

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

### 1.1. Product identifier

TIP TOP COROFLAKE 200 B

#### Art.-No.

590 0796, 590 0797, 590 1393, 590 1394

### 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: TIP TOP Oberflächenschutz Elbe GmbH

Street: Heuweg 4

Place: D-06886 Wittenberg

Telephone: +49(0)3491/635-50

Telefax: +49(0)3491/635-552

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 according to 1272/2008/EC

Hazard categories:

Skin corrosion/irritation: Skin Corr. 1A

Serious eye damage/eye irritation: Eye Dam. 1

Respiratory or skin sensitisation: Skin Sens. 1

Hazardous to the aquatic environment: Aquatic Chronic 3

Hazard Statements:

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

Harmful to aquatic life with long lasting effects.

### 2.2. Label elements

#### Hazardous components which must be listed on the label

Triethylenetetramine

2-Propenenitril Polymer with 1,3-butadiene, 1-cyano-1-methyl-4-oxo-4-[[2-(1-piperazinyl)ethyl]amino]butyl- terminated

Cyclohex-1,2-ylenediamine

2-Piperazin-1-ylethylamine

Signal word:

Danger

Pictograms:



#### Hazard statements

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H412 Harmful to aquatic life with long lasting effects.

#### Precautionary statements

P260 Do not breathe 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/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.

P308+P313

IF exposed or concerned: Get medical advice/attention.

P273

Avoid release to the environment.

### 2.3. Other hazards

Not known.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

#### Chemical characterization

Hardener based on aliphatic polyamines

#### Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
112-24-3	Triethylenetetramine			< 45 %
	203-950-6	612-059-00-5		
	Acute Tox. 4, Skin Corr. 1B, Skin Sens. 1, Aquatic Chronic 3; H312 H314 H317 H412			
68683-29-4	2-Propenenitril Polymer with 1,3-butadiene, 1-cyano-1-methyl-4-oxo-4-[[2-(1-piperaziny)ethyl]amino]butyl- terminated			< 30 %
	Skin Sens. 1; H317			
100-51-6	Benzyl alcohol			< 15 %
	202-859-9	603-057-00-5	01-2119492630-38	
	Acute Tox. 4, Acute Tox. 4; H302 H332			
694-83-7	Cyclohex-1,2-ylenediamine			< 10 %
	211-776-7		01-2119976312-37	
	Acute Tox. 4, Acute Tox. 4, Acute Tox. 4, Skin Corr. 1A, STOT SE 3; H302 H312 H332 H314 H335			
140-31-8	2-Piperazin-1-ylethylamine			< 5 %
	205-411-0	612-105-00-4	01-2119471486-30	
	Acute Tox. 3, Acute Tox. 4, Skin Corr. 1B, Skin Sens. 1, Aquatic Chronic 3; H311 H302 H314 H317 H412			
112-57-2	Tetraethylenepentamine			< 1 %
	203-986-2	612-060-00-0		
	Acute Tox. 4, Acute Tox. 4, Skin Corr. 1B, Skin Sens. 1, Aquatic Chronic 2; H312 H302 H314 H317 H411			
111-40-0	Diethylenetriamine			< 1 %
	203-865-4	612-058-00-X	01-2119473793-27	
	Acute Tox. 2, Acute Tox. 4, Acute Tox. 4, Skin Corr. 1B, Skin Sens. 1; H330 H302 H312 H314 H317			

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

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### General information

Remove contaminated soaked clothing immediately.

Call a physician immediately.

#### 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

In case of contact with skin wash off immediately with plenty of water.

Seek medical treatment immediately.



**After contact with eyes**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.  
Consult (eye) doctor immediately.

**After ingestion**

Do not induce vomiting.  
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.

Summon a doctor immediately.

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

Causes severe skin burns and eye damage.  
May cause an allergic skin reaction.  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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

Treat symptoms.

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**SECTION 5: Firefighting measures**

**5.1. Extinguishing media**

**Suitable extinguishing media**

Alcohol-resistant foam, dry chemical, carbon dioxide (CO<sub>2</sub>), water-spray.

**Unsuitable extinguishing media**

Full water jet.

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

Fire may produce:  
Carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>).

**5.3. Advice for firefighters**

Use breathing apparatus with independent air supply.  
Protective suit.

**Additional information**

Cool containers at risk with water spray jet.  
Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

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**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.

**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.  
Clean contaminated surface thoroughly.

**6.4. Reference to other sections**

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

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**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

**Advice on safe handling**

Keep container tightly closed.  
Do not breathe vapours.  
Use only in thoroughly ventilated areas.



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 container tightly closed in a dry, cool and well-ventilated place.

**Advice on storage compatibility**

Incompatible with:

Acids and oxidizing agents.

Halogenated compounds.

Acrylates, aldehydes, ketones, copper and copper alloys.

