



FISPQ Nº: 026
**CHEMICAL PRODUCT SAFETY
 INFORMATION RECORD**

SEALANT

1. Product and company identification:

Product's name: SEALANT

Product's internal identification code: PS500, BS1000

Company's name: rubber vulk, lda

Address: Zona Industrial, Lote 21 - 3680-133 Oliveira de Frades

Company's phone: +351 232 763 109 Fax: +351 232 763 110

Emergency phone: 808 250 143 (INEM ANTI-VENENOS)

E-mail: info@rubbervulk.com

2. Hazard identification:

Risk: Toxic product; has narcotic effect. Intense exposure can lead to unconsciousness and even coma, and cause irritation on the skin and eyes.

PRODUCT EFFECTS

Effects of Exposure Its vapors are central nervous system (CNS) depressants
 Toxic by inhalation, ingestion and skin contact.
 Repeated exposure at high concentrations of trichloroethylene produce adverse effects to the liver and at a smaller degree to the kidneys

Environmental Effects: AIR: vapors of the product reduce the concentration of oxygen, making the environment asphyxiating and can form explosive mixtures of difficult ignition, requiring high intensity heat sources, such as welds, sparks, etc.
 WATER: product of low solubility in water. Trichloroethylene causes long-term damaging effect to the aquatic environment.
 SOIL: volatile liquid, can penetrate the soil and cause possible contamination

Physical and Chemical Hazards: Irritation of the skin and mucus by prolonged contact;
 Contamination by organic vapors.

Specific Hazards: At high temperatures, the product releases toxic vapors.
 Burning of the product releases toxic gases.

Hazard classification and labeling:



Toxic (T)



Hazardous to the Environment (N)

Class: 6.1
 Risk No: 60

3. Composition and information on the ingredients:

Preparation: Trichloroethylene rubber solution

Chemical nature: Chlorinated solvent

Components that contribute to the hazard: Chlorinated solvent

No.	Substância	CAS	Concentration	Risk classification and phrases
01	Trichloroethylene	79016	85%	T(R45;R68;R67) - Xi(R36/38)-N(R52 53)
02	Rubber	----	15%	----



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4. First-aid measures:

FIRST-AID MEASURES

Inhalation	Dizziness, headache and fainting. Remove the victim to a ventilated location, keeping him in lying position, quiet and warm. Keep the respiratory passages free. Administer artificial respiration or oxygen if necessary. See a doctor.
Contact with the skin	Irritation and burning on the contaminated site. Remove the clothes contaminated with the product. Wash with running water for 20 minutes. See a doctor if necessary.
Contact with the eyes	Irritation, discomfort and pain. Wash with water for at least 20 minutes, see an ophthalmologist.
Ingestion	Call/see a doctor immediately. Provide water (3 to 4 cups). Lay the victim down with the head turned to the side, keep the respiratory passages free, be careful not to inhale vomit. In case the victim is unconscious, do not give water or induce vomit.
Major symptoms	Irritation on the skin, eyes and respiratory tracts, dizziness, sleepiness and loss of motor coordination, and unconsciousness.
Actions to be avoided	Do not administer anything orally or induce the vomit if the victim is having a seizure or is unconscious.
Doctor information	It is recommended to carefully administer gastric suction. The over-exposure to the solvent can cause higher sensitivity of the heart to adrenaline. In the case of ingestion, the supply of moist oxygen is normally necessary.

5. Firefighting measures:

Appropriate extinguishing methods	Chemical Powder fire extinguisher, CO ₂ ,
Inappropriate extinguishing methods	Do not use jet of water directly, only spray or foam.
Specific hazards	This product can burn but it is not easily ignited. Its burning can generate toxic fumes. The recipients can explode from the heat of the fire.
Special methods	Firefighting with the wind always at your back
Firefighters protection	In the case of high concentrations of organic vapor, use the individual respiratory equipment.

6. Control measures for spill / leakage:

PERSONAL PRECAUTIONS

Removal of the sources of ignition	Remove all sources of ignition, do not smoke at the site.
Dust control	Not applicable.
Prevention of inhalation or contact with the skin, mucus or eyes.	Use individual protection equipment. Avoid contact with the eyes and skin. Ensure adequate ventilation.
Environmental precautions	Contain the leakage to avoid contamination of the soil and water. The product is heavier than water and has very low solubility. Avoid cloistering the place and if possible keep the place ventilated. It can contaminate water, causing long-term damaging effect to the aquatic environment.
Removal and cleaning methods	In the case of spills, use absorbing materials and take the material to an appropriate location, leaving the solvent to dry.
Recovery	After the contamination, the product can no longer be used.
Disposal	Burn in an appropriate incinerator. Any disposal method should obey the legislation and the local regulations. Do not dispose into the sewer, ground or any water body or source.



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7. Handling and storage:
HANDLING

Appropriate technical measures

Provide exhaust ventilation where the processes so require. The product should be handled, obeying the standards and procedures of industrial hygiene and occupational safety, according to the current legislation.

Exposure prevention

Handle according to the established safety standards. Use the indicated individual protection equipments (IPE). Keep the packs always well closed.

