

Trade name: Hardener S for cds-Mortar 0-3L flex special

Version: 2 / GB

Date revised: 26.06.2025

Substance number: 10292

Replaces Version: 1 / GB

Print date: 26.06.2025

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

### **1.1. Product identifier**

Hardener S for cds-Mortar 0-3L flex special

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

#### **Use of the substance/preparation**

Coating material

### **1.3. Details of the supplier of the safety data sheet**

#### **Address/Manufacturer**

cds Polymere GmbH &amp; Co. KG

Gau-Bickelheimer Str. 72

55576 Sprendlingen/Rhh.

Telephone no. +49(6701) 9350-0

Fax no. +49(6701) 9350-50

Information provided info@cds-polymere.de

by / telephone

### **1.4. Emergency telephone number**

Emergency CONTACT (24-Hour-Number): GBK GmbH +49 (0)6132-84463

## **SECTION 2: Hazards identification \*\*\***

### **2.1. Classification of the substance or mixture**

#### **Classification (Regulation (EC) No. 1272/2008)**

Classification (Regulation (EC) No. 1272/2008)

Skin Corr. 1B	H314
Eye Dam. 1	H318
Skin Sens. 1	H317
Repr. 2	H361fd
STOT SE 3	H335
STOT RE 1	H372
Asp. Tox. 1	H304
Aquatic Acute 1	H400
Aquatic Chronic 1	H410

The product is classified and labelled in accordance with Regulation (EC) No 1272/2008

For explanation of abbreviations see section 16.

### **2.2. Label elements**

#### **Labelling according to regulation (EC) No 1272/2008**

#### **Hazard pictograms**



#### **Signal word**

Danger

#### **Hazard statements**

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H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H335	May cause respiratory irritation.
H372	Causes damage to organs through prolonged or repeated exposure.
H304	May be fatal if swallowed and enters airways.
H410	Very toxic to aquatic life with long lasting effects.

**Precautionary statements**

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor.
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 POISON CENTER or doctor.

**Hazardous component(s) to be indicated on label (Regulation (EC) No. 1272/2008)**

contains	2-piperazin-1-ylethylamine; Reaction mass of (1-Phenylethyl)phenols and bis-(1-phenylethyl)phenols; amines, coco alkyl; (Z)-octadec-9-enylamine; Polyoxypropylenediamine ; 2,2,4-Trimethylhexane-1,6-diamine; Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol
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**2.3. Other hazards**

No special hazards have to be mentioned.

The product contains no PBT substances. The product contains substances meeting the vPvB criteria. See SECTION 3 in this safety data sheet. This product does not contain a substance that has endocrine disrupting properties with respect to human. The product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms.

**SECTION 3: Composition/information on ingredients \*\*\*****3.2. Mixtures****Hazardous ingredients****(Z)-octadec-9-enylamine**

CAS No.	112-90-3
EINECS no.	204-015-5
Registration no.	01-2119473797-19-XXXX
Concentration	>= 25 < 50 %
Classification (Regulation (EC) No. 1272/2008)	
Acute Tox. 4	H302
Asp. Tox. 1	H304
Skin Corr. 1B	H314
STOT SE 3	H335
STOT RE 2	H373
Aquatic Acute 1	H400
Aquatic Chronic 1	H410

## Concentration limits (Regulation (EC) No. 1272/2008)

Aquatic Acute 1	M = 10
Aquatic Chronic 1	M = 10

ATE	oral	1.200	mg/kg
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**Reaction mass of (1-Phenylethyl)phenols and bis-(1-phenylethyl)phenols**

EINECS no.	701-443-9
Registration no.	01-2119980970-27-XXXX

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Concentration	>=	25	<	50	%
Classification (Regulation (EC) No. 1272/2008)					
		Skin Irrit. 2		H315	
		Skin Sens. 1A		H317	
		Aquatic Chronic 2		H411	

**Polyoxypropylenediamine**

CAS No.	9046-10-0				
EINECS no.	618-561-0				
Registration no.	01-2119557899-12-XXXX				
Concentration	>=	10	<	25	%
Classification (Regulation (EC) No. 1272/2008)					
		Skin Corr. 1C		H314	
		Eye Dam. 1		H318	
		Aquatic Chronic 3		H412	

**2-piperazin-1-ylethylamine**

CAS No.	140-31-8				
EINECS no.	205-411-0				
Registration no.	01-2119471486-30-XXXX				
Concentration	>=	10	<	25	%
Classification (Regulation (EC) No. 1272/2008)					
		Acute Tox. 3		H311	
		Repr. 2		H361	
		STOT RE 1		H372	
		Skin Corr. 1B		H314	
		Eye Dam. 1		H318	
		Acute Tox. 4		H302	
		Skin Sens. 1		H317	
		Aquatic Chronic 3		H412	

