

Safety data-sheet (91/155 EEC)

Printed 16.10.2002
Revision 16.10.2002 (GB) Version 1.1
TIP TOP HEATING SOLUTION S
10156TE0020

**1. Identification of the substance/preparation**

Name of product **TIP TOP HEATING SOLUTION S**
No. 538 1172, 538 1189, 538 1220, 538 1237

Manufacturer/distributor STAHLGRUBER Otto Gruber GmbH & Co. KG
Gruber Straße 63, D-85586 Poing
Phone ++49 / 81 21 / 707 - 0

Emergency advice Phone ++49 / 81 21 / 707 - 0
Recommended use(s)
Assembling solution

2. Composition/information on ingredients**Chemical characterization**

Preparation with trichloroethylene

Hazardous ingredients

CAS-No.	EC-No.	Name	[% weight]	Classification
000079-01-6	201-167-4	trichloroethylene; trichloroethene	> 90	Carc.Cat.2 R45; Muta.Cat.3 R68; R67; Xi R36/38; R52-53
008050-09-7	232-475-7	colophonium	< 1	R43

3. Special hazards information for man and environment**R-phrases**

45 May cause cancer.
36/38 Irritating to eyes and skin.
52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
67 Vapours may cause drowsiness and dizziness.
68 Possible risk of irreversible effects.

4. First aid measures**General information**

Remove contaminated soaked clothing immediately.
In the event of persistent symptoms receive medical treatment.
Take away from danger area and lay down affected person.

In case of inhalation

Move to fresh air in case of accidental inhalation of vapours.
In the event of symptoms refer for medical treatment.

In case of skin contact

Wash off immediately with soap and plenty of water.
Consult a doctor if skin irritation persists.

In case of eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Seek medical treatment by eye specialist.

In case of ingestion

Induce vomiting only upon the advice of a physician.
Attention! Beware, danger of aspiration!
Summon a doctor immediately.
Immediately give plenty of water, if possible charcoal slurry.

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5. Fire-fighting measures

Suitable extinguishing material

Foam, carbon dioxide (CO₂), dry chemical, water-spray

Product does not burn, fire-extinguishing activities according to surrounding.

Extinguishing material that may not be used for safety reasons

Full water jet

Special exposure hazards arising from the substance, combustible products or resulting gases

Fire may produce:

Carbon monoxide and carbon dioxide.

chlorine and traces of phosgene

Hydrogen chloric gas.

Special protective equipment for firefighters

Wear self-contained breathing apparatus and protective suit.

Additional information

Keep away from heat and sources of ignition.

Cool containers at risk with water spray jet.

6. Accidental release measures

Personal precautions

In case of vapour formation use respirator.

Ensure adequate ventilation.

Use personal protective clothing.

Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

Do not discharge into the subsoil/soil.

Methods for cleaning up/taking up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder).

Shovel into suitable container for disposal.

7. Handling and storage

Advice on safe handling

Keep container tightly closed.

Vapours are heavier than air and spread along ground.

Care for thoroughly room ventilation, if necessary suck off at workplace.

Avoid contact with skin, eyes and clothing.

Advice on protection against fire and explosion

Keep away from heat and sources of ignition.

Requirements for storage rooms and vessels

Keep containers tightly closed in a cool, well-ventilated place.

Advice on storage compatibility

Incompatible with:

oxidizing agents

aluminium powder

Alkaline metals and earth alkaline metals.

alkaline leaches

Further information on storage conditions

Keep away from food, drink and animal feeding stuffs.

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**8. Exposure controls / personal protection****Additional advice on system design**

Ensure adequate ventilation, especially in confined areas.

Ingredients with occupational exposure limits to be monitored

CAS-No.	Name	Code	[mg/m³]	[ml/m³]	Remark
000079-01-6	trichloroethylene; trichloroethene	TLV	550	100	table 1

Respiratory protection

In case of insufficient ventilation wear suitable respiratory equipment (gas filter type A).

Hand protection

Protective gloves resistant to chemicals made off viton, Minimum coat thickness 0,7 mm, Permeation resistance (wear duration) approx. 480 minutes, i.e. protective glove <Vitoject 890> made by KCL (e-mail: vertrieb@kcl.de)
This recommendation refers exclusively to the chemical compatibility and the lab test conforming to EN 374 carried out under lab conditions.

Requirements can vary as a function of the use. Therefore it is necessary to adhere additionally to the recommendations given by the manufacturer of protective gloves.

Eye protection

Eye wash bottle with pure water

Tightly fitting goggles

Skin protection

Long sleeved clothing.

General protective measures

Do not inhale vapours.

Avoid contact with eyes and skin

Wash hands before breaks and immediately after handling the product.

When using, do not eat, drink or smoke.

Take off immediately all contaminated clothing.