Fire or explosion prevention

Trichloroethylene can form an explosive mixture with air, therefore adopt all the protection measures for fire prevention.
No welding activity or cutting of any pack should be performed where the solvent is likely present due to the risk of explosion.
Due to the volatility of the tri chlorine, the cans can explode due to the heat of the fire.

Safe handling precautions

Avoid dropping the packs during the loading and offloading operation. In the case of drums of the product, they should be stored over wood platforms, away from the sun and rain and away from flames, fire, sparks and sources of heat. The packs should never be thrown over tires

STORAGE CONDITIONS

Medidas técnicas apropriadas

Armazenar longe de produtos alimentícios, oxidantes e bases fortes (ex.: hidróxido de Sódio/Potássio).
Tricloroetileno reage violentamente com metais ativos (sódio, berílio, lítio).

CONDIÇÕES DE ARMAZENAMENTO

Appropriate

Covered, ventilated and dry areas (temperature of $\pm 25^{\circ}\text{C}$).

To be avoided

Proximity with sources of heat and ignition, locations without ventilation and incompatible materials.

Risk signal

PRODUCT:

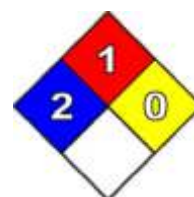


Toxic (T)
Class 6

The location should have signals indicating the flammability of the product and the safety standards of the place
Classification according to Standard 704 of NFPA – National Fire Protection Agency. *

4 - Extreme
3 - High
2 - Moderate
1 - Mild
0 - Minimum

HEALTH	2
FLAMMABILITY	1
REACTIVITY	0
SPECIAL	



* According to the FISPQ [Chemical Product Safety Information Record] of the solvent supplier

Incompatible products

Active metals, strong bases, strong oxidants and metal powders.

SAFE PACKAGING MATERIALS

Recommended

Original pack (cans and gallons of flanders).

Inappropriate

Any other type of packing that is not the original packing of the product.

8. Exposure control and individual protection:

Engineering control measures

Appropriate ventilation of the place.

SPECIFIC CONTROL PARAMETERS

Limits of occupational exposure:

BRAZIL – LT/ NR15

LT-MP
VM
ppm

LT-VM
ppm



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8. Exposure control and individual protection: Continued

TRICHLOROETHYLENE USA – ACGIH	78 TWA / TLV ppm 50	N.E. STEL / TLV ppm 100
TRICHLOROETHYLENE		
TWA: Time weighted average	LT-MP: Weighted average tolerance limit	
TLV: Threshold Limit Value	LT-VM: Maximum Tolerance Limit Value	
STEL: Short Term Exposure Limit		
TRICHLOROETHYLENE	N.E	
CEILING CONCENTRATION (TLV-C): -----	rat= 8000ppm/4hs	
LETHAL CONCENTRATION (CL50):- -----	1000 ppm	
ODOR LIMIT-----		
IDHL-----	Human=100ppm-8hours causes irritating effects	
TOXIC CONCENTRATION (TClo)-----	CNS=160ppm-83 minutes causes depression of the CNS	

APPROPRIATE INDIVIDUAL PROTECTION EQUIPMENT

Breathing protection	Mask against organic vapors, mask.
Hand protection	Viton Rubber Gloves, Nitrile rubber..
Eye protection	Protective goggles
Skin and body protection	Safety footwear (boot) and apron.
Special precautions	Emergency showers and eye wash should be installed at the handling sites
Hygiene measures	Do not inhale the vapors. Avoid contact with the eyes and skin. Remove the dirty or embedded clothes. Smoking, eating and drinking should be forbidden at the area of application. Always use hot water, soap and cleaning creams for cleaning. Do not use gasoline, diesel oil or other solvent for personal hygiene.

9. Physical/Chemical properties:

Physical state	Viscous liquid.
Form	Liquid.
Odor	Characteristic.
Color	Black
pH	N.A.

SPECIFIC TEMPERATURES AT WHICH CHANGES IN THE PHYSICAL STATE OCCUR

Boiling point	85 – 87°C *
Distillation range	Not determined
Freezing point	Not determined
Melting point	Not determined
Flash point	Not determined
Self-igniting temperature	Not determined
Limit of explosiveness in air	LIE: 7% ; LSE: 52%*
Steam pressure	± 60mmg à 20°C*
Vapor density	4,5g/cm ³ a 20/4°C (AR=1)*
Rate of evaporation	Not determined
Density (apparent)	1.34 a 1.38
Solubility	Insoluble in water.

*Based on the values of the pure solvent according to the supplier FISPQ



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10. Stability and reactivity:
SPECIFIC CONDITIONS

Chemical stability	Stable under the normal recommended handling and storage conditions.
Instability	Stable under normal use and stock conditions.
Dangerous reactions	None; when the product is stored, applied and processed correctly. The solvent reacts violently with active metals (sodium, beryllium, lithium).
Conditions to avoid	Keep away from heat and sources of ignition.
Incompatible materials	Active metals (Sodium, Barium, Beryllium and others), strong alkalinizing and oxidizing agents.
Hazardous products from the breakdown	Product does not have corrosive action on materials. The combustion of the product may emit acid and toxic gases (carbon oxides, chlorinated products, phosgene). It can react with alkaline compounds to generate chloroacetylene, which are explosive and highly toxic.
Risk of spontaneous polymerization	Does not occur.