ATE	dermal	866	mg/kg
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**Urethane Prepolymer**

Concentration	>=	1	<	10	%
Classification (Regulation (EC) No. 1272/2008)					
		Acute Tox. 4		H302	

cATpE	oral	500	mg/kg
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**amines, coco alkyl**

CAS No.	61788-46-3				
EINECS no.	262-977-1				
Registration no.	01-2119473798-17-XXXX				
Concentration	>=	3	<	5	%
Classification (Regulation (EC) No. 1272/2008)					
		Acute Tox. 4		H302	
		Asp. Tox. 1		H304	
		Skin Corr. 1B		H314	
		STOT SE 3		H335	
		STOT RE 2		H373	
		Aquatic Acute 1		H400	
		Aquatic Chronic 1		H410	

Concentration limits (Regulation (EC) No. 1272/2008)	
Aquatic Acute 1	M = 10
Aquatic Chronic	M = 10
1	

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ATE oral 1.240 mg/kg

**2,2,4-Trimethylhexane-1,6-diamine**

CAS No. 25513-64-8

EINECS no. 247-063-2

Registration no. 01-2119560598-25-XXXX

Concentration  $\geq 1$  < 5 %

Classification (Regulation (EC) No. 1272/2008)

Skin Corr. 1A H314

Acute Tox. 4 H302

Skin Sens. 1A H317

Eye Dam. 1 H318

ATE oral 910 mg/kg

**4-methylpentan-2-one**

CAS No. 108-10-1

EINECS no. 203-550-1

Registration no. 01-2119473980-30-XXXX

Concentration  $\geq 0,1$  < 1 %

Classification (Regulation (EC) No. 1272/2008)

Flam. Liq. 2 H225

Eye Irrit. 2 H319

Acute Tox. 4 H332

STOT SE 3 H336

Carc. 2 H351

**Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol**

EINECS no. 700-960-7

Registration no. 01-2119555274-38-XXXX

Concentration  $\geq 0,1$  < 1 %

Classification (Regulation (EC) No. 1272/2008)

Skin Irrit. 2 H315

Skin Sens. 1 H317

Aquatic Chronic 3 H412

## Supplemental information

The substance is contained in the Candidate List for inclusion in Annex XIV of Regulation (EC) No. 1907/2006 (REACH).

**Candidate List for inclusion in Annex XIV of Regulation (EC) No. 1907/2006 (REACH).**

Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol

**SECTION 4: First aid measures****4.1. Description of first aid measures****General information**

Remove contaminated, soaked clothing immediately and dispose of safely. Adhere to personal protective measures when giving first aid. Clean body thoroughly (bath, shower). In any case show the physician the Safety Data Sheet.

**After inhalation**

Ensure supply of fresh air. Remove affected person from danger area. Seek medical advice immediately. Give a Cortison spray at an early stage.

**After skin contact**

Wash off immediately with soap and water. Seek medical advice immediately.

**After eye contact**

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Separate eyelids, wash the eyes thoroughly with water (15 min.). Take medical treatment.

#### **After ingestion**

Call in a physician immediately and show him the Safety Data Sheet. Rinse mouth thoroughly with water. Let plenty of water be drunk in small gulps. Do not induce vomiting.

#### **Adhere to personal protective measures when giving first aid**

First aider: Pay attention to self-protection!

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

Until now no symptoms known so far.

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

#### **Hints for the physician / hazards**

In the case of swallowing with subsequent vomiting, aspiration of the lungs can occur which can lead to chemical pneumonia or asphyxiation.

## **SECTION 5: Firefighting measures**

### **5.1. Extinguishing media**

#### **Suitable extinguishing media**

Dry powder

#### **Non suitable extinguishing media**

Full water jet

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

In case of combustion evolution of dangerous gases possible. Carbon monoxide (CO); Carbon dioxide (CO<sub>2</sub>); Pyrolysis products

### **5.3. Advice for firefighters**

#### **Special protective equipment for fire-fighting**

Do not inhale explosion and/or combustion gases. In case of combustion use a suitable breathing apparatus. Wear full protective suit.

#### **Other information**

Collect contaminated fire-fighting water separately, must not be discharged into the drains. Fire residues and contaminated fire-fighting water must be disposed of in accordance with the local regulations. Observe manufacturer's / distributor's instructions.

