

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

1.1. Product identifier

TIP TOP COROFLAKE 29

Art.-No.

590 0460, 590 0470

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

Use of the substance/mixture

Spray coating material

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:

Flammable liquid: Flam. Liq. 3

Acute toxicity: Acute Tox. 4

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Dam. 1

Respiratory or skin sensitisation: Skin Sens. 1A

Reproductive toxicity: Repr. 2

Specific target organ toxicity - single exposure: STOT SE 3

Specific target organ toxicity - repeated exposure: STOT RE 1

Hazardous to the aquatic environment: Aquatic Chronic 3

Hazard Statements:

Flammable liquid and vapour.

Harmful if inhaled.

Causes skin irritation.

Causes serious eye damage.

May cause an allergic skin reaction.

Suspected of damaging the unborn child.

May cause respiratory irritation.

Causes damage to organs through prolonged or repeated exposure.

Harmful to aquatic life with long lasting effects.

2.2. Label elements

Hazard components for labelling

Styrene

Methacrylic acid

Fatty acids, C6-C19, branched, Co(2+)salts

Cobalt bis (2-ethylhexanoate)

1,2-Ethanediamine, N-[3-(trimethoxysilyl)propyl]-, N-[(ethenylphenyl)methyl], Derivates, Hydrochlorides

Signal word:

Danger

Pictograms:



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Hazard statements

- H226 Flammable liquid and vapour.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H318 Causes serious eye damage.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H361d Suspected of damaging the unborn child.
- H372 Causes damage to organs through prolonged or repeated exposure.
- H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

- P202 Do not handle until all safety precautions have been read and understood.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- 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.
- P405 Store locked up.

2.3. Other hazards

Vapours may form explosive mixture with air.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Epoxide-vinyl ester-resin in styrene

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**Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
100-42-5	Styrene			< 35 %
	202-851-5	601-026-00-0	01-2119457861-32	
	Flam. Liq. 3, Repr. 2, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, STOT RE 1, Asp. Tox. 1, Aquatic Chronic 3; H226 H361d H332 H315 H319 H335 H372 H304 H412			
79-41-4	Methacrylic acid			< 5 %
	201-204-4	607-088-00-5	01-2119463884-26	
	Acute Tox. 4, Acute Tox. 4, Acute Tox. 4, Skin Corr. 1A, STOT SE 3; H302 H312 H332 H314 H335			
67-56-1	Methanol			< 1 %
	200-659-6	603-001-00-X	01-2119433307-44	
	Flam. Liq. 2, Acute Tox. 3, Acute Tox. 3, Acute Tox. 3, STOT SE 1; H225 H301 H311 H331 H370			
75-57-0	Tetramethylammonium chloride			< 1 %
	200-880-8		01-2119970924-26	
	Acute Tox. 2, Acute Tox. 3, Skin Irrit. 2, STOT SE 1, Aquatic Chronic 2; H300 H311 H315 H370 H411			
68409-81-4	Fatty acids, C6-C19, branched, Co(2+)salts			< 1 %
	270-066-5			
	Acute Tox. 4, Skin Irrit. 2, Skin Sens. 1; H302 H315 H317			
136-52-7	Cobalt bis (2-ethylhexanoate)			< 1 %
	205-250-6		01-2119524678-29	
	Repr. 2, Skin Sens. 1A, Aquatic Acute 1, Aquatic Chronic 3; H361f H317 H400 H412			
171869-89-9	1,2-Ethanediamine, N-[3-(trimethoxysilyl)propyl]-, N-[(ethenylphenyl)methyl], Derivates, Hydrochlorides			< 0,1 %
	Eye Dam. 1, Skin Sens. 1; H318 H317			
121-69-7	N,N-Dimethylaniline			< 1 %
	204-493-5	612-016-00-0	01-2119935241-47	
	Carc. 2, Acute Tox. 3, Acute Tox. 3, Acute Tox. 3, Aquatic Chronic 2; H351 H301 H311 H331 H411			
123-31-9	1,4-Dihydroxybenzene			< 0,1 %
	204-617-8	604-005-00-4	01-2119524016-51	
	Carc. 2, Muta. 2, Acute Tox. 4, Eye Dam. 1, Skin Sens. 1, Aquatic Acute 1; H351 H341 H302 H318 H317 H400			

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.
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 immediately with soap and plenty of water.
Treat subsequently with skin cream.
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.



