

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### TIP TOP HARDENER PERFORMANCE 140 HT

Revision date: 13.10.2017

Product code: 00156-0447

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

##### 1.1. Product identifier

TIP TOP HARDENER PERFORMANCE 140 HT

Art.-No.

525 5012

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

Use of the substance/mixture

Hardener

##### 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)  
England and Wales: NHS Direct - 0845 4647; Scotland: NHS 24 - 08454 24 24  
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#### SECTION 2: Hazards identification

##### 2.1. Classification of the substance or mixture

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

Hazard categories:

Flammable liquid: Flam. Liq. 2

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Specific target organ toxicity - single exposure: STOT SE 3

Hazardous to the aquatic environment: Aquatic Chronic 2

Hazard Statements:

Highly flammable liquid and vapour.

Causes skin irritation.

Causes serious eye irritation.

May cause drowsiness or dizziness.

Toxic to aquatic life with long lasting effects.

##### 2.2. Label elements

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

###### Hazard components for labelling

Ethyl acetate

Cyclohexane

Signal word:

Danger

Pictograms:



###### Hazard statements

H225

Highly flammable liquid and vapour.

H315

Causes skin irritation.

H319

Causes serious eye irritation.



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H336 May cause drowsiness or dizziness.  
 H411 Toxic to aquatic life with long lasting effects.

#### Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
 P261 Avoid breathing vapour.  
 P280 Wear protective gloves/protective clothing/eye protection/face protection.  
 P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.  
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P312 Call a POISON CENTER/doctor if you feel unwell.  
 P273 Avoid release to the environment.

#### Special labelling of certain mixtures

EUH208 Contains formaldehyde. May produce an allergic reaction.

#### 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.  
 Vapours may form explosive mixture with air.

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

##### Chemical characterization

Preparation in organic solvents

##### Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
141-78-6	Ethyl acetate			< 25 %
	205-500-4	607-022-00-5	01-2119475103-46	
	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336 EUH066			
110-82-7	Cyclohexane			< 25 %
	203-806-2	601-017-00-1	01-2119463273-41	
	Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Acute 1, Aquatic Chronic 1; H225 H315 H336 H304 H400 H410			
140-66-9	4-tert-Octylphenol			< 0,25 %
	205-426-2	604-075-00-6	01-2119541687-29	
	Skin Irrit. 2, Eye Dam. 1, Aquatic Acute 1 (M-Factor = 10), Aquatic Chronic 1 (M-Factor = 10); H315 H318 H400 H410			
50-00-0	formaldehyde			< 0.1 %
	200-001-8	605-001-00-5	01-2119488953-20	
	Carc. 1B, Muta. 2, Acute Tox. 2, Acute Tox. 3, Acute Tox. 3, Skin Corr. 1B, Skin Sens. 1A; H350 H341 H330 H311 H301 H314 H317			

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

### SECTION 4: First aid measures



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#### 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.  
Seek medical treatment immediately.

##### **After contact with skin**

Wash off 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.  
Induce vomiting only upon the advice of a physician.

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

Causes serious eye irritation.  
May cause drowsiness or dizziness.  
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 (CO<sub>2</sub>), dry chemical, water-spray.

##### **Unsuitable extinguishing media**

Full water jet.

#### 5.2. Special hazards arising from the substance or mixture

Fire may produce:  
carbon monoxide and carbon dioxide  
Hydrogen chloride gas.

#### 5.3. Advice for firefighters

Use breathing apparatus with independent air supply.  
Protective suit.

##### **Additional information**

The vapour/air mixture is explosive, even in empty, uncleaned receptacles.  
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.  
Use only explosion-proof equipment.  
Ensure adequate ventilation.



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Remove persons to safety.  
Use personal protective clothing.  
Keep away sources of ignition.

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

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

#### **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.  
Keep a good ventilation and air-exhaust at the place of work.  
Avoid contact with skin, eyes and clothing.

#### **Advice on protection against fire and explosion**

Do not smoke - volatile.  
Keep away from heat and sources of ignition.  
Take precautionary measures against static discharges.  
Use only explosion-proof equipment.

### **7.2. Conditions for safe storage, including any incompatibilities**

#### **Requirements for storage rooms and vessels**

Keep container tightly closed in a dry, cool and well-ventilated place.  
Pay attention to anti-explosion rules.

#### **Advice on storage compatibility**

Incompatible with oxidizing agents.

#### **Further information on storage conditions**

Keep away from food, drink and animal feeding stuffs.

### **7.3. Specific end use(s)**

Hardener

## SECTION 8: Exposure controls/personal protection

### **8.1. Control parameters**

#### **Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
110-82-7	Cyclohexane	100	350		TWA (8 h)	WEL
		300	1050		STEL (15 min)	WEL
141-78-6	Ethyl acetate	200	-		TWA (8 h)	WEL
		400	-		STEL (15 min)	WEL
50-00-0	Formaldehyde	2	2.5		TWA (8 h)	WEL
		2	2.5		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.
- Wash hands before breaks and immediately after handling the product.
- When using do not eat, drink or smoke.
- Treat subsequently with skin cream.
- Avoid contact with skin, eyes and clothing.
- Remove and wash contaminated clothes before re-use.