## **SECTION 6: Accidental release measures**

### **6.1. Personal precautions, protective equipment and emergency procedures**

Use breathing apparatus if exposed to vapours/dust/aerosol. Avoid contact with skin, eyes and clothing. Refer to protective measures listed in Sections 7 and 8.

### **6.2. Environmental precautions**

Prevent spread over a wide area (e.g. by containment or oil barriers). Do not discharge into the drains/surface waters/groundwater. Do not discharge into the subsoil/soil. Retain and dispose of contaminated wash water. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

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

Pick up with absorbent material. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations. Containers in which spilt substance has been collected must be adequately labelled. Dispose of absorbed material in accordance with the regulations.

### **6.4. Reference to other sections**

Refer to protective measures listed in Sections 7 and 8.



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## **SECTION 7: Handling and storage**

### **7.1. Precautions for safe handling**

#### **Advice on safe handling**

Avoid formation of aerosols. Perform filling operations only at stations with exhaust ventilation facilities. Provide suitable exhaust ventilation at the processing machines. If workplace limits are exceeded, a respiratory protection approved for this particular job must be worn. Keep container tightly closed.

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

#### **Requirements for storage rooms and vessels**

Keep in original packaging, tightly closed. Storage rooms must be properly ventilated. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Provide solvent-resistant and impermeable floor.

#### **Hints on storage assembly**

Do not store together with foodstuffs.

#### **Further information on storage conditions**

Do not keep at temperatures above 20 °C.

### **7.3. Specific end use(s)**

Read attached instructions before use.

## **SECTION 8: Exposure controls/personal protection \*\*\***

### **8.1. Control parameters**

#### **Other information**

Abbreviations: E = respirable part, A = alveoli absorbable part  
There are not known any further control parameters.

#### **Derived No/Minimal Effect Levels (DNEL/DMEL)**

##### **2-piperazin-1-ylethylamine**

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	10,6	mg/m <sup>3</sup>

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Acute	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	10,6	mg/m <sup>3</sup>

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	0,015	mg/m <sup>3</sup>

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Short term	

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Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	0,08	mg/m <sup>3</sup>

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	3,33	mg/kg/d

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Short term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	20	mg/kg/d

**Reaction mass of (1-Phenylethyl)phenols and bis-(1-phenylethyl)phenols**

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	2,87	mg/kg

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	1,21	mg/m <sup>3</sup>

**amines, coco alkyl**

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	0,38	mg/m <sup>3</sup>

**(Z)-octadec-9-enylamine**

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	0,38	mg/m <sup>3</sup>

**Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol**

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Route of exposure	dermal	
Concentration	3,5	mg/kg

Type of value	Derived No Effect Level (DNEL)	
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Reference group	Worker	
Route of exposure	inhalative	
Concentration	1,4	mg/kg

**Polyoxypropylenediamine**

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	2,5	mg/kg/d

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	5,29	mg/m <sup>3</sup>

**4-methylpentan-2-one**

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	83	mg/m <sup>3</sup>

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Acute	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	208	mg/m <sup>3</sup>

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	83	mg/l

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Acute	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	208	mg/m <sup>3</sup>

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	11,8	mg/kg/d

**Predicted No Effect Concentration (PNEC)**



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**2-piperazin-1-ylethylamine**

Type of value	PNEC	
Type	Freshwater	
Concentration	0,058	mg/l
Type of value	PNEC	
Type	Marine	
Concentration	0,0058	mg/l
Type of value	PNEC	
Type	Water (intermittent release)	
Concentration	0,58	mg/l
Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	250	mg/l
Type of value	PNEC	
Type	Sediment	
Concentration	215	mg/kg
Type of value	PNEC	
Type	Marine sediment	
Concentration	21,5	mg/kg
Type of value	PNEC	
Type	Soil	
Concentration	1	mg/kg

**Reaction mass of (1-Phenylethyl)phenols and bis-(1-phenylethyl)phenols**

Type of value	PNEC	
Type	Freshwater	
Concentration	0,0115	mg/l
Type of value	PNEC	
Type	Marine	
Concentration	0,00115	mg/l

**amines, coco alkyl**

Type of value	PNEC	
Type	Freshwater	
Concentration	0,00026	mg/l
Type of value	PNEC	
Type	Marine	
Concentration	0,000026	mg/l
Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	0,55	mg/l
Type of value	PNEC	
Type	Freshwater sediment	
Concentration	0,1794	mg/kg
Type of value	PNEC	
Type	Marine sediment	

