

# ESKANOL EF HARDENER

## Safety Data Sheet

according to the Model Work Health and Safety Regulations

Issue date: Revision date:26/04/2021 Version: 1.2

SDS No: 00359-1293



### SECTION 1: Product identifier

#### 1.1. GHS Product identifier

Product form : Mixture  
Product name : ESKANOL EF HARDENER  
Product code : 10023, 10024

#### 1.2. Other means of identification

No additional information available

#### 1.3. Recommended use of the chemical and restrictions on use

Recommended use : Hardener

#### 1.4. Details of manufacturer or importer

##### Supplier

TIP TOP Oberflächenschutz Elbe GmbH  
4 Heuweg  
Wittenberg 6886  
Germany  
T +49(0)3491/635-50 - F +49(0)3491/635-552

##### Importer

REMA TIP TOP Australia Pty Ltd.  
3/20 Worth Street  
Chullora NSW 2190  
Australia  
T +61 2 8755 8400  
[www.rema-tiptop.com.au](http://www.rema-tiptop.com.au)

E-mail address of competent person responsible for the SDS: [sds@gbk-ingelheim.de](mailto:sds@gbk-ingelheim.de)

#### 1.5. Emergency phone number

Emergency number : +61-280735031, Infotrac/GBK GmbH-ID: 93591

### SECTION 2: Hazard identification

#### 2.1. Classification of the hazardous chemical

##### Classification according to the model Work Health and Safety Regulations (WHS Regulations)

Acute toxicity (inhalation:dust,mist) Category 4	H332
Skin corrosion/irritation, Category 1B	H314
Serious eye damage/eye irritation, Category 1	H318
Skin sensitisation, Category 1	H317
Hazardous to the aquatic environment — Chronic Hazard, Category 3	H412

#### 2.2. GHS Label elements, including precautionary statements

Hazard pictograms (GHS AU) :



Corrosion

Exclamation  
mark

Signal word (GHS AU) :

Danger

Contains :

benzyl alcohol (< 45 %); 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with 3-aminomethyl-3,5,5-trimethylcyclohexylamine (< 40 %); 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with m-phenylenebis(methylamine) (< 15 %); Salicylic acid (< 3 %)

Hazard statements (GHS AU) :

H314 - Causes severe skin burns and eye damage  
H317 - May cause an allergic skin reaction  
H332 - Harmful if inhaled  
H412 - Harmful to aquatic life with long lasting effects

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Precautionary statements (GHS AU) :

- P260 - Do not breathe vapours.
- P264 - Wash hands thoroughly after handling.
- P271 - Use only outdoors or in a well-ventilated area.
- P272 - Contaminated work clothing should not be allowed out of the workplace.
- P273 - Avoid release to the environment.
- P280 - Wear eye protection, face protection, protective gloves, protective clothing.
- P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
- P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water .
- 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.
- P310 - Immediately call a doctor, a POISON CENTER.
- P333+P313 - If skin irritation or rash occurs: Get medical attention.
- P362+P364 - Take off contaminated clothing and wash it before reuse.
- P363 - Wash contaminated clothing before reuse.
- P405 - Store locked up.
- P501 - Dispose of contents and container to a hazardous or special waste collection point.

### 2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification : Vapours may form explosive mixture with air.

## SECTION 3: Composition and information on ingredients

Comments : Hardener based on aliphatic polyamines.

Name	CAS-No.	%	Classification according to the model Work Health and Safety Regulations (WHS Regulations)
benzyl alcohol	100-51-6	< 45	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Eye Irrit. 2A, H319
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with 3-aminomethyl-3,5,5-trimethylcyclohexylamine	38294-64-3	< 40	Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 3, H412
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with m-phenylenebis(methylamine)	113930-69-1	< 15	Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 2, H411
Salicylic acid	69-72-7	< 3	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318 Repr. 2, H361

## SECTION 4: First aid measures

### 4.1. Description of necessary first-aid measures

First-aid measures general : Take off immediately all contaminated clothing. In the event of persistent symptoms receive medical treatment.

First-aid measures after inhalation : Move to fresh air in case of accidental inhalation of vapours or decomposition products. In the event of symptoms refer for medical treatment.

First-aid measures after skin contact : Wash off immediately with soap and plenty of water. If skin irritation or rash occurs: Get medical advice/attention.

First-aid measures after eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Consult an eye specialist.

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First-aid measures after ingestion : Do not induce vomiting without medical advice. Rinse mouth. Never give anything by mouth to an unconscious person.

### 4.2. Symptoms caused by exposure

Symptoms/effects after skin contact : Causes severe skin burns and eye damage. May cause an allergic skin reaction.  
Symptoms/effects after ingestion : Harmful if swallowed.

### 4.3. Medical attention and special treatment

Treatment : Treat symptomatically.

## SECTION 5: Fire-fighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Alcohol resistant foam. Carbon dioxide.  
Unsuitable extinguishing media : high volume water jet.

