

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

1.1. Product identifier

TIP TOP ECLON EP 2K HARDENER V-5795

Art.-No.

580 1010

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
24

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture according to 1272/2008/EC

Hazard categories:

Flammable liquid: Flam. Liq. 3

Skin corrosion/irritation: Skin Irrit. 2

Hazardous to the aquatic environment: Aquatic Chronic 2

Hazard Statements:

Flammable liquid and vapour.

Causes skin irritation.

Toxic to aquatic life with long lasting effects.

2.2. Label elements

Signal word:

Warning

Pictograms:



Hazard statements

H226 Flammable liquid and vapour.

H315 Causes skin irritation.

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.

P243 Take precautionary measures against static discharge.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352 IF ON SKIN: Wash with plenty of water and soap.

P332+P313 If skin irritation occurs: Get medical advice/attention.

P362+P364 Take off contaminated clothing and wash it before reuse.

P391 Collect spillage.

P501 Dispose of contents/container to in accordance with local and national regulations.

Special labelling of certain mixtures

EUH208 Contains Polyaminoamide salt. May produce an allergic reaction.



2.3. Other hazards

Vapours may form explosive mixture with air.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Polyaminoamide

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
1330-20-7	Xylene (mixed isomers)			12,5 - 20 %
	215-535-7	601-022-00-9	01-2119488216-32	
	Flam. Liq. 3, Acute Tox. 4, Acute Tox. 4, Skin Irrit. 2; H226 H312 H332 H315			
107-98-2	1-Methoxy-2-propanol			10 - 12,5 %
	203-539-1	603-064-00-3	01-2119457435-35	
	Flam. Liq. 3, STOT SE 3; H226 H336			
7779-90-0	Trizinc bis(orthophosphate)			5 - 10 %
	231-944-3	030-011-00-6	01-2119485044-40	
	Aquatic Acute 1, Aquatic Chronic 1; H400 H410			
64742-95-6	Solvent naphta (petroleum)			2,5 - 5 %
	918-668-5	649-356-00-4	01-2119455851-35	
	Flam. Liq. 3, STOT SE 3, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2; H226 H335 H336 H304 H411 EUH066			
1314-13-2	Zinc oxide			2,5 - 5 %
	215-222-5	030-013-00-7	01-2119463881-32	
	Aquatic Acute 1, Aquatic Chronic 1; H400 H410			
100-41-4	Ethyl benzene			1 - < 5 %
	202-849-4	601-023-00-4	01-2119489370-35	
	Flam. Liq. 2, Acute Tox. 4, STOT RE 2, Asp. Tox. 1; H225 H332 H373 H304			
108-10-1	4-Methylpentan-2-one			2,5 - 5 %
	203-550-1	606-004-00-4	01-2119473980-30	
	Flam. Liq. 2, Acute Tox. 4, Eye Irrit. 2, STOT SE 3; H225 H332 H319 H335 EUH066			
	Polyaminoamide salt			< 0,5 %
	Skin Sens. 1; H317			

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

Further Information

According to note P to the regulation (EC) no. 1272/2008, "Solvent naphta (petroleum)" is not to be classified as "carcinogenic" or "mutagen" ingredient because a benzene content (EINECS No. 200-753-7) is below 0.1 % by weight.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Remove contaminated soaked clothing immediately.

Take away from danger area and lay down affected person.

After inhalation

Move to fresh air in case of accidental inhalation of vapours or decomposition products.

Keep warm and calm injured person.

If patient is not breathing, apply artificial respiration.



Seek medical treatment immediately.

After contact with skin

In case of contact with skin wash off immediately with soap and water.

Do not use solvents or thinners.

After contact with eyes

Remove contact lens.

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.

Rinse mouth.

Never give anything by mouth to an unconscious person.

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 skin irritation.

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 (CO), carbon dioxide (CO₂) and nitrogen oxides (NO_x).

High smoke development

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.

Keep away sources of ignition.

Use only explosion-proof equipment.