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Concentration 0,01794 mg/kg

Type of value PNEC  
 Type Soil  
 Concentration 10 mg/kg

**(Z)-octadec-9-enylamine**

Type of value PNEC  
 Type Freshwater  
 Concentration 0,00026 mg/l

Type of value PNEC  
 Type Saltwater  
 Concentration 0,000026 mg/l

Type of value PNEC  
 Type Sewage treatment plant (STP)  
 Concentration 0,55 mg/l

Type of value PNEC  
 Type Freshwater sediment  
 Concentration 0,1794 mg/kg

Type of value PNEC  
 Type Marine sediment  
 Concentration 0,01794 mg/kg

Type of value PNEC  
 Type Soil  
 Concentration 10 mg/kg

**2,2,4-Trimethylhexane-1,6-diamine**

Type of value PNEC  
 Type Freshwater  
 Concentration 0,102 mg/l

Type of value PNEC  
 Type Marine  
 Concentration 0,01 mg/l

**Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol**

Type of value PNEC  
 Type Freshwater  
 Concentration 0,014 mg/l

Type of value PNEC  
 Type Marine  
 Concentration 0,0014 mg/l

Type of value PNEC  
 Type Water (intermittent release)  
 Concentration 0,14 mg/l

Type of value PNEC  
 Type Sewage treatment plant (STP)  
 Concentration 2,4 mg/l



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Type of value	PNEC		
Type	Soil		
Concentration	212		mg/kg

Type of value	PNEC		
Type	Freshwater sediment		
Concentration	1064		mg/kg

Type of value	PNEC		
Type	Marine sediment		
Concentration	106		mg/kg

**Polyoxypropylenediamine**

Type of value	PNEC		
Type	Freshwater		
Concentration	0,015		mg/l

Type of value	PNEC		
Type	Water (intermittent release)		
Concentration	0,15		mg/l

Type of value	PNEC		
Type	Saltwater		
Concentration	0,014		mg/l

Type of value	PNEC		
Type	Sewage treatment plant (STP)		
Concentration	7,5		mg/l

Type of value	PNEC		
Type	Freshwater sediment		
Concentration	0,132		mg/kg

Type of value	PNEC		
Type	Marine sediment		
Concentration	0,125		mg/kg

Type of value	PNEC		
Type	Soil		
Concentration	0,018		mg/kg

Type of value	PNEC		
Type	Secondary poisoning		
Concentration	6,93		mg/kg

**4-methylpentan-2-one**

Type of value	PNEC		
Type	Freshwater		
Concentration	0,6		mg/l

Type of value	PNEC		
Type	Saltwater		
Concentration	0,06		mg/l

Type of value	PNEC		
Type	Sewage treatment plant (STP)		
Concentration	27,5		mg/l

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Type of value	PNEC		
Type	Freshwater sediment		
Concentration	8,27		mg/kg
Type of value	PNEC		
Type	Marine sediment		
Concentration	0,83		mg/kg
Type of value	PNEC		
Type	Soil		
Concentration	1,3		mg/kg

## 8.2. Exposure controls

### General protective and hygiene measures

Hold emergency shower available. Hold eye wash fountain available. Do not inhale gases/vapours/aerosols. Avoid contact with skin and eyes. Do not eat, drink or smoke during work time. Storage of foodstuffs in work rooms is forbidden. Wash hands before breaks and after work. Clean skin thoroughly after work; apply skin cream.

### Respiratory protection

If workplace limits are exceeded, a respiratory protection approved for this particular job must be worn. Short term: filter apparatus, combination filter A-P2; The respiratory protection must comply with the relevant CEN standards.

### Hand protection

Chemical resistant gloves

Appropriate Material nitrile  
 Material thickness  $\geq$  0,3 mm  
 Breakthrough time  $\geq$  480 min

Hand protection must comply with EN 374.

Check leak-tightness/impermeability prior to use.

### Eye protection

Safety glasses with side protection shield; Face shield; Eye protection must comply with EN 166.

### Body protection

Clothing as usual in the chemical industry. Protective shoes; Personal protective clothing must comply with the relevant CEN standards.

