



## ESKANOL EF HARDENER

Revision date: 23.08.2022

Product code: 00359-1293

Page 2 of 12

### Pictograms:



### Hazard statements

H332	Harmful if inhaled.
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.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
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 or shower.
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 POISON CENTER/doctor.

### Special labelling of certain mixtures

EUH071	Corrosive to the respiratory tract.
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### 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.

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

Vapours may form explosive mixture with air.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

#### Chemical characterization

Hardener based on aliphatic polyamines

## ESKANOL EF HARDENER

Revision date: 23.08.2022

Product code: 00359-1293

Page 3 of 12

### Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
100-51-6	Benzyl alcohol			< 45 %
	202-859-9	603-057-00-5	01-2119492630-38	
	Acute Tox. 4, Acute Tox. 4, Eye Irrit. 2; H332 H302 H319			
38294-64-3	4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with 3-aminomethyl-3,5,5-trimethylcyclohexylamine			< 40 %
	500-101-4		01-2119965165-33	
	Skin Corr. 1B, Eye Dam. 1, Skin Sens. 1, Aquatic Chronic 3; H314 H318 H317 H412			
113930-69-1	4,4'-isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with m-phenylenebis(methylamine)			< 15 %
	500-302-7		01-2119965162-39	
	Skin Corr. 1B, Eye Dam. 1, Skin Sens. 1, Aquatic Chronic 2; H314 H318 H317 H411			
69-72-7	Salicylic acid			< 3 %
	200-712-3	607-732-00-5	01-2119486984-17	
	Repr. 2, Acute Tox. 4, Eye Dam. 1; H361d H302 H318			

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

### Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
100-51-6	202-859-9	Benzyl alcohol	< 45 %
		inhalation: ATE = 11 mg/l (vapours); oral: LD50 = 1570 mg/kg	
69-72-7	200-712-3	Salicylic acid	< 3 %
		dermal: LD50 = > 2000 mg/kg; oral: LD50 = 891 mg/kg	

## 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.

#### 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.

#### After contact with skin

Wash off immediately 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.  
Rinse mouth.  
Never give anything by mouth to an unconscious person.  
Summon a doctor immediately.  
Induce vomiting only upon the advice of a physician.

## ESKANOL EF HARDENER

Revision date: 23.08.2022

Product code: 00359-1293

Page 4 of 12

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

Harmful if inhaled.  
Causes severe skin burns and eye damage.  
May cause an allergic skin reaction.

### **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 (CO<sub>2</sub>), water-spray.  
Fire-extinguishing activities according to surrounding.

#### **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**

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**

#### **General advice**

Ensure adequate ventilation.  
Remove persons to safety.  
Keep away sources of ignition.

#### **For non-emergency personnel**

Avoid contact with skin, eyes and clothing.  
Do not breathe vapours.

#### **For emergency responders**

In case of vapour formation use respirator.  
Use personal protective clothing.

### **6.2. Environmental precautions**

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

### **6.3. Methods and material for containment and cleaning up**

#### **For containment**

Prevent spread over a wide area (e.g. by containment or oil barriers).

#### **For 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.

## ESKANOL EF HARDENER

Revision date: 23.08.2022

Product code: 00359-1293

Page 5 of 12

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

##### Advice on safe handling

- Keep container tightly closed.
- Use only in thoroughly ventilated areas.
- Avoid contact with skin, eyes and clothing.

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

- No special protective measures against fire required.

#### 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.
- Protect against direct sun radiation.
- Recommended storage temperature: 10°C - 30°C

##### Hints on joint storage

- Incompatible with:  
Oxidizing agents, Acids and 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

##### Additional advice on limit values

- No data available

#### 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).
- Eye wash bottle with pure water (EN 15154).

##### Hand protection

- Protective gloves resistant to chemicals made off viton, minimum coat thickness 0.7 mm, permeation resistance (wear duration) approx. 30 minutes, i.e. protective glove <Vitoject 890> made by www.kcl.de.
- Splash protection: Protective gloves resistant to chemicals made off butyl, minimum coat thickness 0.7 mm, permeation resistance approx. 480 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.
- Pls. find examples in the protective gloves database under: <http://bestglove.com/site/chemrest/>

## ESKANOL EF HARDENER

Revision date: 23.08.2022

Product code: 00359-1293

Page 6 of 12

### Skin protection

Long sleeved clothing (DIN EN ISO 6530)

### 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:	Colourless		
Odour:	Amine like		
			<b>Test method</b>
pH-Value (at 20 °C):			n.d.
<b>Changes in the physical state</b>			
Melting point/freezing point:			n.d.
Boiling point or initial boiling point and boiling range:			n.d.
Sublimation point:			n.a.
Softening point:			n.d.
Flash point:		94 °C	Calculated
Sustaining combustion:		Sustaining combustion	
<b>Flammability</b>			
Solid/liquid:			n.a.
Gas:			n.a.
<b>Explosive properties</b>			
The product is not explosive.			
Lower explosion limits:			n.d.
Upper explosion limits:			n.d.
Auto-ignition temperature:			n.d.
<b>Self-ignition temperature</b>			
Solid:			n.a.
Gas:			n.a.
Decomposition temperature:			n.d.
<b>Oxidizing properties</b>			
Not oxidising.			
Vapour pressure:			n.d.
Density (at 23 °C):		approx. 1,05 g/cm <sup>3</sup>	ISO 2811
Bulk density:			n.a.
Water solubility: (at 20 °C)			n.d.
<b>Solubility in other solvents</b>			
n.d.			
Partition coefficient n-octanol/water:			n.d.
Viscosity / dynamic: (at 23 °C)		280 - 420 mPa·s	ISO 2884
Viscosity / kinematic:			n.d.
Flow time:			n.d.