11. Toxicological information:
INFORMATION ACCORDING TO THE DIFFERENT WAYS OF EXPOSURES

Acute toxicity	The overexposure to the product's vapors, above the professional limits of exposure, causes headache, nausea, dizziness, sleepiness and even unconsciousness. Exposures at concentrations equal or greater than 5000 ppm cause anesthetic effects, causing loss of consciousness and can even lead to death in extreme cases.
Site effects	The prolonged or repeated exposure can cause skin irritation. The repeated contact can cause drying and peeling of the skin.
Sensitization	Not available
Chronic toxicity	The constant and prolonged exposure to the vapors released by the product in an unhealthy environment, and without individual or collective protection equipment, can cause chemical dependency, causing even disease of the liver and kidneys.
Toxicologically synergic effects	Not available
Specific effects	Repeated exposure to high concentrations of the solvent can produce adverse effects to the liver and kidneys. According to the producer of Trichloroethylene, none of the toxic effects of the solvent should occur if the exposures are kept below the current Occupational Exposure Limit.

12. Ecological information:

Environmental effects, behavioral effects and impacts of the product	Leakage and spills release vapors that can form explosive mixtures, and its burning releases toxic smoke. The solvent (trichloroethylene) contained in the product is toxic to aquatic life, and can have fatal effects if they remain in the aquatic environment for long. On the ground and sediments, the product can partially infiltrate and contaminate the water table.
Mobility	The product is a volatile liquid with low solubility in water and high mobility in soil and sediments.
Persistence/degradability	The product is not readily biodegradable, the solvent suffers photodegradation in air, and slow degradation in the soil.
Bioaccumulation	The solvent (trichloroethylene) has low potential for bioaccumulation
Mobility	Not available



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12. Ecological information: Continued

Expected behavior	Not determined
Environmental impact	Not determined
Ecotoxicity	Not determined

13. Considerations regarding treatment and disposal:

METHODS OF TREATMENT AND DISPOSAL

Product

Product remains According to the current legislation. Do not dispose the materials in sewers or water bodies.

Used packing According to the current legislation.

14. Information on transportation:

NATIONAL AND INTERNATIONAL REGULATION

Product considered dangerous, by its components according to ordinance 204 dated 05/20/2007 of the ministry of transportation

For containing the chlorinated solvent, the SVF sealant is considered a dangerous product for land, sea or air transport according to the respective regulations (ADR; IMDG; IATA-DGR).

DANGEROUS PRODUCT REGULATION

UN Number	1710
Appropriate name for shipment	Chlorinated solvent (Trichloroethylene) contact adhesive
Risk class	6.1
Risk number	60
Packing group	II

15. Regulations:

Name of substance/preparation: Chlorinated solvent (Trichloroethylene) contact adhesive

Indication of Hazards and Risk Symbol: TOXIC (T)

Risk Sentences (R)

R 45: Can cause cancer.

R36/38: Irritates the eyes and skin.

R 52/53: Harmful to the aquatic organisms, long-term damaging effects.

R 66- Can cause drying and dermatitis

R67 Can cause sleepiness and vertigo by inhalation of the vapors

Safety Sentences (S)

Reserved for professional users

S2: keep away from food and children

S 9: Keep the recipient well closed.

S 16: Keep away from any source of flame or spark. Do not smoke or eat.

S 36/37: Use appropriate protective clothing and gloves

S 53: Avoid exposure – obtain specific instructions before use.

Ordinance 204 – 05/20/1997 – classification and definition of the class of dangerous products.

NBR 14725-4 Standard

Ordinance 3214 of the Ministry of Labor NR 15 – Activities in Unhealthy Operations and NR 07 – Occupational Health Medical Control Program / PCMSO.

Portuguese legislation DL 63/ 2008



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16. Outras informações:

VOC concentration > 85 %

This FISPQ was prepared according to Portuguese legislation DL 63/ 2008

Product for exclusive industrial use

The information contained in this FISPQ was researched and compiled from reliable sources, from MSDS of suppliers and from legislations applicable to the product.

The data of this FISPQ refer to the specific product and are not valid when this product is being used in combination with other products.

Abbreviations and symbols used in this document:

ACGIH – American Conference of Governmental Industrial Hygienists

IMDG - International Maritime Dangerous Goods Code

IATA-DGR - International Air Transport Association - Dangerous Goods Regulation

LT-MP – Tolerance Limit – Weighted Average

N.A. – Not applicable

NR – Regulatory Standard

PCMSO – Occupational Health Medical Control Program

TLV-TWA - Threshold Limit Value-Time Weighted Average

TLV-STEL - Threshold Limit Value -Short Term Exposure Limit

VM – Maximum Value

VOC- Volatile organic Compound

Elaborated on: **November/2008**

Revised on: **28/05/2010**

