 mg/kg

Skin corrosion/irritation Prolonged exposure may cause skin irritation.

Serious eye damage/irritation Direct contact with eyes may cause temporary irritation.

Respiratory sensitisation Not classified.

Skin sensitisation Not a skin sensitiser. **Germ**

cell mutagenicity Not classified.

Carcinogenicity Suspected of causing cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

Perchloroethylene (CAS 127-18-4) 2A Probably carcinogenic to humans.

Reproductive toxicity Not classified.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not available.

Mixture versus substance information Not available.

Other information Not available.

SECTION 12: Ecological information

12.1. Toxicity Toxic to aquatic life with long lasting effects.

Product	Species		Test results
VALVE PACK B (CAS Mixture)			
Aquatic			
Crustacea	EC50	Daphnia	20,96 mg/l, 48 hours, estimated
Fish	LC50	Fish	39,0965 mg/l, 96 hours, estimated

Components	Species		Test results
Perchloroethylene (CAS 127-18-4)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	6,1 - 9 mg/l, 48 hours
Fish	LC50	Flagfish (Jordanella floridae)	4 mg/l, 96 hours

12.2. Persistence and degradability No data available.

12.3. Bioaccumulative potential No data available.

Partition coefficient n-octanol/water (log Kow) No data available.

Perchloroethylene (CAS 127-18-4) 3,4

Bioconcentration factor (BCF) Not available.

12.4. Mobility in soil No data available.

Mobility in general The product is insoluble in water.

12.5. Results of PBT and vPvB assessment Not a PBT or vPvB substance or mixture.

12.6. Other adverse effects Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste Dispose of in accordance with local regulations.

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

EU waste code 08 04 10

Disposal methods/information 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.

SECTION 14: Transport information

ADR

The product is not covered by international regulation on the transport of dangerous goods.

RID

The product is not covered by international regulation on the transport of dangerous goods.

ADN

The product is not covered by international regulation on the transport of dangerous goods.

IATA

The product is not covered by international regulation on the transport of dangerous goods.

IMDG

The product is not covered by international regulation on the transport of dangerous goods.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code This substance/mixture is not intended to be transported in bulk.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I
Not listed.

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex II
Not listed.

Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended
Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1 as amended
Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2 as amended
Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3 as amended
Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V as amended
Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry
Perchloroethylene (CAS 127-18-4)

Regulation (EC) No. 1907/2006, REACH Article 59(1) Candidate List as currently published by ECHA
Not listed.

Authorisations

Regulation (EC) No. 143/2011 Annex XIV Substances Subject to Authorisation
Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended
Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work
Not regulated.

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding
Perchloroethylene (CAS 127-18-4)

Other EU regulations

Directive 96/82/EC (Seveso II) on the control of major-accident hazards involving dangerous substances
Not regulated.

Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work
Perchloroethylene (CAS 127-18-4)

Directive 94/33/EC on the protection of young people at work
Perchloroethylene (CAS 127-18-4)

Other regulations

The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended and respective national laws implementing EC directives. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006 as amended.

National regulations

Follow national regulation for work with chemical agents.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations

DNEL: Derived No-Effect Level.
PNEC: Predicted No-Effect Concentration. PBT: Persistent, bioaccumulative and toxic. vPvB: Very Persistent and very Bioaccumulative. DSD: Directive 67/548/EEC.
CLP: Regulation No. 1272/2008.

References

Not available.

Information on evaluation method leading to the classification of mixture

The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

Full text of any statements or R-phrases and H-statements under Sections 2 to 15

R40 Limited evidence of a carcinogenic effect.
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
H351 - Suspected of causing cancer.
H411 - Toxic to aquatic life with long lasting effects.

Training information

Follow training instructions when handling this material.

Disclaimer

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