## ESKANOL EF HARDENER

Revision date: 23.08.2022

Product code: 00359-1293

Page 7 of 12

Relative vapour density:	n.d.
Evaporation rate:	n.d.
Solvent separation test:	n.d.
Solvent content:	0 %

### 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.  
Protect against direct sun radiation.

### 10.5. Incompatible materials

Oxidizing agents, Acids and bases.

### 10.6. Hazardous decomposition products

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

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in GB CLP Regulation

#### **Acute toxicity**

Harmful if inhaled.  
No toxicological data available.  
ATEmix/oral: > 2000 mg/kg

#### **Irritation and corrosivity**

Causes severe skin burns and eye damage.  
Causes serious eye damage.

#### **Sensitising effects**

May cause an allergic skin reaction. (4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with 3-aminomethyl-3,5,5-trimethylcyclohexylamine; 4,4'-isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with m-phenylenebis(methylamine))

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

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

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

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

#### **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.

## ESKANOL EF HARDENER

Revision date: 23.08.2022

Product code: 00359-1293

Page 8 of 12

### Additional information on tests

Classification in compliance with the assessment procedure specified in the Regulation (EC) no 1272/2008.

### 11.2. Information on other hazards

#### Endocrine disrupting properties

No data available

## 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

Not readily biodegradable.

### 12.3. Bioaccumulative potential

No data available

### 12.4. Mobility in soil

No data available

### 12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.

### 12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

### 12.7. 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

#### Disposal recommendations

Can be incinerated, when in compliance with local regulations.  
Where possible recycling is preferred to disposal.

#### List of Wastes Code - residues/unused products

080411 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); adhesive and sealant sludges containing organic solvents or other hazardous substances; 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:

POLYAMINES, LIQUID, CORROSIVE, N.O.S.  
(3-Aminomethyl-3,5,5-trimethylcyclohexylamine, Xylylenediamine)



**ESKANOL EF HARDENER**

Revision date: 23.08.2022

Product code: 00359-1293

Page 9 of 12

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

8

**14.4. Packing group:**

II

Hazard label:

8



Classification code:

C7

Special Provisions:

274

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:**POLYAMINES, LIQUID, CORROSIVE, N.O.S.  
(3-Aminomethyl-3,5,5-trimethylcyclohexylamine, Xylylenediamine)**14.3. Transport hazard class(es):**

8

**14.4. Packing group:**

II

Hazard label:

8



Classification code:

C7

Special Provisions:

274

Limited quantity:

1 L / 30 kg

Excepted quantity:

E2

**Marine transport (IMDG)****14.1. UN number:**

UN 2735

**14.2. UN proper shipping name:**POLYAMINES, LIQUID, CORROSIVE, N.O.S. (Isophorone diamine,  
xylylendiamine)**14.3. Transport hazard class(es):**

8

**14.4. Packing group:**

II

Hazard label:

8



Marine pollutant:

No

Special Provisions:

274

Limited quantity:

1 L / 30 kg

Excepted quantity:

E2

EmS:

F-A, S-B

Segregation group:

18 - alkalis

**Air transport (ICAO-TI/IATA-DGR)****14.1. UN number:**

UN 2735

**14.2. UN proper shipping name:**POLYAMINES, LIQUID, CORROSIVE, N.O.S. (Isophorone diamine,  
xylylendiamine)**14.3. Transport hazard class(es):**

8

## ESKANOL EF HARDENER

Revision date: 23.08.2022

Product code: 00359-1293

Page 10 of 12

### 14.4. Packing group:

II

Hazard label:

8



Special Provisions:

A3 A803

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. Maritime transport in bulk according to IMO instruments

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

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 75

2004/42/EC (VOC):

&lt; 45 %

Information according to 2012/18/EU

Not subject to 2012/18/EU (SEVESO III)

(SEVESO III):

#### National regulatory information

Employment restrictions:

Observe restrictions to employment for juveniles 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 hazard class (D):

2 - obviously hazardous to water

### 15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

## SECTION 16: Other information

### Changes

This data sheet contains changes from the previous version in section(s): 1,2,5,6,7,8,9,10,11,12,13,14,15.

## ESKANOL EF HARDENER

Revision date: 23.08.2022

Product code: 00359-1293

Page 11 of 12

### 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

### Classification for mixtures and used evaluation method according to GB CLP Regulation

Classification	Classification procedure
Acute Tox. 4; H332	Calculation method
Skin Corr. 1B; H314	Calculation method
Eye Dam. 1; H318	Calculation method
Skin Sens. 1; H317	Calculation method
Aquatic Chronic 3; H412	Calculation method

### Relevant H and EUH statements (number and full text)

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.
H361d	Suspected of damaging the unborn child.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH071	Corrosive to the respiratory tract.

### 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)



## Safety Data Sheet

according to UK REACH Regulation



### ESKANOL EF HARDENER

Revision date: 23.08.2022

Product code: 00359-1293

Page 12 of 12

*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*