

Safety Data Sheet

according to Regulation (EC) No 1907/2006

TIP TOP SOLUTION STL-RF

Revision date: 16.05.2019

Product code: 00156-0024

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

TIP TOP SOLUTION STL-RF

Art.-No.

538 1239, 538 1241, 538 1244, 538 1299, 538 1952, 538 1971, 538 1976

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

Use of the substance/mixture

Assembling solution

1.3. Details of the supplier of the safety data sheet

Company name: REMA TIP TOP AG

Street: Gruber Strasse 65

Place: D-85586 Poing

Telephone: +49 (0) 8121 / 707 - 100

Responsible Department: Responsible for the safety data sheet: sds@gbk-ingelheim.de

1.4. Emergency telephone

number:

INTERNATIONAL: +49 - (0) 6132 - 84463, GBK GmbH (24h - 7d/w - 365d/a)

In England and Wales: NHS 111 In Scotland: NHS 24 - dial 111

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard Statements:

Causes skin irritation.

May cause an allergic skin reaction.

Causes serious eye irritation.

May cause drowsiness or dizziness.

Suspected of causing genetic defects.

May cause cancer.

Harmful to aquatic life with long lasting effects.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

Trichloroethylene

Colophonium

Signal word:

Danger

Pictograms:



Hazard statements

| | |
|------|--|
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H319 | Causes serious eye irritation. |
| H336 | May cause drowsiness or dizziness. |
| H341 | Suspected of causing genetic defects. |
| H350 | May cause cancer. |
| H412 | Harmful to aquatic life with long lasting effects. |

Precautionary statements

P201 Obtain special instructions before use.

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| | |
|-----------|--|
| P202 | Do not handle until all safety precautions have been read and understood. |
| P261 | Avoid breathing vapour. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P308+P313 | IF exposed or concerned: Get medical advice/attention. |
| P405 | Store locked up. |
| P273 | Avoid release to the environment. |

Special labelling of certain mixtures

Restricted to professional users.

2.3. Other hazards

According to Regulation (EC) No 1907/2006 (REACH) none of the substances, contained in this product are a PBT / vPvB substance.

SECTION 3: Composition/information on ingredients**3.2. Mixtures****Chemical characterization**

Preparation with trichloroethylene

Hazardous components

| CAS No | Chemical name | Quantity | | |
|-----------|---|--------------|------------------|---------|
| | EC No | Index No | REACH No | |
| | GHS Classification | | | |
| 79-01-6 | Trichloroethylene | | | < 95 % |
| | 201-167-4 | 602-027-00-9 | 01-2119490731-36 | |
| | Carc. 1B, Muta. 2, Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1, STOT SE 3, Aquatic Chronic 3; H350 H341 H315 H319 H317 H336 H412 | | | |
| 1314-13-2 | Zinc oxide | | | < 1 % |
| | 215-222-5 | 030-013-00-7 | 01-2119463881-32 | |
| | Aquatic Acute 1, Aquatic Chronic 1; H400 H410 | | | |
| 8050-09-7 | Colophonium | | | < 1 % |
| | 232-475-7 | 650-015-00-7 | 01-2119480418-32 | |
| | Skin Sens. 1; H317 | | | |
| 108-46-3 | 1,3-Dihydroxybenzene | | | < 1 % |
| | 203-585-2 | 604-010-00-1 | 01-2119480136-40 | |
| | Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, Aquatic Acute 1; H302 H315 H319 H400 | | | |
| 1317-36-8 | Lead(II)-oxide | | | < 0,3 % |
| | 215-267-0 | | 01-2119531110-62 | |
| | Carc. 2, Repr. 1A, Lact., Acute Tox. 4, Acute Tox. 4, STOT RE 1, Aquatic Acute 1 (M-Factor = 1), Aquatic Chronic 1 (M-Factor = 10); H351 H360Df H362 H332 H302 H372 H400 H410 | | | |

Full text of H and EUH statements: see section 16.

