

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### TIP TOP SOLUTION STL-RF

Revision date: 28.03.2023

Product code: 00156-0516

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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 1254, 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)  
Public Poisons Information Line: +353 (0) 1 809 2166 (8am-10pm 7 days a week)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Regulation (EC) No 1272/2008

Skin Irrit. 2; H315

Eye Irrit. 2; H319

Skin Sens. 1; H317

Muta. 2; H341

Carc. 1B; H350

STOT SE 3; H336

Aquatic Chronic 3; H412

Full text of hazard statements: see SECTION 16.

### 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.

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**Precautionary statements**

P201	Obtain special instructions before use.
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.

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

**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			< 90 %
	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, Aquatic Chronic 1; H351 H360Df H362 H332 H302 H372 H400 H410			

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

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#### Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
79-01-6	201-167-4	Trichloroethylene	< 90 %
		dermal: LD50 = > 2000 mg/kg; oral: LD50 = 4920 mg/kg	
1314-13-2	215-222-5	Zinc oxide	< 1 %
		Aquatic Acute 1; H400: M=1 Aquatic Chronic 1; H410: M=1	
108-46-3	203-585-2	1,3-Dihydroxybenzene	< 1 %
		dermal: LD50 = 3360 mg/kg; oral: LD50 = 301 mg/kg	
1317-36-8	215-267-0	Lead(II)-oxide	< 0,3 %
		inhalation: ATE = 11 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); oral: ATE = 500 mg/kg Aquatic Acute 1; H400: M=1 Aquatic Chronic 1; H410: M=10	

#### 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.

##### 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

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#### **5.1. Extinguishing media**

##### **Suitable extinguishing media**

Foam, carbon dioxide (CO<sub>2</sub>), 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 chloric 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**

##### **General advice**

Ensure adequate ventilation.  
Keep away noninvolved persons.

##### **For non-emergency personnel**

Do not breathe vapours.  
Avoid contact with skin, eyes and clothing.

##### **For emergency responders**

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

#### **6.2. Environmental precautions**

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

#### **6.3. Methods and material for containment and cleaning up**

##### **For containment**

Prevent spread over a wide area (e.g. by containment or oil barriers).

##### **For 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).  
Informations for disposal look up chapter 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.

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#### 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

##### Occupational exposure limits

CAS No	Substance	ppm	mg/m <sup>3</sup>	fib/cm <sup>3</sup>	Category	Origin
1333-86-4	Carbon black (Inhalable Fraction)	-	3		TWA (8 h)	
9006-04-6	Natural Rubber Latex (as inhalable allergenic proteins)	-	0.0001		TWA (8 h)	
108-46-3	Resorcinol	10	45		TWA (8 h)	
79-01-6	Trichloroethylene	10	54.7		TWA (8 h)	
		30	164.1		STEL (15 min)	
1314-13-2	Zinc oxide, fume (Respirable Fraction)	-	2		TWA (8 h)	
		-	10		STEL (15 min)	

##### Biological limit values

CAS No	Substance	Parameter	Value	Test material	Sampling time
79-01-6	Trichloroethylene	TCA	20 mg/L	Urine	By the end of the last shift of a workweek/ shift period

#### 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.

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#### 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

pH-Value:	n.d.
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#### Changes in the physical state

Melting point/freezing point:	n.d.
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Boiling point or initial boiling point and boiling range:	approx. 90 °C
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Sublimation point:	n.a.
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Softening point:	n.d.
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Flash point:	n.a. *)
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#### Flammability

Solid/liquid:	n.a.
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#### Explosive properties

The product is not explosive.

Lower explosion limits:	7,9 vol. %
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Upper explosion limits:	n.d.
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Auto-ignition temperature:	410 °C
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#### Self-ignition temperature

Solid:	n.a.
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Gas:	n.a.
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Decomposition temperature:	n.d.
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#### Oxidizing properties

Not oxidising.

Vapour pressure: (at 20 °C)	77 hPa
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Density:	1,45 g/cm <sup>3</sup>
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Bulk density:	n.a.
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#### Test method

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Water solubility:  
(at 20 °C) Immiscible

**Solubility in other solvents**

n.d.

Partition coefficient n-octanol/water: n.d.

Viscosity / dynamic: 1500 mPa·s

Viscosity / kinematic: n.d.

Flow time: n.d.

Relative 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 oxidising 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**

No hazardous decomposition products known.  
Fire may produce:  
Chlorine and traces of phosgene.  
Hydrogen chloride gas  
Carbon monoxide and carbon dioxide

**SECTION 11: Toxicological information****11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008****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/inhalativ/rat: 12500 ppm/4h

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#### 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.

#### 11.2. Information on other hazards

##### Endocrine disrupting properties

- No data available.

##### Other information

- 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.

#### 12.3. Bioaccumulative potential

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



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#### **12.4. Mobility in soil**

Trichloroethylene  
High mobility in soil.

#### **12.5. Results of PBT and vPvB assessment**

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

#### **12.6. Endocrine disrupting properties**

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

#### **12.7. 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**

##### **Disposal recommendations**

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

##### **List of Wastes Code - 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)**

<b><u>14.1. UN number:</u></b>	UN 1710
<b><u>14.2. UN proper shipping name:</u></b>	TRICHLOROETHYLENE Solution
<b><u>14.3. Transport hazard class(es):</u></b>	6.1
<b><u>14.4. Packing group:</u></b>	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)**

<b><u>14.1. UN number:</u></b>	UN 1710
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**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 practice.

#### **14.7. Maritime transport in bulk according to IMO instruments**

The transport takes place only in approved and appropriate packaging.

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## 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):

Substances of very high concern, SVHC (REACH, article 59):  
Trichloroethylene; Lead(II)-oxide

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 28, Entry 63, Entry 75

2004/42/EC (VOC):

&lt; 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 juveniles 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.

Water hazard class (D):

3 - highly hazardous to water

### 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

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#### Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]

Classification	Classification procedure
Skin Irrit. 2; H315	Calculation method
Eye Irrit. 2; H319	Calculation method
Skin Sens. 1; H317	Calculation method
Muta. 2; H341	Calculation method
Carc. 1B; H350	Calculation method
STOT SE 3; H336	Calculation method
Aquatic Chronic 3; H412	Calculation method

#### Relevant H and EUH statements (number and full text)

H302	Harmful if swallowed.
H315	Causes skin irritation.
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.)*