**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
111-40-0	2,2'-Iminodi(ethylamine)	1	4.3		TWA (8 h)	WEL
		-	-		STEL (15 min)	WEL

**8.2. Exposure controls**

**Appropriate engineering controls**

Ensure adequate ventilation, especially in confined areas.

**Protective and hygiene measures**

Wash hands before breaks and immediately after handling the product.

When using do not eat, drink or smoke.

Remove and wash contaminated clothes before re-use.

Avoid contact with eyes, skin or mucous membrane.

**Eye/face protection**

Tightly fitting goggles (EN 166).

Eye wash bottle with pure water (EN 15154).

**Hand protection**

Chemical protective gloves made of nitrile, nitrile/cotton, butyl or neoprene, with a minimum thickness of 0.7 mm, permeation time of approx. 480 minutes.

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.

Pls. find examples in the protective gloves database under: <http://bestglove.com/site/chemrest/>

**Skin protection**

Long sleeved clothing (EN 368).

**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:	Yellowish
Odour:	Amine like



**Changes in the physical state**

Flash point:	> 100 °C	
Lower explosion limits:	n.d.	
Ignition temperature:	n.d.	
Density (at 20 °C):	0,98 - 1,04 g/cm <sup>3</sup>	
Water solubility: (at 20 °C)	Immiscible	
Viscosity / dynamic: (at 25 °C)	400 - 600 mPa·s	
Flow time: (at 25 °C)	< 40 s	6 DIN/ISO 2431

**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 acids and strong oxidizing agents.

**10.4. Conditions to avoid**

To avoid thermal decomposition, do not overheat.

**10.5. Incompatible materials**

Acids and oxidizing agents.

Halogenated compounds.

Acrylates, aldehydes, ketones, copper and copper alloys.

**10.6. Hazardous decomposition products**

Carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>).

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**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.

ATEmix/oral: > 2000 mg/kg

ATEmix/dermal: > 2000 mg/kg

ATEmix/inhalation: > 20 mg/l/4h

**Irritation and corrosivity**

Causes severe skin burns and eye damage.

**Sensitising effects**

May cause an allergic skin reaction. (Triethylenetetramine), (2-Propenenitril Polymer with 1,3-butadiene, 1-cyano-1-methyl-4-oxo-4-[[2-(1-piperaziny)ethyl]amino]butyl- terminated), (2-Piperazin-1-ylethylamine), (Tetraethylenepentamine), (Diethylenetriamine)

**STOT-single exposure**

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

**Severe effects after repeated or prolonged exposure**

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.

**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.

**SECTION 12: Ecological information**

**12.1. Toxicity**

Ecological data are not available.

Harmful 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**

Hazardous water pollutant.

**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  
Classified as hazardous waste.

**Contaminated packaging**

Contaminated packagings are to be treated like the product itself.

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)**

**14.1. UN number:**

UN 2735

**14.2. UN proper shipping name:**

AMINES, LIQUID, CORROSIVE, N.O.S. (Triethylenetetramine, 1,2-Cyclohexanediamine)

**14.3. Transport hazard class(es):**

8

**14.4. Packing group:**

II

Hazard label:

8



Classification code:

C7

Limited quantity:

1 L / 30 kg

Excepted quantity:

E2

Transport category:

2

Hazard No:

80

Tunnel restriction code:

E

**Inland waterways transport (ADN)**

**14.1. UN number:** UN 2735  
**14.2. UN proper shipping name:** AMINES, LIQUID, CORROSIVE, N.O.S. (Triethylenetetramine, 1,2-Cyclohexanediamine)  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** II  
 Hazard label: 8



Classification code: C7  
 Limited quantity: 1 L / 30 kg  
 Excepted quantity: E2

**Marine transport (IMDG)**

**14.1. UN number:** UN 2735  
**14.2. UN proper shipping name:** AMINES, LIQUID, CORROSIVE, N.O.S. (triethylene tetramine and 1,2-cyclohexane diamine)  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** II  
 Hazard label: 8



Marine pollutant: No  
 Limited quantity: 1 L / 30 kg  
 Excepted quantity: E2  
 EmS: F-A, S-B

**Air transport (ICAO)**

**14.1. UN number:** UN 2735  
**14.2. UN proper shipping name:** AMINES, LIQUID, CORROSIVE, N.O.S. (triethylene tetramine and 1,2-cyclohexane diamine)  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** II  
 Hazard label: 8



Limited quantity Passenger: 0.5 L  
 Passenger LQ: Y840  
 Excepted quantity: E2  
 IATA-packing instructions - Passenger: 851  
 IATA-max. quantity - Passenger: 1 L  
 IATA-packing instructions - Cargo: 855  
 IATA-max. quantity - Cargo: 30 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. Transport in bulk according to Annex II of MARPOL73/78 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**

2004/42/EC (VOC): 0 %

#### **National regulatory information**

Employment restrictions: Observe employment restrictions for young people. Observe employment restrictions for child bearing mothers and nursing.

Water contaminating class (D): 2 - 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

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.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H330	Fatal if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H411	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.)*