Further Information

SVHC substance [Regulation (EC) No 1907/2006, Article 57]: Trichloroethylene; Lead(II)-oxide

SECTION 4: First aid measures**4.1. Description of 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.



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After inhalation

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

After contact with skin

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

After contact with eyes

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

After ingestion

Do not induce vomiting.
Summon a doctor immediately.
Rinse out mouth and give plenty of water to drink.
Never give anything by mouth to an unconscious person.
Induce vomiting only upon the advice of a physician.

4.2. Most important symptoms and effects, both acute and delayed

May cause cancer.
Suspected of causing genetic defects.
May cause drowsiness or dizziness.
Causes skin irritation.
Causes serious eye irritation.
May cause an allergic skin reaction.
Attention. Beware, danger of aspiration.

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

Treat symptoms.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Foam, carbon dioxide (CO₂), dry chemical, water-spray.
Product does not burn, fire-extinguishing activities according to surrounding.

Unsuitable extinguishing media

Full water jet.

5.2. Special hazards arising from the substance or mixture

Fire may produce:
carbon monoxide and carbon dioxide
Chlorine and traces of phosgene.
Hydrogen chloride gas.

5.3. Advice 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.
Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

In case of vapour formation use respirator.
Ensure adequate ventilation.
Use personal protective clothing.



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6.2. Environmental precautions

Do not discharge into the drains/surface waters/ground water.
Do not discharge into the subsoil/soil.

6.3. Methods and material for containment and cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder).
Shovel into suitable container for disposal.

6.4. Reference to other sections

Observe protective instructions (see Sections 7 and 8).
Information for disposal see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

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.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

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

Hints on joint storage

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.

7.3. Specific end use(s)

Assembling solution

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

| CAS No | Substance | ppm | mg/m ³ | fibres/ml | Category | Origin |
|-----------|------------------------------|-----|-------------------|-----------|---------------|--------|
| 1333-86-4 | Carbon black | - | 3.5 | | TWA (8 h) | WEL |
| | | - | 7 | | STEL (15 min) | WEL |
| 108-46-3 | Resorcinol | 10 | 46 | | TWA (8 h) | WEL |
| | | 20 | 92 | | STEL (15 min) | WEL |
| 8050-09-7 | Rosin-based solder flux fume | - | 0.05 | | TWA (8 h) | WEL |
| | | - | 0.15 | | STEL (15 min) | WEL |
| 79-01-6 | Trichloroethylene | 100 | 550 | | TWA (8 h) | WEL |
| | | 150 | 820 | | STEL (15 min) | WEL |

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8.2. Exposure controls**Appropriate engineering controls**

Ensure adequate ventilation, especially in confined areas.

Protective and hygiene 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.

Eye/face protection

Tightly fitting goggles (EN 166).

Eye wash bottle with pure water (EN 15154).

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 www.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.

Skin protection

Long sleeved clothing (DIN EN ISO 6530)

Respiratory protection

In case of insufficient ventilation wear suitable respiratory equipment (gas filter type A) (EN 14387).

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

| | |
|-----------------|----------|
| Physical state: | Liquid |
| Colour: | Black |
| Odour: | Sweetish |

Test method

pH-Value: n.d.

Changes in the physical state

Melting point: n.d.

Initial boiling point and boiling range: approx. 90 °C

Sublimation point: n.a.

Softening point: n.d.

Flash point: n.a. *)

Flammability

Solid: n.a.

Gas: n.a.

Explosive properties

The product is not explosive.

Lower explosion limits: 7,9 vol. %

Upper explosion limits: n.d.

Ignition temperature: 410 °C

Auto-ignition temperature

Solid: n.a.

