



TAG SOLVENT PRODUCTS (PTY)LTD.

MATERIAL SAFETY DATA SHEET PERCHLOROETHYLENE

1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Common name	: PERCHLOROETHYLENE		
Supplier	: TAG Solvent Products Mallet Road/Weg Knights Germiston 1401 Republic of South Africa TEL: +27 11 822-1600		
Synonym	: Tetrachloroethylene		
Trade name	: Perchloroethylene		
		In case of emergency	TAG: 011 822 1600

2 COMPOSITION

Name	CAS#	R Phase	EEC classification
Perchloroethylene	127-18-4	R40	Harmful EEC Category carcinogen

3 HAZARDS IDENTIFICATION

NFP RATINGS (Scale 0-4)	Health = 2 Fire = 0 Reactivity = 0
Main hazards	: Harmful by inhalation.
Flammability	: Non-flammable
Potential acute health effects	
Eyes	: May cause irritation.
Skin	: May cause dermatitis.
Inhalation	: Harmful by inhalation.
Ingestion	: May produce adverse effects on the liver and kidney.
Potential chronic health Effects:	
Carcinogenicity	: OSHA: N : NTP: Y : IARC: Y

4 FIRST AID MEASURES

Eye contact	: Check for and remove any contact lenses. Immediately flush the eyes with running water for at least 10 minutes, keep eyelids open. Get medical attention immediately.
Skin contact	: remove contaminated clothing. Wash with soap. If symptoms develop, obtain medical attention.
Inhalation	: If inhaled, remove to fresh air, keep warm and at rest. Do not walk the patient about. If not breathing administer artificial respiration. Do not use mouth-to-mouth resuscitation. If breathing is laboured, give oxygen. Get medical attention.
Ingestion	: Provided the patient is conscious, wash out mouth with water and give 200-300ml of water to drink. Obtain medical attention.

5 *FIRE FIGHTING MEASURES*

Extinguishing media	: Keep fire exposed containers cool by spraying with water.
Special hazards	: Non-flammable. Containers may burst if overheated.
Protective clothing	: A self-contained breathing apparatus and full protective clothing should be worn in fire conditions.

6 *ACCIDENTAL RELEASE MEASURES*

Small spill or leak	: Absorb spillage onto sand, earth or any suitable absorbent material. Transfer to container for disposal or recovery.
Large spill or leak	: Provided to do so, isolate source of leak. Contain spillage with sand, earth or suitable absorbent material. Do not allow to enter drains, sewers or water courses.

7 *HANDLING AND STORAGE*

Handling	: Atmospheric levels should be controlled in compliance with the occupational exposure limit. Do not breathe vapour. Avoid with skin and eyes. Use only in well ventilated areas. The vapour is heavier than air. High concentrations may be produced at low levels where general ventilation is poor. In such cases provide adequate ventilation or wear suitable respiratory protective equipment with positive air supply. Avoid contact with naked flames and hot surfaces as toxic decomposition products can be formed. Do not weld on the presence of vapours, toxic decomposition products may be formed.
Storage	: Keep container dry. Keep in a cool, well-ventilated place. Keep away from heat and sources of ignition. Bulk storage vessels should be made of steel and require a suitable vent or pressure relief valve.

8 *EXPOSURE CONTROLS, PERSONAL PROTECTION*

Engineering control measures	: Provide local exhaust or general dilution ventilation. Ventilation equipment should be explosion-proof if explosion concentrations of vapour or fumes are present.
Personal protection	
Eyes	: Splash-proof goggles or dust-resistant safety goggles and face shield to prevent contact with substance.
Body/skin	: PVA, Viton and multilayered materials will give best protection.
Respiratory	: Vapour respirator. Wear suitable respiratory protective equipment if exposure is expected to be greater than the occupational exposure limit, or unknown
Hands	: Wear appropriate protective gloves, e.g. Butyl rubber gloves.
Feet	: Chemical resistant safety boots.
Other protection	: Ensure that eyewash stations and safety showers are proximal to the work-station location.