Ensure adequate ventilation.

Remove persons to safety.

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.



SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Do not wear contact lenses when handling the product.
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.
Do not empty container under pressure. No pressure tank!

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.
Take precautionary measures against static discharges.
Storage temperature between 15°C to 30°C

Advice on storage compatibility

Incompatible with:
Strong oxidizing agents
strong acids and strong bases

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 ³	fibres/ml	Category	Origin
107-98-2	1-Methoxypropan-2-ol	100	375		TWA (8 h)	WEL
		150	560		STEL (15 min)	WEL
108-10-1	4-Methylpentan-2-one	50	208		TWA (8 h)	WEL
		100	416		STEL (15 min)	WEL
100-41-4	Ethylbenzene	100	441		TWA (8 h)	WEL
		125	552		STEL (15 min)	WEL
1330-20-7	Xylene: mixed isomers	50	220		TWA (8 h)	WEL
		100	441		STEL (15 min)	WEL

Biological Monitoring Guidance Values (EH40)

CAS No	Substance	Parameter	Value	Test material	Sampling time
108-10-1	4-methylpentan-2-one	4-methylpentan-2-one	20 µmol/L	urine	Post shift
1330-20-7	Xylene, o-, m-, p- or mixed isomers	methyl hippuric acid	650 mmol/mol	urine	Post shift

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.
Avoid contact with skin, eyes and clothing.
Remove and wash contaminated clothes before re-use.

Eye/face protection

Tightly fitting goggles (EN 166).

Hand protection

Protective gloves resistant to chemicals made of nitrile, minimum coat thickness 0.4 mm, permeation resistance (wear duration) approx. 480 minutes, i.e. protective glove <Camatril Velours 730> 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:	Various
Odour:	characteristic

Changes in the physical state

Flash point:	28 °C	DIN 53213
Lower explosion limits:	2,1 vol. %	
Upper explosion limits:	13,7 vol. %	
Ignition temperature:	287 °C	
Vapour pressure:	3,46 hPa	
(at 20 °C)		
Density (at 20 °C):	1,37 g/cm ³	
Water solubility:	Partially miscible	
Solvent content:	36 %	

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 acids, alkalies and 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.
Strong acids and strong bases



10.6. Hazardous decomposition products

Carbon monoxide (CO), carbon dioxide (CO₂) and nitrogen oxides (NO_x).

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.

Irritation and corrosivity

Causes skin irritation.
Eye irritation: Not classified.

Sensitising effects

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

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.

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.
Components of the product may be absorbed into the body through the skin.
Contact with eyes may cause irritation.
Ingestion causes irritation of upper respiratory system and gastrointestinal disturbance.
Attention. Beware, danger of aspiration!

SECTION 12: Ecological information

12.1. Toxicity

Ecological data are not available.
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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

080111 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU and removal of paint and varnish; waste paint and varnish 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.

Empty containers should be taken for local recycling, recovery or waste disposal.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number: UN 1263
14.2. UN proper shipping name: Paint
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
 Hazard No: 30
 Tunnel restriction code: D/E

Inland waterways transport (ADN)

14.1. UN number: UN 1263
14.2. UN proper shipping name: Paint
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

Marine transport (IMDG)

14.1. UN number: UN 1263
14.2. UN proper shipping name: Paint (Trizinc bis(orthophosphate))
14.3. Transport hazard class(es): 3
14.4. Packing group: III
 Hazard label: 3



Marine pollutant: Yes
 Limited quantity: 5 L / 30 kg
 Excepted quantity: E1
 EmS: F-E, S-E

Air transport (ICAO)

14.1. UN number: UN 1263
14.2. UN proper shipping name: Paint
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: 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 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): 494 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

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.

H304 May be fatal if swallowed and enters airways.

H312 Harmful in contact with skin.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

H336 May cause drowsiness or dizziness.

H373 May cause damage to organs through prolonged or repeated exposure.

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 Polyaminoamide salt. 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.)