Consult (eye) doctor immediately.

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

Harmful if inhaled.

Causes skin irritation.

Can cause allergic reactions.

Causes serious eye damage.

May cause respiratory irritation.

Causes damage to organs through prolonged or repeated exposure. (the ear)

Suspected of damaging the unborn child.

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

Alcohol-resistant foam, dry chemical, carbon dioxide (CO₂), 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

Irritant/corrosive, flammable as well as toxic distillation gases (carbonization gases).

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit.

Additional information

Vapours are heavier than air and spread along ground.

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.

Ensure adequate ventilation.

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

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**Advice on safe handling**

Keep container tightly closed.
 Vapours are heavier than air and spread along ground.
 Use only in thoroughly ventilated areas.
 Provide suitable extraction at the processing machines.

Advice on protection against fire and explosion

Keep away from heat and sources of ignition.
 Do not smoke.
 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.
 Avoid temperatures above 50°C.

Advice on storage compatibility

Incompatible with:
 Oxidizing agents, Metal halogenides, Peroxides

Further information on storage conditions

Keep away from food, drink and animal feeding stuffs.

7.3. Specific end use(s)

Spray coating material

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
123-31-9	Hydroquinone	-	0.5		TWA (8 h)	WEL
		-	-		STEL (15 min)	WEL
79-41-4	Methacrylic acid	20	72		TWA (8 h)	WEL
		40	143		STEL (15 min)	WEL
67-56-1	Methanol	200	266		TWA (8 h)	WEL
		250	333		STEL (15 min)	WEL
121-69-7	N,N-Dimethylaniline	5	25		TWA (8 h)	WEL
		10	50		STEL (15 min)	WEL
100-42-5	Styrene	100	430		TWA (8 h)	WEL
		250	1080		STEL (15 min)	WEL
13463-67-7	Titanium dioxide, respirable	-	4		TWA (8 h)	WEL
		-	-		STEL (15 min)	WEL

8.2. Exposure controls**Appropriate engineering controls**

Ensure adequate ventilation, especially in confined areas.
 Pay attention to explosion protection guidelines.

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.
 Remove and wash contaminated clothes before re-use.

Eye/face protection

Tightly fitting goggles (EN 166).

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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).

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:	Yellowish
Odour:	Pungent

Changes in the physical state

Initial boiling point and boiling range:	145 °C	
Flash point:	26 °C	
Lower explosion limits:	1,0 vol. %	
Upper explosion limits:	6,0 vol. %	
Ignition temperature:	490 °C	
Vapour pressure:	6 hPa	
(at 20 °C)		
Density (at 20 °C):	1,17 ± 0,02 g/cm ³	
Water solubility:	Immiscible	
(at 20 °C)		
Viscosity / dynamic:	3250 ± 250 mPa·s	
Viscosity / kinematic:	> 20,5 mm ² /s	
(at 40 °C)		
Flow time:	> 40 s	Ford beaker, no. 6

9.2. Other information

No data available.

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.

Reactions with peroxides.

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.

Avoid temperatures above 50°C.

If heating up polymerisation.



10.5. Incompatible materials

Metal halogenides, oxidizing agents, Peroxides

10.6. Hazardous decomposition products

Irritant/corrosive, flammable as well as toxic distillation gases (carbonization gases).

Carbon monoxide and carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Harmful if inhaled.

No toxicological data available.

Styrene

LD50/oral/rat: 5000 mg/kg

LD50/dermal/rat: > 2000 mg/kg

LC50/inhalation/rat: 11,8 mg/l/4h

Irritation and corrosivity

Causes serious eye damage.

Causes skin irritation.