### 5.2. Specific hazards arising from the chemical

General measures : In case of vapour formation use adequate respirator. Ensure adequate air ventilation. Concerning personal protective equipment to use, see section 8.  
Hazardous decomposition products in case of fire : Carbon monoxide. Carbon dioxide. Nitrogen oxides.

### 5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.  
Hazchem Code : 2X  
Other information : Cool containers / tanks with spray water if possible. The vapour/air mixture is explosive, even in empty, uncleaned receptacles. Vapours are heavier than air and may spread along floors. 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 measures : In case of vapour formation use adequate respirator. Ensure adequate air ventilation. Concerning personal protective equipment to use, see section 8.

#### 6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area.

#### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

### 6.2. Environmental precautions

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

### 6.3. Methods and materials for containment and cleaning up

Methods for cleaning up : Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Shovel or sweep up and put in a closed container for disposal. Clean contaminated surface thoroughly.

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### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling : Keep container tightly closed. Use only outdoors or in a well-ventilated area. Avoid contact with skin, eyes and clothing.

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

Technical measures : Pay attention to explosion protection guidelines.  
Storage conditions : Keep out of direct sunlight. Keep containers tightly closed in a dry, well-ventilated place.  
Incompatible materials : oxidizing materials. Acids. Bases.  
Storage temperature : 10 – 30 °C  
Information on mixed storage : Keep away from food, drink and animal feeding stuffs.

### SECTION 8: Exposure controls and personal protection

#### 8.1. Control parameters - exposure standards

No additional information available

#### 8.2. Biological Monitoring

No additional information available

#### 8.3. Engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

#### 8.4. Individual protection measures, such as personal protective equipment (PPE)

Hand protection : 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/>

Type	Material	Permeation	Thickness (mm)	Penetration	Standard
protective gloves	Fluoro-rubber (Viton) - FKM	2 (> 30 minutes)	0,7		EN ISO 374
protective gloves	Butyl rubber	6 (> 480 minutes)	0,7		EN ISO 374

Eye protection : Tightly fitting goggles (EN 166). Eyewash bottle with clean water (EN 15154)

Skin and body protection :

Type	Standard
Long sleeved protective clothing	EN ISO 6530

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment

Device	Filter type	Condition	Standard
Respiratory protective device with a gas filter	Type A		EN 14387

Environmental exposure controls : Avoid release to the environment.

Other information : Do not inhale vapour. Take off contaminated clothing and wash it before reuse. Wash hands before breaks and at the end of workday. Wash hands immediately after handling the product. Do not eat, drink or smoke when using this product. Avoid contact with skin, eyes and clothing.

### SECTION 9: Physical and chemical properties

Physical state : Liquid

Appearance : No data available

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Colour	: Colourless
Odour	: Amine-like
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point / Freezing point	: No data available
Boiling point	: No data available
Flash point	: 94 °C
Auto-ignition temperature	: calculated
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative density	: No data available
Density	: Density: $\approx 1.05 \text{ g/cm}^3$ @ 23 °C, ISO 2811
Solubility	: Water: Not miscible
Log Pow	: No data available
Viscosity, dynamic	: 280 – 420 mPa·s @ 23 °C, ISO 2884
Explosive properties	: Product is not explosive.
Oxidising properties	: Not oxidising
Explosive limits	: No data available
Minimum ignition energy	: No data available
VOC content	: 0 %
Fat solubility	: No data available

### SECTION 10: Stability and reactivity

Reactivity	: No decomposition if stored normally.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: Reactions with acids, alkalies and oxidizing agents.
Conditions to avoid	: To avoid thermal decomposition, do not overheat. Keep out of direct sunlight.
Incompatible materials	: Oxidizing agent. acids and bases.
Hazardous decomposition products	: Thermal decomposition generates : Carbon monoxide. Carbon dioxide. Nitrogen oxides.

### SECTION 11: Toxicological information

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Harmful if inhaled.

ATE AU (dust,mist)	3.341 mg/l/4h
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#### benzyl alcohol (100-51-6)

LD50 oral rat	1630 mg/kg
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Skin corrosion/irritation	: Causes severe skin burns.
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

### SECTION 12: Ecological information

#### 12.1. Ecotoxicity

Hazardous to the aquatic environment, short-term (acute)	: Not classified
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Hazardous to the aquatic environment, long-term (chronic) : Harmful to aquatic life with long lasting effects.

Other information : Do not flush into surface water or sewer system.

<b>benzyl alcohol (100-51-6)</b>	
NOEC chronic crustacea	51 mg/l
Partition coefficient n-octanol/water (Log Kow)	1.05

### 12.2. Persistence and degradability

<b>ESKANOL EF HARDENER</b>	
Persistence and degradability	Not readily biodegradable.

### 12.3. Bioaccumulative potential

<b>ESKANOL EF HARDENER</b>	
Bioaccumulative potential	No data available.

<b>benzyl alcohol (100-51-6)</b>	
Partition coefficient n-octanol/water (Log Kow)	1.05

### 12.4. Mobility in soil

<b>ESKANOL EF HARDENER</b>	
Ecology - soil	No data available.