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| | |
|-------------------------------------|------------------------|
| Gas: | n.a. |
| Decomposition temperature: | n.d. |
| Oxidizing properties | |
| Not oxidising. | |
| Vapour pressure: (at 20 °C) | 77 hPa |
| Density: | 1,45 g/cm ³ |
| Bulk density: | n.a. |
| Water solubility: (at 20 °C) | Immiscible |
| Solubility in other solvents | |
| n.d. | |
| Partition coefficient: | n.d. |
| Viscosity / dynamic: | 1500 mPa·s |
| Viscosity / kinematic: | n.d. |
| Flow time: | n.d. |
| Vapour density: | 4,54 |
| Evaporation rate: | n.d. |
| Solvent separation test: | 0 % |
| Solvent content: | < 95 % |

9.2. Other information

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

SECTION 10: Stability and reactivity**10.1. Reactivity**

No decomposition if stored and applied as directed.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Reactions with alkali metals.
Reactions with earth alkali metals.
Reactions with oxidizing agents.

10.4. Conditions to avoid

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

10.5. Incompatible materials

Alkaline metals and alkaline earth metals.
Bases.
oxidizing agents, Aluminium powder

10.6. Hazardous decomposition products

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

SECTION 11: Toxicological information**11.1. Information on toxicological effects**

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Acute toxicity

Based on available data, the classification criteria are not met.

Trichloroethylene

LD50/oral/rat: 5400 mg/kg

LD50/dermal/rabbit: > 2000 mg/kg

LC50/inhalation/rat: 12500 ppm/4h

Irritation and corrosivity

Causes skin irritation.

Causes serious eye irritation.

Sensitising effects

May cause an allergic skin reaction. (Trichloroethylene; Colophonium)

Carcinogenic/mutagenic/toxic effects for reproduction

Suspected of causing genetic defects. (Trichloroethylene)

May cause cancer. (Trichloroethylene)

Reproductive toxicity: Based on available data, the classification criteria are not met.

STOT-single exposure

May cause drowsiness or dizziness. (Trichloroethylene)

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Additional information on tests

Classification in compliance with the assessment procedure specified in the Regulation (EC) no 1272/2008.

Practical experience

Other observations

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.

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.

SECTION 12: Ecological information

12.1. Toxicity

Trichloroethylene

LC50/Pimephales promelas/ 96 h = 42,4 mg/l

EC50/Daphnia magna/48 h = 20,8 mg/l

EC50/Algae/96 h = 36,5 mg/l

Zinc oxide

EC50/Selenastrum capricornutum/72 h = 0,17 mg/l

Colophony

LC50/EC50: > 100 mg/l

Lead(II)-oxide

LC50/EC50: 0,1 - 1,0 mg/l

Harmful to aquatic life with long lasting effects.

12.2. Persistence and degradability

Trichloroethylene

Biodegradable (OECD): 2,4% (14 d) [OECD 301C]

Not readily biodegradable.

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12.3. Bioaccumulative potential

Trichloroethylene

Low bio-accumulation can be estimated because of low log Po/w. (Log Pow: 2,53)

12.4. Mobility in soil

Trichloroethylene

High mobility in soil.

12.5. Results of PBT and vPvB assessment

According to Regulation (EC) No 1907/2006 (REACH) none of the substances, contained in this product are a PBT / vPvB substance.

12.6. Other adverse effects

Severe hazard to waters

Further information

Do not flush into surface water or sanitary sewer system.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

Where possible recycling is preferred to disposal.

Can be incinerated, when in compliance with local regulations.

Waste disposal number of waste from residues/unused products

080409 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU of adhesives and sealants (including waterproofing products); waste adhesives and sealants containing organic solvents or other hazardous substances; hazardous waste

Contaminated 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.