##### Eye/face protection

- Tightly fitting goggles (EN 166).
- Eye wash bottle with pure water (EN 15154).

##### Hand protection

- Splash protection:
- Protective gloves resistant to chemicals made off butyl, minimum coat thickness 0.7 mm, permeation resistance (wear duration) > 30 minutes, i.e. protective glove <Butoject 898> 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

- Solvent-resistant apron (EN 467).

##### 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:	Red
Odour:	Fruity

#### Test method

##### Changes in the physical state

Initial boiling point and boiling range:	77 - 81 °C
Flash point:	- 18 °C
Lower explosion limits:	1,2 vol. %
Upper explosion limits:	11,5 vol. %
Ignition temperature:	> 250 °C
Vapour pressure: (at 20 °C)	~ 100 hPa
Density (at 20 °C):	~ 0,94 g/cm <sup>3</sup>
Water solubility: (at 20 °C)	Immiscible
Solvent content:	< 50 %

#### 9.2. Other information

No data available.



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#### 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 oxidizing agents.

##### 10.4. Conditions to avoid

To avoid thermal decomposition, do not overheat.  
Vapour/air mixtures are explosive at intensive warming.  
Heating can release vapours which can be ignited.

##### 10.5. Incompatible materials

Strong oxidizing agents.

##### 10.6. Hazardous decomposition products

Hydrogen chloride gas  
Carbon monoxide and carbon dioxide

#### SECTION 11: Toxicological information

##### 11.1. Information on toxicological effects

###### **Acute toxicity**

Based on available data, the classification criteria are not met.  
No toxicological data available.  
Ethyl acetate  
LD50/oral/rat: 4935 mg/kg  
LC50/inhalation/rat: 1600 mg/l  
Cyclohexane  
LD50/oral/rat: 12705 mg/kg

###### **Irritation and corrosivity**

Causes skin irritation.  
Causes serious eye irritation.

###### **Sensitising effects**

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

###### **Carcinogenic/mutagenic/toxic effects for reproduction**

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

###### **STOT-single exposure**

May cause drowsiness or dizziness. (Ethyl acetate; Cyclohexane)

###### **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**

May cause irritation of the mucous membranes.  
Effects of breathing high concentrations of vapour may include:





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Headache, dizziness, weakness, unconsciousness.  
May cause sensitization of susceptible persons by skin contact.

#### SECTION 12: Ecological information

##### 12.1. Toxicity

Ecological data are not available.  
Cyclohexane  
EC50/Daphnia magna/48 h = 0,9 mg/l  
IC50/Selenastrum capricornutum/72 h > 4 mg/l  
Toxic to aquatic life with long lasting effects.

##### 12.2. Persistence and degradability

No data available.

##### 12.3. Bioaccumulative potential

No data available.

##### 12.4. Mobility in soil

No data available.

##### 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

Low 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)**

<b><u>14.1. UN number:</u></b>	UN 1133
<b><u>14.2. UN proper shipping name:</u></b>	Adhesives
<b><u>14.3. Transport hazard class(es):</u></b>	3
<b><u>14.4. Packing group:</u></b>	II
Hazard label:	3



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Classification code: F1  
Limited quantity: 5 L / 30 kg  
Excepted quantity: E2  
Transport category: 2  
Hazard No: 33  
Tunnel restriction code: D/E

#### Inland waterways transport (ADN)

**14.1. UN number:** UN 1133  
**14.2. UN proper shipping name:** Adhesives  
**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** II  
Hazard label: 3



Classification code: F1  
Limited quantity: 5 L / 30 kg  
Excepted quantity: E2

#### Marine transport (IMDG)

**14.1. UN number:** UN 1133  
**14.2. UN proper shipping name:** Adhesives (Cyclohexane)  
**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** II  
Hazard label: 3



Marine pollutant: Yes  
Limited quantity: 5 L / 30 kg  
Excepted quantity: E2  
EmS: F-E, S-D

#### Air transport (ICAO-TI/IATA-DGR)

**14.1. UN number:** UN 1133  
**14.2. UN proper shipping name:** Adhesives  
**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** II  
Hazard label: 3



Limited quantity Passenger: 1 L  
Passenger LQ: Y341  
Excepted quantity: E2





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IATA-packing instructions - Passenger:	353
IATA-max. quantity - Passenger:	5 L
IATA-packing instructions - Cargo:	364
IATA-max. quantity - Cargo:	60 L

#### 14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: yes



#### 14.6. Special precautions for user

Handle in accordance with good industrial hygiene and safety practice.

#### 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):

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

4-tert-Octylphenol

Restrictions on use (REACH, annex XVII):

Entry 57: Cyclohexane

2004/42/EC (VOC): &lt; 50%

##### 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.

Water contaminating class (D):

1 - slightly water contaminating

#### 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



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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)

H225	Highly flammable liquid and vapour.
H301	Toxic if swallowed.
H304	May be fatal if swallowed and enters airways.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H336	May cause drowsiness or dizziness.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.
EUH208	Contains formaldehyde. May produce an allergic reaction.

#### 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.)*

