

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

Version: 2 / GB

Date revised: 07.05.2025

Substance number: 10293

Replaces Version: 1 / GB

Print date: 08.05.2025

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

1.1. Product identifier

Hardener FH 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 & Co. KG

Gau-Bickelheimer Str. 72

55576 Sprendlingen/Rhh.

Telephone no. +49(6701) 9350-0

Fax no. +49(6701) 9350-50

Information provided by / telephone info@cds-polymere.de

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; Polyoxypropylenediamine ; Reaction mass of (1-Phenylethyl)phenols and bis-(1-phenylethyl)phenols; amines, coco alkyl; (Z)-octadec-9-enylamine; 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****Reaction mass of (1-Phenylethyl)phenols and bis-(1-phenylethyl)phenols**

EINECS no.	701-443-9			
Registration no.	01-2119980970-27-XXXX			
Concentration	>= 25	<	50	%
Classification (Regulation (EC) No. 1272/2008)	Skin Irrit. 2		H315	
	Skin Sens. 1A		H317	
	Aquatic Chronic 2		H411	

(Z)-octadec-9-enylamine

CAS No.	112-90-3			
EINECS no.	204-015-5			
Registration no.	01-2119473797-19-XXXX			
Concentration	>= 20	<	25	%
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	

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

Aquatic Acute 1 M = 10

Aquatic Chronic 1 M = 10

ATE oral 1.200 mg/kg

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

Polyoxypropylenediamine

CAS No. 9046-10-0

EINECS no. 618-561-0

Registration no. 01-2119557899-12-XXXX

Concentration ≥ 5 < 10 %

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

Skin Corr. 1C H314

Eye Dam. 1 H318

Aquatic Chronic 3 H412

Urethane PrepolymerConcentration ≥ 1 < 10 %

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

Acute Tox. 4 H302

cATpE oral 500 mg/kg

amines, coco alkyl

CAS No. 61788-46-3

EINECS no. 262-977-1

Registration no. 01-2119473798-17-XXXX

Concentration ≥ 5 < 10 %

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

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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 ≥ 3 < 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

2,4,6-tris(dimethylaminomethyl)phenol

CAS No. 90-72-2

EINECS no. 202-013-9

Registration no. 01-2119560597-27-XXXX

Concentration ≥ 1 < 10 %

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

Acute Tox. 4 H302

Skin Irrit. 2 H315

Eye Irrit. 2 H319

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**

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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

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 (CO₂); 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

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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.

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 ³

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 ³

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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 ³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Short term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	0,08	mg/m ³

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 ³

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 ³

2,4,6-tris(dimethylaminomethyl)phenol

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

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Mode of action	Systemic effects	
Concentration	0,53	mg/m ³

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	0,15	mg/kg/d

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Short term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	2,1	mg/m ³

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	0,6	mg/kg/d

(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 ³

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)	
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 ³

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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 ³

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 ³

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 ³

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)**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	
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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	
Concentration	0,01794	mg/kg

Type of value	PNEC	
Type	Soil	
Concentration	10	mg/kg

2,4,6-tris(dimethylaminomethyl)phenol

Type of value	PNEC	
Type	Water	
Concentration	0,046	mg/l

Type of value	PNEC	
Type	Marine	
Concentration	0,0046	mg/l

Type of value	PNEC	
Type	Water (intermittent release)	
Concentration	0,46	mg/l

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Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	0,2	mg/l
Type of value	PNEC	
Type	Freshwater sediment	
Concentration	0,262	mg/kg
Type of value	PNEC	
Type	Marine sediment	
Concentration	0,026	mg/kg
Type of value	PNEC	
Type	Soil	
Concentration	0,025	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	

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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
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

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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
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

Physical state liquid
Odour amine-like
Colour yellow

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Melting point

Remarks not determined

Freezing point

Remarks not determined

Boiling point or initial boiling point and boiling range

Remarks not determined

Flammability

evaluation not determined

Upper and lower explosive limits

Remarks not determined

Flash point

Value > 100 °C

Ignition temperature

Remarks not determined

Decomposition temperature

Remarks not determined

pH value

Value	11	to	12
Concentration/H ₂ 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 ³
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 not determined

Explosive properties

evaluation not determined

Oxidising properties

Remarks not determined

Other information

None known

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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.

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	2.471,81	mg/kg
	91	
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	

2,4,6-tris(dimethylaminomethyl)phenol

Species	rat	
LD50	2169	mg/kg
Remarks	The classification criteria are met.	

(Z)-octadec-9-enylamine

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

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

Species	rat
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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 5.275,66 mg/kg
 25
 Method calculated value (Regulation (EC) No. 1272/2008)
 Remarks Based on available data, the classification criteria are not met.

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.

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

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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

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

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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		

Polyoxypropylenediamine

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

2,4,6-tris(dimethylaminomethyl)phenol

Species	carp (Cyprinus carpio)		
LC50	175		mg/l
Duration of exposure	96	h	

(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

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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			

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			

2,4,6-tris(dimethylaminomethyl)phenol

Species	Daphnia magna			
EC50	718			mg/l
Duration of exposure	96	h		

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			
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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				

2,4,6-tris(dimethylaminomethyl)phenol

Species	Desmodemus subspicatus				
EC50		84			mg/l
Duration of exposure		72	h		
Method	OECD 201				

2,4,6-tris(dimethylaminomethyl)phenol

Species	Desmodemus subspicatus				
NOEC		6,25			mg/l
Duration of exposure		72	h		
Method	OECD 201				

(Z)-octadec-9-enylamine

Species	Desmodemus 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				
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)**2,4,6-tris(dimethylaminomethyl)phenol**

Species	activated sludge				
NOEC		2			mg/l
Duration of exposure		28	h		

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

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

Polyoxypropylenediamine

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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	28	d
evaluation	Readily biodegradable (according to OECD criteria)	
Method	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

4-methylpentan-2-one

pOW	79
log Pow	1,9

Bioconcentration factor (BCF) (Components)**(Z)-octadec-9-enylamine**

BCF > 500

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**

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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, 2-piperazin-1-ylethylamine)	POLYAMINES, LIQUID, CORROSIVE, N.O.S. ((Z)-octadec-9-enylamine, 2-piperazin-1-ylethylamine)	POLYAMINES, LIQUID, CORROSIVE, N.O.S. ((Z)-octadec-9-enylamine, 2-piperazin-1-ylethylamine)
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)	0,38	%	3,5	g/l
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Other regulations, restrictions and prohibition regulationsHandling epoxy resin systems safely (published by PlasticsEurope) 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.