Sensitising effects

May cause an allergic skin reaction. (Fatty acids, C6-C19, branched, Co(2+)salts), (Cobalt bis (2-ethylhexanoate)), (1,2-Ethanediamine, N-[3-(trimethoxysilyl)propyl]-, N-[(ethenylphenyl)methyl], Derivates, Hydrochlorides), (1,4-Dihydroxybenzene)

STOT-single exposure

May cause respiratory irritation. (Styrene), (Methacrylic acid)

Severe effects after repeated or prolonged exposure

Causes damage to organs through prolonged or repeated exposure. (Styrene)

Carcinogenic/mutagenic/toxic effects for reproduction

Suspected of damaging the unborn child. (Styrene)

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: 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

Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product.

SECTION 12: Ecological information

12.1. Toxicity

Ecological data are not available.

Styrene

LC50/Pimephales promelas/96 h = 4,02 mg/kg

EC50/Daphnia magna/48 h = 4,7 mg/kg

EC50/Pseudokirchneriella subcapitata/72 h > 4,9 mg/kg

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.

Product is toxic to fish and their nutrient animals.

Further information

Do not flush into surface water or sanitary sewer system.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

Can be incinerated, when in compliance with local regulations.

Where possible recycling is preferred to disposal.

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 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 1866
14.2. UN proper shipping name: Resin solution
14.3. Transport hazard class(es): 3
14.4. Packing group: III
Hazard label: 3



Classification code: F1
Limited quantity: 5 L / 30 kg
Excepted quantity: E1
Transport category: 3
Tunnel restriction code: E

Other applicable information (land transport)

Viscous substance - excepted quantity if in containers with a capacity up to 450 l (subsection 2.2.3.1.5 ADR).

Inland waterways transport (ADN)

14.1. UN number: UN 1866
14.2. UN proper shipping name: Resin solution
14.3. Transport hazard class(es): 3
14.4. Packing group: III
Hazard label: 3



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Classification code: F1
 Limited quantity: 5 L / 30 kg
 Excepted quantity: E1

Other applicable information (inland waterways transport)

Viscous substance - excepted quantity if in containers with a capacity up to 450 l (subsection 2.2.3.1.5 ADN).

Marine transport (IMDG)

14.1. UN number: UN 1866
14.2. UN proper shipping name: Resin solution
14.3. Transport hazard class(es): 3
14.4. Packing group: III
 Hazard label: 3



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

Other applicable information (marine transport)

Viscous substance - excepted quantity if in containers with a capacity up to 30 l (subsection 2.3.2.5 IMDG Code).

Air transport (ICAO)

14.1. UN number: UN 1866
14.2. UN proper shipping name: Resin solution
14.3. Transport hazard class(es): 3
14.4. Packing group: III
 Hazard label: 3



Limited quantity Passenger: 10 L
 Passenger LQ: Y344
 Excepted quantity: E1
 IATA-packing instructions - Passenger: 355
 IATA-max. quantity - Passenger: 60 L
 IATA-packing instructions - Cargo: 366
 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. 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

2004/42/EC (VOC): < 5 %; < 90 g/l

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): 2 - water contaminating

Additional information

Consider Chemical prohibition regulation.

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)

- H225 Highly flammable liquid and vapour.
- H226 Flammable liquid and vapour.
- H300 Fatal if swallowed.
- H301 Toxic if swallowed.
- H302 Harmful if swallowed.
- H304 May be fatal if swallowed and enters airways.
- H311 Toxic in contact with skin.
- H312 Harmful 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.
- H331 Toxic if inhaled.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H341 Suspected of causing genetic defects.
- H351 Suspected of causing cancer.
- H361d Suspected of damaging the unborn child.
- H361f Suspected of damaging fertility.
- H370 Causes damage to organs.
- H372 Causes damage to organs through prolonged or repeated exposure.
- H400 Very toxic to aquatic life.
- H411 Toxic to aquatic life with long lasting effects.
- H412 Harmful to aquatic life with long lasting effects.

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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.)