## SECTION 9: Physical and chemical properties \*\*\*

### 9.1. Information on basic physical and chemical properties

<b>Physical state</b>	liquid
<b>Odour</b>	amine-like
<b>Colour</b>	yellow
<b>Melting point</b>	
Remarks	not determined
<b>Freezing point</b>	
Remarks	not determined
<b>Boiling point or initial boiling point and boiling range</b>	
Remarks	not determined
<b>Flammability</b>	
evaluation	not determined
<b>Upper and lower explosive limits</b>	

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Remarks not determined

**Flash point**

Value &gt; 100 °C

**Ignition temperature**

Remarks not determined

**Decomposition temperature**

Remarks not determined

**pH value**Value 11 to 12  
Concentration/H<sub>2</sub>O 1 %**Viscosity**

Remarks not determined

**Solubility(ies)**

Remarks not determined

**Partition coefficient n-octanol/water (log value)**

Remarks not determined

**Vapour pressure**

Remarks not determined

**Density and/or relative density**Value 0,93 g/cm<sup>3</sup>  
Temperature 23 °C**Relative vapour density**

Remarks not determined

**9.2. Other information****Odour threshold**

Remarks not determined

**Evaporation rate (ether = 1) :**

Remarks not determined

**Solubility in water**

Remarks immiscible

**Explosive properties**

evaluation not determined

**Oxidising properties**

Remarks not determined

**Other information**

None known

**SECTION 10: Stability and reactivity****10.1. Reactivity**

No hazardous reactions when stored and handled according to prescribed instructions.

**10.2. Chemical stability**

No hazardous reactions known.

**10.3. Possibility of hazardous reactions**

No hazardous reactions known.

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**10.4. Conditions to avoid**

No hazardous reactions known.

**10.5. Incompatible materials**

Reactions with strong oxidising agents. Reactions with strong acids. Reactions with strong alkalies.

**10.6. Hazardous decomposition products**

Toxic gases/vapours, Irritant gases/vapours

**SECTION 11: Toxicological information \*\*\*****11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute oral toxicity**

ATE	2.316,87 36	mg/kg
Method	calculated value (Regulation (EC) No. 1272/2008)	
Remarks	Based on available data, the classification criteria are not met.	

**Acute oral toxicity (Components)****2-piperazin-1-ylethylamine**

Species	rat		
LD50	2140		mg/kg

**Reaction mass of (1-Phenylethyl)phenols and bis-(1-phenylethyl)phenols**

Species	rat		
LD50	> 2000		mg/kg
Method	OECD 423		

**amines, coco alkyl**

Species	rat		
LD50	1240	to	1388 mg/kg
Method	OECD 401		

**Polyoxypropylenediamine**

Species	rat		
LD50	2885		mg/kg
Method	OECD 401		

**(Z)-octadec-9-enylamine**

Species	rat		
LD50	1200	to	2000 mg/kg
Method	OECD 401		

**2,2,4-Trimethylhexane-1,6-diamine**

Species	rat		
LD50	910		mg/kg

**Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol**

Species	rat		
LD50	> 2000		mg/kg
Method	OECD 423		

**4-methylpentan-2-one**

Species	rat		
LD50	2080		mg/kg
Method	OECD 401		

**Acute dermal toxicity**

ATE	6.357,36 31	mg/kg
Method	calculated value (Regulation (EC) No. 1272/2008)	
Remarks	Based on available data, the classification criteria are not met.	

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**Acute dermal toxicity (Components)****2-piperazin-1-ylethylamine**

Species	rabbit		
LD50	866		mg/kg

**Reaction mass of (1-Phenylethyl)phenols and bis-(1-phenylethyl)phenols**

Species	rat		
LD50	> 2000		mg/kg
Method	OECD 402		

**Polyoxypropylenediamine**

Species	rabbit		
LD50	2980		mg/kg
Method	OECD 402		

**Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol**

Species	rat		
LD50	> 2000		mg/kg
Method	OECD 402		

**4-methylpentan-2-one**

Species	rat		
LD50	> 2000		mg/kg

**Acute inhalational toxicity**

Remarks	Based on available data, the classification criteria are not met.
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**Acute inhalative toxicity (Components)****Reaction mass of (1-Phenylethyl)phenols and bis-(1-phenylethyl)phenols**

Species	rat		
LC0	> 4,9		mg/l
Duration of exposure	4	h	
Administration/Form	Dust/Mist		
Method	OECD 403		

**Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol**

Species	rat		
LC0	4,9		mg/l
Duration of exposure	4	h	
Administration/Form	Dust/Mist		
Method	OECD 403		

**4-methylpentan-2-one**

ATE	11		mg/l
Administration/Form	Vapors		

**Skin corrosion/irritation**

evaluation	corrosive
Remarks	The classification criteria are met.

**Skin corrosion/irritation (Components)****amines, coco alkyl**

Species	rabbit
evaluation	corrosive

**Serious eye damage/irritation**

evaluation	corrosive
Remarks	The classification criteria are met.