SECTION 14: Transport information

Land transport (ADR/RID)

| | |
|---|----------------------------|
| <u>14.1. UN number:</u> | UN 1710 |
| <u>14.2. UN proper shipping name:</u> | TRICHLOROETHYLENE Solution |
| <u>14.3. Transport hazard class(es):</u> | 6.1 |
| <u>14.4. Packing group:</u> | III |
| Hazard label: | 6.1 |



| | |
|--------------------------|-------------|
| Classification code: | T1 |
| Limited quantity: | 5 L / 30 kg |
| Excepted quantity: | E1 |
| Transport category: | 2 |
| Hazard No: | 60 |
| Tunnel restriction code: | E |

Inland waterways transport (ADN)

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14.1. UN number: UN 1710
14.2. UN proper shipping name: TRICHLOROETHYLENE Solution
14.3. Transport hazard class(es): 6.1
14.4. Packing group: III
Hazard label: 6.1



Classification code: T1
Limited quantity: 5 L / 30 kg
Excepted quantity: E1

Marine transport (IMDG)

14.1. UN number: UN 1710
14.2. UN proper shipping name: TRICHLOROETHYLENE SOLUTION
14.3. Transport hazard class(es): 6.1
14.4. Packing group: III
Hazard label: 6.1



Marine pollutant: No
Limited quantity: 5 L / 30 kg
Excepted quantity: E1
EmS: F-A, S-A

Other applicable information (marine transport)

Segregation group: 10 (Liquid halogenated hydrocarbons)

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 1710
14.2. UN proper shipping name: TRICHLOROETHYLENE SOLUTION
14.3. Transport hazard class(es): 6.1
14.4. Packing group: III
Hazard label: 6.1



Limited quantity Passenger: 2 L
Passenger LQ: Y642
Excepted quantity: E1
IATA-packing instructions - Passenger: 655
IATA-max. quantity - Passenger: 60 L
IATA-packing instructions - Cargo: 663
IATA-max. quantity - Cargo: 220 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

Handle in accordance with good industrial hygiene and safety practices.



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14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

The transport takes place only in approved and appropriate packaging.

SECTION 15: Regulatory information

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

EU regulatory information

Authorisations (REACH, annex XIV):

Trichloroethylene

Substances of very high concern, SVHC (REACH, article 59):

Lead(II)-oxide

Restrictions on use (REACH, annex XVII):

Entry 28: Trichloroethylene

2004/42/EC (VOC):

< 95 %

Information according to 2012/18/EU
(SEVESO III):

Not subject to 2012/18/EU (SEVESO III)

National regulatory information

Employment restrictions:

Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers. Observe employment restrictions for women of child-bearing age.

15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information

Abbreviations and acronyms

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route

RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses

ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure

IMDG = International Maritime Code for Dangerous Goods

IATA/ICAO = International Air Transport Association / International Civil Aviation Organization

MARPOL = International Convention for the Prevention of Pollution from Ships

IBC-Code = International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

REACH = Registration, Evaluation, Authorization and Restriction of Chemicals

CAS = Chemical Abstract Service

EN = European norm

ISO = International Organization for Standardization

DIN = Deutsche Industrie Norm

PBT = Persistent Bioaccumulative and Toxic

vPvB = Very Persistent and very Bio-accumulative

LD = Lethal dose

LC = Lethal concentration

EC = Effect concentration

IC = Median immobilisation concentration or median inhibitory concentration

Relevant H and EUH statements (number and full text)

H302 Harmful if swallowed.

H315 Causes skin irritation.

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| | |
|--------|---|
| H317 | May cause an allergic skin reaction. |
| H319 | Causes serious eye irritation. |
| H332 | Harmful if inhaled. |
| H336 | May cause drowsiness or dizziness. |
| H341 | Suspected of causing genetic defects. |
| H350 | May cause cancer. |
| H351 | Suspected of causing cancer. |
| H360Df | May damage the unborn child. Suspected of damaging fertility. |
| H362 | May cause harm to breast-fed children. |
| H372 | Causes damage to organs through prolonged or repeated exposure. |
| H400 | Very toxic to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |
| H412 | Harmful to aquatic life with long lasting effects. |

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)

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)