<b>benzyl alcohol (100-51-6)</b>	
Partition coefficient n-octanol/water (Log Kow)	1.05

### 12.5. Other adverse effects

Ozone : Not classified  
Other adverse effects : Significantly hazardous to water.

<b>ESKANOL EF HARDENER</b>	
Fluorinated greenhouse gases	False

<b>benzyl alcohol (100-51-6)</b>	
Fluorinated greenhouse gases	False

<b>Salicylic acid (69-72-7)</b>	
Fluorinated greenhouse gases	False

<b>4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with 3-aminomethyl-3,5,5-trimethylcyclohexylamine (38294-64-3)</b>	
Fluorinated greenhouse gases	False

<b>4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with m-phenylenebis(methylamine) (113930-69-1)</b>	
Fluorinated greenhouse gases	False

## SECTION 13: Disposal considerations

Waste treatment methods : Recycling is preferred to disposal or incineration. Can be incinerated according to local regulations. Dispose of contents/container in accordance with licensed collector's sorting instructions.

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Product/Packaging disposal recommendations : Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse. Empty containers should be taken for local recycling, recovery or waste disposal. Packaging that cannot be cleaned should be disposed of like the product.

### SECTION 14: Transport information

ADG	IMDG	IATA
<b>14.1. UN number</b>		
2735	2735	2735
<b>14.2. UN Proper Shipping Name</b>		
POLYAMINES, LIQUID, CORROSIVE, N.O.S. (3-aminomethyl-3,5,5-trimethylcyclohexylamine, m-phenylenebis(methylamine))	POLYAMINES, LIQUID, CORROSIVE, N.O.S. (3-aminomethyl-3,5,5-trimethylcyclohexylamine)	Amines, liquid, corrosive, n.o.s. (3-aminomethyl-3,5,5-trimethylcyclohexylamine)
<b>14.3. Transport hazard class(es)</b>		
8	8	8
		
<b>14.4. Packing group</b>		
II - Substances presenting medium danger	II	II
<b>14.5. Environmental hazards</b>		
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No

### 14.6. Special precautions for user

Specific storage requirement : No data available  
Shock sensitivity : No data available

### 14.7. Additional information

Other information : No supplementary information available

#### Transport by road and rail

UN-No. (ADG) : 2735  
Special provision (ADG) : 274  
Limited quantities (ADG) : 1I  
Excepted quantities (ADG) : E2  
Packing instructions (ADG) : P001, IBC02  
Portable tank and bulk container instructions (ADG) : T11  
Portable tank and bulk container special provisions (ADG) : TP1, TP27

#### Transport by sea

UN-No. (IMDG) : 2735  
Special provisions (IMDG) : 274  
Limited quantities (IMDG) : 1 L  
Excepted quantities (IMDG) : E2  
Packing instructions (IMDG) : P001  
IBC packing instructions (IMDG) : IBC02  
Tank instructions (IMDG) : T11  
Tank special provisions (IMDG) : TP1, TP27  
EmS-No. (Fire) : F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE  
EmS-No. (Spillage) : S-B - SPILLAGE SCHEDULE Bravo - CORROSIVE SUBSTANCES

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Stowage category (IMDG) : A

### Air transport

UN-No. (IATA) : 2735  
PCA Excepted quantities (IATA) : E2  
PCA Limited quantities (IATA) : Y840  
PCA limited quantity max net quantity (IATA) : 0.5L  
PCA packing instructions (IATA) : 851  
PCA max net quantity (IATA) : 1L  
CAO packing instructions (IATA) : 855  
CAO max net quantity (IATA) : 30L  
Special provisions (IATA) : A3, A803  
ERG code (IATA) : 8L

## 14.8. Hazchem or Emergency Action Code

Hazchem Code : 2X

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations specific for the product in question

#### Australian Industrial Chemicals Introduction Scheme (AICIS)

Australian Inventory of Industrial Chemicals (AICIS Inventory) status : All components of this mixture are listed on or exempted from AICIS

#### Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)

Relevant Poisons Schedule number : Labelling requirements for SUSMP do not apply to a poison that is packed and sold solely for industrial, laboratory or manufacturing use. However, this product is labelled in accordance with the Safe Work Australia "Code of Practice" for workplace substances.

### 15.2. International agreements

No additional information available

## SECTION 16: Other information

Revision date : 26/04/2021

Classification	
Acute Tox. 4 (Inhalation:dust,mist)	H332
Skin Corr. 1B	H314
Eye Dam. 1	H318
Skin Sens. 1	H317
Aquatic Chronic 3	H412

Full text of H-statements	
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2A	Serious eye damage/eye irritation, Category 2A



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Full text of H-statements	
Repr. 2	Reproductive toxicity, Category 2
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
Skin Sens. 1	Skin sensitisation, Category 1
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H319	Causes serious eye irritation
H332	Harmful if inhaled
H361	Suspected of damaging fertility or the unborn child
H411	Toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should therefore not be construed as guaranteeing any specific property of the product.