**Sensitization**

evaluation	May cause sensitization by skin contact.
Remarks	The classification criteria are met.

**Subacute, subchronic, chronic toxicity**

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Remarks not determined

**Mutagenicity**

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

**Reproductive toxicity**evaluation Suspected of damaging fertility. Suspected of damaging the unborn child.  
Remarks The classification criteria are met.**Carcinogenicity**

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

**Specific Target Organ Toxicity (STOT)****Single exposure**Remarks The classification criteria are met.  
evaluation May cause respiratory irritation.**Repeated exposure**Remarks The classification criteria are met.  
evaluation Causes damage to organs through prolonged or repeated exposure**Specific Target Organ Toxicity (STOT) (Components)****amines, coco alkyl**

evaluation May cause respiratory irritation.

**Aspiration hazard**The classification criteria are met.  
Harmful: may cause lung damage if swallowed.**11.2 Information on other hazards****Endocrine disrupting properties with respect to humans**

The product does not contain a substance that has endocrine disrupting properties with respect to humans.

**Experience in practice**

Inhalation may lead to irritation of the respiratory tract.

**Other information**

No toxicological data are available.

**SECTION 12: Ecological information \*\*\*****12.1. Toxicity****General information**

not determined

**Fish toxicity (Components)****2-piperazin-1-ylethylamine**Species Fathead minnow (Pimephales promelas)  
LC50 2190 mg/l  
Duration of exposure 96 h**Reaction mass of (1-Phenylethyl)phenols and bis-(1-phenylethyl)phenols**Species zebra fish (Brachydanio rerio)  
LL50 14,8 mg/l  
Duration of exposure 96 h  
Method OECD 203**amines, coco alkyl**Species Fathead minnow (Pimephales promelas)  
LC50 > 0,01 to 0,1 mg/l  
Method OECD 203

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**Polyoxypropylenediamine**

Species rainbow trout (*Oncorhynchus mykiss*)  
 EC50 > 15 mg/l  
 Duration of exposure 96 h  
 Method OECD 203

**(Z)-octadec-9-enylamine**

Species Fathead minnow (*Pimephales promelas*)  
 LC50 > 0,01 to 0,1 mg/l  
 Duration of exposure 96 h  
 Method OECD 203

**2,2,4-Trimethylhexane-1,6-diamine**

Species golden orfe (*Leuciscus idus*)  
 LC50 174 mg/l  
 Duration of exposure 48 h

**Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol**

Species zebra fish (*Brachydanio rerio*)  
 LL50 25,8 mg/l  
 Duration of exposure 96 h  
 Method OECD 203

**4-methylpentan-2-one**

Species zebra fish (*Brachydanio rerio*)  
 LC50 > 179 mg/l  
 Duration of exposure 96 h  
 Method OECD 203

**Daphnia toxicity (Components)****2-piperazin-1-ylethylamine**

Species *Daphnia magna*  
 EC50 58 mg/l  
 Duration of exposure 48 h

**Reaction mass of (1-Phenylethyl)phenols and bis-(1-phenylethyl)phenols**

Species *Daphnia magna*  
 EC50 4,6 mg/l  
 Duration of exposure 48 h  
 Method OECD 202

**amines, coco alkyl**

Species *Daphnia magna*  
 EC50 > 0,01 to 0,1 mg/l  
 Duration of exposure 48 h  
 Method OECD 202

**amines, coco alkyl**

Species *Daphnia magna*  
 NOEC > 0,01 to 0,1  
 Duration of exposure 21 Days  
 Method OECD 211

**Polyoxypropylenediamine**

Species *Daphnia magna*  
 EC50 80 mg/l  
 Duration of exposure 48 h  
 Method OECD 202

**(Z)-octadec-9-enylamine**

Species *Daphnia magna*  
 EC50 > 0,01 to 0,1 mg/l  
 Duration of exposure 48 h  
 Method OECD 202

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**2,2,4-Trimethylhexane-1,6-diamine**

Species	Daphnia magna			
EC50	31,5			mg/l
Duration of exposure	24	h		

**Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol**

Species	Daphnia magna			
EL50	14	to	51	mg/l
Duration of exposure	48	h		
Method	OECD 202			

**4-methylpentan-2-one**

Species	Daphnia magna			
EC50	> 200			mg/l
Duration of exposure	48	h		
Method	OECD 202			

**4-methylpentan-2-one**

Species	Daphnia magna			
NOEC	30			mg/l
Duration of exposure	21	d		
Method	OECD 211			