9 PHYSICAL AND CHEMICAL PROPERTIES

Physical state and appearance	: Liquid.
Colour	: Colourless, Clear, volatile liquid
Odor	: Mild ether-like odour
PH (1% soln/water)	: Not available
Boiling/condensation point	: 121°C
Melting/freezing point	: -22.4°C
Oxidizing Properties	: Not applicable
Explosive Properties	: Not applicable
Vapor pressure	: 14.7mm of Hg (@20°C)
Vapor density	: 5.38 (Air=1)[74°C]
Flash point	: Not applicable
Flammability	: Not flammable
Solubility - solvent	: Miscible with most organic solvents
Solubility - water	: Marginally soluble 0.015% w/w at 25°C

10 STABILITY AND REACTIVITY

Stability and reactivity	: The product is stable under normal conditions.
Conditions of instability	: The product is stable in normal conditions
Incompatibility with various substances	: ACIDS (STRONG) – Incompatible. ALUMINIUM: May form explosive mixture BARIUM – Forms a detonable mixture. BASE – May form explosive mixture. BERYLLIUM – Possible explosive mixture. DINITROGEN TETRAOXIDE - explosive when subjected to extreme shock.. METALS (LIGHT) – Violent reaction. OXIDIZERS – Incompatible. OXYGEN (liquid) – incompatible. PLASTICS, RUBBER AND COATINGS – May be attacked. POTASSIUM HYDROSIDE – May form explosive mixture. SODIUM HYDROXIDE – may form explosive mixture
Hazardous decomposition products	: May react violently with metals such as sodium, potassium, and barium galvanised surfaces to produce highly toxic dichloroacetylene. Decomposes when exposed to high temperatures generating phosgene gas.

11 TOXICOLOGICAL INFORMATION

Acute Toxicity	: High atmospheric concentrations will lead to anaesthetic effects and adverse effects on the central nervous system. Very high concentrations may result in loss of consciousness, may cause an abnormal heart rhythm and prove suddenly fatal.
Chronic Toxicity	: Repeated exposure to high levels may produce adverse effects on the liver and kidneys.
Carcinogenicity	: No data available
Reproductive hazards	: No data available
Skin and Eye Contact	: Slight/mild irritant. Repeated or prolonged skin contact may cause reddening, burning, blisters, and results in dermatitis. Repeated or prolonged contact with eyes may cause conjunctivitis. Permanent damage to eyes is unlikely

12 *ECOLOGICAL INFORMATION*

Aquatic toxicity	: Shows some toxicity to aquatic organisms. This effects is mitigated by its rapid evaporation from open water systems.
Biodegradability	: Degrades fairly rapidly in lower atmosphere (troposphere). Atmospheric life time approximately 5 months. Does not deplete ozone layer.
Bio-accumulation	: Low potential

13 *DISPOSAL CONSIDERATIONS*

Disposal methods	: Transfer solvent residues to a labelled sealed container for disposal or recovery. Waste disposal must be via an authorised waste contractor.
Disposal of packaging	: Must be disposed of via an authorised waste contractor.

Consult your local or regional authorities.

14 *TRANSPORT INFORMATION*

Hazchem code	: 2Z
UN No.	: 1897
UN packaging Group	: 111
Substance identity No.	: 1897
Air:	
ICAO/IATA class-primary	: 6.1
UN packaging group	: 111
Sea:	
IMDG class-primary	: 6.1
UN packaging group	: 111
Proper shipping name	: Perchloroethylene
Marine pollutant	: Classified as a Marine Pollutant (P)
Road/Rail:	
ADR/RID class	: 6.1
ADR/RID item no.	: 15(c)
ADR SIN	: 1897
Tremcard no.	: CEFIC TEC (R) - 722
Emergency action code	: EAC 74

15 *REGULATORY INFORMATION*

EEC hazard classification	: Harmful EEC Category 3 Carcinogen
Risk phrase	: R40 – Possible risk of irreversible effects
Safety phrases	: S23 - Do not breath vapour S36/37 – Wear suitable protective clothing and gloves.

16 <i>OTHER INFORMATION</i>

Notice to reader:

This MSDS summarizes at the date of issue our best knowledge of the health, safety and environmental hazard information related to the product, and in particular how to safely handle, use and transport the product in the workplace. Since TAG Solvent Products (PTY) LTD. and it's subsidiaries cannot anticipate or control the conditions under which the product may be handled, used, stored or transported, each user must, prior to usage, review MSDS in the context of how the user intends to handle, use, store or transport the product in the workplace and beyond, and communicate such information to all relevant parties. If clarification or further information is required to ensure that an appropriate assessment can be made, the user should contact the company.

We shall not assume any liability for the accuracy or completeness of the information contained herein or any advice given unless there has been gross negligence on our part. In such event our liability shall be limited only to direct damages suffered. Our responsibility for the product as sold is subject to our standards terms and conditions, a copy of which is sent to our customers and is also available upon request. All risk with possession and application of the product passes on delivery.