



1. Material name/compound and trade name

Details on the product

Trade name NILOS TOPGUM TL-PVC

Details on the company/supplier

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2. Composition/details of components

Chemical characterization

Mostly linear polyurethane in trichloroethylene

Hazardous contents:

Trichloroethylene (Trichloroethene)

Content: approx. 80%, CAS-No.: 79-01-6, EG-No.: 201-167-4

3. Possible hazards

Hazardous preparation according to directive 1999/45/EG

Hazard designation: toxic Hazardous symbol: T

Information on special hazards

R 36/38 Hazardous to eyes and skin.

R 43 May cause sensitisation by skin contact.

R 45 Can be carcinogenic.

R 52/53 Harmful to water organisms, can have long-term damaging effects in water.

R 67 Vapors can cause drowsiness and numbness.

R 68 Irreversible harm is possible.

Danger of suffocation with high concentrations of vapor.

4.1 First aid steps

General information

In case of illness go to the doctor. Remove clothing contaminated with the product.

After inhalation

Provide fresh air. Provide artificial respiration in case of breathing arrest. In case of respiratory insufficiency provide oxygen by qualified staff, call for a doctor.

After skin contact

Wash with soap and water and rinse off thoroughly.

After eye contact

Flush with running water for several minutes while keeping the eyelids open, get medical assistance.

4.2 First aid steps

After swallowing

Do not induce vomiting. Call immediately for a doctor or for an ambulance.

Details for the doctor

Right after inhaling a rapid resorption into the lungs can occur and therewith it may lead to a systemic effect. The treating doctor has to decide if he will induce vomiting or not. If irrigation is performed endotracheal and/or esophageal controlling is appropriate. If emptying of the stomach has been indicated, the danger of lung aspiration must be weighed up against the danger of toxicity. Exposition may increase the irritability of the myocardium. Only apply sympaticus-stimulating medication in case of a serious emergency. No specific antidote is known. Supporting measures for treatment according to the medical evaluation of the patient's state.

5. Firefighting steps

The product does not burn by itself. Keep away from high-energy ignition sources. Use extinguishing agents that are suitable for the situation and the location. Keep away from ignition sources. Cool down containers at risk with a water spray.

Unsuitable extinguishing agents: no limitation

Special protective equipment: Wear self-contained breathing apparatus.

Under heat influence during fire, formation of hydrogen chloride and small quantities of chloride and phosgene is possible.

6. Actions to take if released accidentally

Personal protective steps. Ensure adequate ventilation and air extraction.

Environmental protection steps

Prevent it from getting into the drainage and sewage system, into the groundwater or into the soil.

Procedure for cleaning-up:

Mop it with absorbant material (sand, universal binder) and put it into a sealed container.

7. Handling and storage

Store in sealed containers. Ensure that there is good ventilation/air extraction at the workplace. Vapors are heavier than air. Protect against heat and direct sunlight. Follow the legal instructions and the technical guidelines (TRbF 20).

8. Limitation of exposure and personal protective equipment

Constitutes with limiting values to be monitored at the workplace: Trichloroethylene
MAK values: 50 ml/m³ maximum limitation, exceeding factor 4. Y.
EG classification: carcinogenic cat. 2, genotype cat. 3

Technical steps

Ensure a permanent safe maintaining of the limiting values at the workplace. Only use with adequate ventilation. For some operations, local air extraction is necessary. At inadequate ventilation on air extraction, deadly concentrations may occur.

Respiratory equipment

Use filter/gas mask: If respiratory equipment is required for certain work, use a CE approved mask with filter for organic vapors, type A (boiling point > 65 °C). Adequate filter according to EN 141.A1-P2 Typ 672 (optical identification: brown edge).

Eyes protection/facial protection

Use safety protective glasses.

Personal protection

Use chemical resistant safety shoes.

Skin protection

Use chemical resistant gloves classified under DIN EN 374 (protective gloves against chemicals and microorganisms). Acceptable gloves are manufactured of vitone, nitrile, butadiene rubber or PVC such as for instance Ultratile 493. The limitation of usage of the gloves is depending on the conditions of application. Respect the indications of your glove supplier.

9. Physical and chemical properties

Form:	liquid
Color:	transparent
Smell:	mild, specific
Initial boiling point:	85 °C
Density:	approx. 1,42 g/cm ³
Vapor pressure:	77 hPa (at 20 °C)
Vapor density (air = 1):	4,6
Flash point:	none
Ignition temperature:	410 °C
Evaporation rate (ether = 1):	3
Viscosity:	approx. 2500 mPas
Solubility in water:	virtually insoluble
Explosion limits:	lower: 7,9 Vol-%; upper 44,8 Vol-% (100 °C)

10. Stability and reactivity

Thermal decomposition above 120 °C near naked flames and on hot surfaces.
Dangerous decomposition products: hydrogen chloride and traces of chloride, phosgene and carbon monoxide.

11. Toxicological details

Acute toxicity

LD/LC50 values relating to assessment:

Component: Trichloroethylene

oral: 4290 mg/kg rat

inhalated./4h: 12500 ppm rat

Primary forms of irritation

On the skin: degreases the skin

On the eyes: irritation

Inhalation:

The vapors can easily accumulate in enclosed or poorly ventilated areas and cause unconsciousness or death. Excessive exposure can cause irritation of the upper respiratory passages. Excessive exposure can cause sensitivity to adrenaline and irritation of the myocardia (irregular heartbeat). Can cause intolerance to alcohol in the form of temporary reddening of the skin. Concentrations of about 200 - 400 ppm can have a minimal anaesthetic or irritant effect. Concentrations in the range of 1000 - 2000 ppm can quickly cause dizziness and giddiness.

Further toxicological effects:

Deformities are implausible. Exposure without harmful effects on the mother should not have any harmful effects on the foetus. No deformities or malformations on laboratory animals; other effects on the foetus only appeared when the doses were high enough to be poisonous to the mother. Test on animals revealed no impair of reproductive capability.

Carcinogen:

A carcinogenic effect was only found in case of mice that had been given high doses of trichloroethylene. Trichloroethylene is assessed as a category 2 by the EU. Existing data make us assume that there is no genotoxic mechanism of tumorigenesis. This means that non-toxic doses of trichloroethylene represent only little or no risk of cancer for humans. Experience with humans do not let recognize a connection between an exposure to trichloroethylene and the carcinogenesis. When handling as prescribed, it is presumed that trichloroethylene does not represent a measurable risk of cancer for humans.

Other details:

Drinking of alcohol before or after the exposition can reinforce the harmful effects. Repeated exposures against high concentrations can bring harmful effects on liver and kidney of laboratory animals. Repeated exposures with trichloroethylene in high concentrations had caused a hearing loss of laboratory animals, for humans there are no diagnostic findings known.

12. Ecological details

Ecotoxicological effects

Aquatic toxicity: LC 50: 41 - 67 mg/l bream (*Pimephales promelas*)
LC 50: 36 mg/l water flea (*Daphnia magna*)

General information:

Water hazard class 3 (list assessment): very hazardous to water. Prevent it from getting into the groundwater, bodies of water or in drainage system, even in small quantities. Danger on drink water after getting into the ground.

13. Information on disposal

Allow waste of solvents to dry out completely. Send to disposal together with waste rubber. Collect remains of solvents and sent it to a disposal company handling special forms of waste. Empty containers: allow it to dry out completely and scrap them while still open. EAK refuse disposal key reference: 080405

14. Details for transport

Land transport ADR/RID und GGVE:

ADR/RID class: 6.1
Hazard label: 6.1
Packing group: III
UN-No.: 2810
Description of the hazardous goods: Toxic liquid, organic, n.o.s., (Trichloroethylene mixture)

Sea transport IMDG/GGVSea:

IMDG/GGV sea class: 6.1
Hazard label: 6.1
UN-No.: 2810
Packing group: III
EMS-No.: F-A, S-A
Marine pollutant: no
Correct technical name: Toxic liquid, organic, n.o.s., (Trichloroethylene mixture)

Air transport ICAO/IATA:

ICAO/IATA-class: 6.1
Hazard label: 6.1
UN/ID-No: 2810
Packing group: III
Correct technical name: Toxic liquid, organic, n.o.s., (Trichloroethylene mixture)

15. Regulations

EG classification and marking:

Classification according to annex I of the regulations of the council 67/548/EWG (regulation for the classification, packing and marking of hazardous material) as well as the Hazardous Material Ordinance GefStoffV.

Hazard symbol: T = toxic

R clauses

R 36/38 Hazardous to eyes and skin.
R 43 May cause sensitisation by skin contact.
R45 Can be carcinogenic.
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15.2 Regulations

S clauses

- S 2 Keep out of reach of children.
- S 23.2 Do not inhale vapors.
- S 26 In case of contact with eyes rinse with plenty of water and seek for medical advice.
- S 36/37/39 Wear suitable protective clothing, gloves, safety glasses and face screen when working.
- S 38 In badly ventilated rooms use breathing protective device.
- S 45 In case of an accident or sickness contact a doctor immediately (show this label if possible).
- S 53 Avoid exposition - read special instructions before use.
- S 61 Avoid exposure to the environment. Read special instructions and this data sheet before use.

German regulations:

- VbF n/a
- TA air class 1
- BG leaflet M 040 (chlorinated hydro carbons)

16. Other details

This product is intended for commercial use only. The details given here are based on current knowledge and experiences. This safety data sheet describes products in terms of their safety requirements. The details are in no way intended to imply a warranty of performance of capabilities.