**Algae toxicity (Components)****2-piperazin-1-ylethylamine**

Species	Pseudokirchneriella subcapitata			
EC50	> 1000			mg/l
Duration of exposure	72	h		

**Reaction mass of (1-Phenylethyl)phenols and bis-(1-phenylethyl)phenols**

Species	Scenedesmus subspicatus			
EL50	3,14			mg/l
Duration of exposure	72	h		
Method	OECD 201			

**amines, coco alkyl**

Species	Scenedesmus subspicatus			
EC50	> 0,01	to	0,1	mg/l
Duration of exposure	72	h		

**Polyoxypropylenediamine**

Species	Selenastrum capricornutum			
ErC50	15			mg/l
Duration of exposure	72	h		
Method	OECD 201			

**Polyoxypropylenediamine**

Species	Skeletonema costatum			
ErC50	141			mg/l
Duration of exposure	2	h		
Method	DIN EN ISO 10253			

**(Z)-octadec-9-enylamine**

Species	Desmodesmus subspicatus			
EC50	> 0,01	to	0,1	mg/l
Duration of exposure	72	h		
Method	OECD 201			

**2,2,4-Trimethylhexane-1,6-diamine**

Species	Scenedesmus subspicatus			
ErC50	43,5			mg/l
Duration of exposure	72	h		

**Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol**

Species	Scenedesmus subspicatus			
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EL50	15		mg/l
Duration of exposure	72	h	
Method	OECD 201		

**4-methylpentan-2-one**

Species	Algae		
EC50	> 146		mg/l
Duration of exposure	7	d	

**4-methylpentan-2-one**

Species	Algae		
NOEC	146		mg/l
Duration of exposure	7	Days	

**Bacteria toxicity (Components)**

**2,2,4-Trimethylhexane-1,6-diamine**

Species	Pseudomonas putida		
EC50	89		mg/l
Duration of exposure	17	h	

**Polyoxypropylenediamine**

Species	activated sludge		
EC50	750		mg/l
Duration of exposure	3	h	
Method	OECD 209		

**4-methylpentan-2-one**

Species	Pseudomonas putida		
EC50	275		mg/l
Duration of exposure	16	h	
Method	DIN 38412 / Part 8		

**12.2. Persistence and degradability**

**General information**

not determined

**Biodegradability (Components)**

**4-methylpentan-2-one**

Value	83		%
Duration of test evaluation	28	d	
Method	Readily biodegradable (according to OECD criteria) OECD 301F		

**12.3. Bioaccumulative potential**

**General information**

not determined

**Partition coefficient n-octanol/water (log value)**

Remarks not determined

**Octanol/water partition coefficient (log Pow) (Components)**

**(Z)-octadec-9-enylamine**

log Pow	3,7
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**4-methylpentan-2-one**

pOW	79
log Pow	1,9

**Bioconcentration factor (BCF) (Components)**

**(Z)-octadec-9-enylamine**

BCF	> 500
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## 12.4. Mobility in soil

### General information

not determined

## 12.5. Results of PBT and vPvB assessment

### General information

not determined

### Results of PBT and vPvB assessment

The product contains no PBT substances

The product contains vPvB-substances.

### Results of PBT and vPvB assessment (Ingredients)

#### Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol

The substance meets vPvB-criteria.

## 12.6 Endocrine disrupting properties

### General information

not determined

### Endocrine disrupting properties with respect to the environment

The product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms.

## 12.7. Other adverse effects

### General information

not determined

### General information / ecology

Do not allow to enter soil, waterways or waste water canal. Avoid release into the atmosphere.

## **SECTION 13: Disposal considerations**

### 13.1. Waste treatment methods

#### Disposal recommendations for the product

Allocation of a waste code number, according to the European Waste Catalogue (EWC), should be carried out in agreement with the regional waste disposal company.

#### Disposal recommendations for packaging

Packaging that cannot be cleaned should be disposed off in agreement with the regional waste disposal company.

## **SECTION 14: Transport information**

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	Land transport ADR/RID	Marine transport IMDG/GGVSee	Air transport ICAO/IATA
14.1. UN number or ID number	2735	2735	2735
14.2. UN proper shipping name	POLYAMINES, LIQUID, CORROSIVE, N.O.S. ((Z)-octadec-9-enylamine, Polyoxypropylenediamine )	POLYAMINES, LIQUID, CORROSIVE, N.O.S. ((Z)-octadec-9-enylamine, Polyoxypropylenediamine )	POLYAMINES, LIQUID, CORROSIVE, N.O.S. ((Z)-octadec-9-enylamine, Polyoxypropylenediamine )
14.3. Transport hazard class(es)	8	8	8
Label			
14.4. Packing group	II	II	II
Limited Quantity	1 I	1 I	
Transport category	2		
14.5. Environmental hazards	 ENVIRONMENTALLY HAZARDOUS	Marine Pollutant  ENVIRONMENTALLY HAZARDOUS	 ENVIRONMENTALLY HAZARDOUS
Tunnel restriction code	E		

**Information for all modes of transport**

**14.6. Special precautions for user**

The relevant transport regulations have to be considered.