9. Physical and chemical properties**Form**

liquid

Colour

black

Odour

sweetish

Data relevant for safety

	Value	Temperature	at	Method	Remark
Boiling point	ca. 90 °C				
Flash point					*)
Combustion temperature	410 °C				
Lower explosion limit	7,9 Vol-%				
Vapour pressure	77 mbar	20 °C			
Density	1,45 g/ml				
Rel. vapour density	4,54				

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	Value	Temperature	at	Method	Remark
Solubility in water		20 °C			immiscible
Viscosity 1	1500 mPa*s				
Solvent concentration	> 90 %				

Additional information

*) According to PTB instructions, trichloroethylene has no flashpoint; however, vapour and air mixtures are flammable under a stronger energy influx.

10. Stability and reactivity**Conditions to avoid**

Above 120°C, a thermic decomposition may take place.

Materials to avoid

Oxidizing agents.
Alkaline metals and alkaline earth metals
alkaline leaches
aluminum powder

Hazardous decomposition products

Chlorine and traces of phosgene.
Hydrogen chloride gas
Carbon monoxide and carbon dioxide

Additional information

No decomposition if stored and applied as directed.

11. Toxicological information**Experiences made from practice**

May cause cancer.
Components of the product may be absorbed into the body through the skin. (skin absorption)
Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product.
Vapours may cause drowsiness and dizziness.
Possible risk of irreversible effects
Irritating to eyes and skin.

Additional information

Effects of breathing high concentrations of vapour may include
headache, dizziness, weakness, unconsciousness
Hazard of lung oedema.
Skin contact or inhalation of solvents contained in this product may cause irritation of skin, eyes and mucous membranes.

12. Ecological information**General regulation**

Do not flush into surface water or sanitary sewer system.
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Highly water contaminating.

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13. Disposal considerations

Waste code No.	Name of waste
08 04 09*	waste adhesives and sealants containing organic solvents or other dangerous substances

Recommendations for the product

Where possible recycling is preferred to disposal.
Can be incinerated, when in compliance with local regulations.

Recommendations for packaging

Empty containers should be taken for local recycling, recovery or waste disposal.
Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.
Packaging that cannot be cleaned should be disposed of like the product.

General information

Wastes marked with an asterisk (*) are considered to be hazardous waste pursuant to Directive 91/689/EEC on hazardous waste.

14. Transport information**Land and inland navigation transport (ADR/RID/GGVS/GGVE/ADNR)**

Identification	1710 TRICHLORETHYLENE, SOLUTION
UN-No.	1710
Class	6.1
PG	III
Hazard No.	60
Remarks	LQ 19: combination packaging: 3 I / 12 I; trays: 1 I / 12 I (20 kg total gross mass)

Marine transport IMDG/GGV See

Proper shipping name	TRICHLORETHYLENE SOLUTION
UN-No.	1710
Class	6.1
PG	III
Marine pollutant	No
EmS-No.	6.1-02
Remarks	Limited quantities (chapter 3.4): combination packaging: 1 I / 30 kg (total gross mass); trays: 1 I / 20 kg (total gross mass)

Air transport ICAO/IATA

Proper shipping name	TRICHLOROETHYLENE SOLUTION
UN/ID-No.	1710
Class	6.1
PG	III
Remarks	PAC 605 (60 L), CAC 612 (220 L)

15. Regulatory information**Remarks for classification**

According to EC-regulations the product is to be labelled as follows:

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**Classification****T** Toxic**R-phrases**

- 45 May cause cancer.
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68 Possible risk of irreversible effects.

S-phrases

- 53 Avoid exposure - obtain special instructions before use.
45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
60 This material and its container must be disposed of as hazardous waste
61 Avoid release to the environment. Refer to special instructions/safety data sheets.

Hazardous ingredients for labeling

trichloroethylene; trichloroethene

Special labelling for certain preparations

Restricted to professional users.

Contains colophonium. May produce an allergic reaction.

VOC standard**VOC content** <95 %**16. Other information****Further information**

Data of items 4 to 8, as well as 10 to 12, do partly not refer to the use and the regular employing of the product (in this sense consult information on use and on product), but to liberation of major amounts in case of accidents and irregularities.

The information describes exclusively the safety requirements for the product (s) and is based on the present level of our knowledge.

The delivery specifications are contained in the corresponding product sheet.

This data does not constitute a guarantee for the characteristics of the product(s) as defined by the legal warranty regulations.

(n.a. = not applicable; n.d. = not determined)

Wording of the R-phrases specified in chapter 2 (not the classification of the formulation!)

R 36/38 Irritating to eyes and skin.

R 43 May cause sensitisation by skin contact.

R 45 May cause cancer.

R 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R 67 Vapours may cause drowsiness and dizziness.

R 68 Possible risk of irreversible effects.