**Other information**

**14.7 Maritime transport in bulk according to IMO instruments**

no data

**SECTION 15: Regulatory information \*\*\***

**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

**Major-accident categories acc. 2012/18/EU**

Category	E1	Hazardous to the Aquatic Environment	100000	kg	200000	kg
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**VOC**

VOC (EU)	0,39	%	3,6	g/l
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**Other regulations, restrictions and prohibition regulations**Handling epoxy resin systems safely (published by PlasticsEurope) [www.plasticseurope.org](http://www.plasticseurope.org)**Restriction according to annex XVII to regulation (EU) No 1907/2006**

Conditions of restriction for the entries Annex XVII REACH should be considered.

**Other information**

The product contains substances according to: Candidate List for inclusion in Annex XIV of Regulation (EC) No. 1907/2006 (REACH).

**15.2. Chemical safety assessment**

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

**SECTION 16: Other information**

Relevant changes compared with the previous version of the safety data sheet are marked with: \*\*\*

**Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:**

Classification (Regulation (EC) No. 1272/2008)

Skin Corr. 1B	H314	Calculation method
Eye Dam. 1	H318	Calculation method
Skin Sens. 1	H317	Calculation method
Repr. 2	H361fd	Calculation method
STOT SE 3	H335	Calculation method
STOT RE 1	H372	Calculation method
Asp. Tox. 1	H304	Calculation method
Aquatic Acute 1	H400	Calculation method
Aquatic Chronic 1	H410	Calculation method

**Hazard statements listed in Chapter 2/3**

H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H311	Toxic 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.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H361	Suspected of damaging fertility or the unborn child.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
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.
H412	Harmful to aquatic life with long lasting effects.

**CLP categories listed in Chapter 2/3**

Acute Tox. 3	Acute toxicity, Category 3
Acute Tox. 4	Acute toxicity, Category 4
Aquatic Acute 1	Hazardous to the aquatic environment, acute, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic, Category 2

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Aquatic Chronic 3	Hazardous to the aquatic environment, chronic, Category 3
Asp. Tox. 1	Aspiration hazard, Category 1
Carc. 2	Carcinogenicity, Category 2
Eye Dam. 1	Serious eye damage, Category 1
Eye Irrit. 2	Eye irritation, Category 2
Flam. Liq. 2	Flammable liquid, Category 2
Repr. 2	Reproductive toxicity, Category 2
Skin Corr. 1A	Skin corrosion, Category 1A
Skin Corr. 1B	Skin corrosion, Category 1B
Skin Corr. 1C	Skin corrosion, Category 1C
Skin Irrit. 2	Skin irritation, Category 2
Skin Sens. 1	Skin sensitization, Category 1
Skin Sens. 1A	Skin sensitization, Category 1A
STOT RE 1	Specific target organ toxicity - repeated exposure, Category 1
STOT RE 2	Specific target organ toxicity - repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity - single exposure, Category 3

### Abbreviations

ADR: Accord européen relatif au transport international des marchandises Dangereuses par Route

RID: Règlement concernant le transport international ferroviaire de marchandises dangereuses

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

CAS: Chemical Abstracts Service

EAK: Europäischer Abfallkatalog

VOC: Volatile Organic Compound

MAK: Maximale Arbeitsplatz-Konzentration

AGW: Arbeitsplatzgrenzwert

BGW: Biologischer Grenzwert

NOEC: No observable effect concentration

LD: Lethal dose

LC: Lethal concentration

PBT: Persistent, Bioaccumulative and Toxic

vPvB: Very persistent and very bioaccumulative

SVHC: Substances of very high concern

DNEL: Derived no effect level

PNEC: Predicted no effect concentration

OECD: Organisation for Economic Co-operation and Development

REACH: Registration, Evaluation, Autohorisation and Restriction of Chemicals

TRGS: Technische Regeln für Gefahrstoffe

### Information about Safety Data Sheets Preparers

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### Supplemental information

This information is based on our present state of knowledge. However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship.