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

1.1. Product identifier

Hardener for cds-Pouring Concrete UW flex

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)

Acute Tox. 4	H302
Skin Corr. 1B	H314
Eye Dam. 1	H318
Skin Sens. 1A	H317
Carc. 2	H351
Repr. 2	H361fd
STOT RE 2	H373
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

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H351	Suspected of causing cancer.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H373	May cause 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; benzyl alcohol; 2,2,4-Trimethylhexane-1,6-diamine; Urethane Prepolymer; Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol; 4-methylpentan-2-one

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

Urethane Prepolymer

Concentration >= 10 < 25 %
Classification (Regulation (EC) No. 1272/2008)

Acute Tox. 4	H302

cATpE	oral	500	mg/kg

(Z)-octadec-9-enylamine

CAS No. 112-90-3
EINECS no. 204-015-5

Registration no. 01-2119473797-19-XXXX
Concentration >= 10 < 20 %
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

2-piperazin-1-ylethylamine
CAS No. 140-31-8
EINECS no. 205-411-0
Registration no. 01-2119471486-30-XXXX
Concentration >= 5 < 10 %
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

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

ATE oral 1.240 mg/kg

benzyl alcohol
CAS No. 100-51-6
EINECS no. 202-859-9
Registration no. 01-2119492630-38-XXXX
Concentration >= 1 < 10 %
Classification (Regulation (EC) No. 1272/2008)

	Acute Tox. 4	H302	
	Acute Tox. 4	H332	
ATE	oral	1.620	mg/kg
cATpE	inhalative, Dust/Mist	1,5	mg/l
cATpE	inhalative, Vapors	11	mg/l

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

CAS No.	25513-64-8				
EINECS no.	247-063-2				
Registration no.	01-2119560598-25-XXXX				
Concentration	>=	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

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	>=	1	<	5	%

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	
cATpE	inhalative, Dust/Mist	1,5	mg/l
ATE	inhalative, Vapors	11	mg/l

Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol

EINECS no.	700-960-7				
Registration no.	01-2119555274-38-XXXX				
Concentration	>=	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

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_2); 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.

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

Exposure limit values

4-methylpentan-2-one

List	MAK(GKV 2003)			
Value	83	mg/m³	20	ppm(V)
Maximum limit value: 2(I); H, Y	Skin resorption / sensibilisation: H;		Pregnancy group: Y	Remarks: DFG, EU,

4-methylpentan-2-one

List	IOELV			
Value	83	mg/m³	20	ppm(V)
Short term exposure limit	208	mg/m³	50	ppm(V)
Remarks: 2000/39/EC				

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)

benzyl alcohol

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	8	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	22	mg/m³

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	110	mg/m³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Acute	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	40	mg/kg

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/m³

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/m³

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/m³

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/m³

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/m³

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/m³

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

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	
Mode of action	Systemic effects	
Concentration	0,53	mg/m³

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/m³

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/m³

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/m³

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/m³

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/m³

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)

benzyl alcohol

Type of value	PNEC	
Type	Water	
Concentration	1	mg/l

Type of value	PNEC	
Type	Water (intermittent release)	
Concentration	2,31	mg/l

Type of value	PNEC	
Type	Saltwater	
Concentration	0,1	mg/l

Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	39	mg/l

Type of value	PNEC	
Type	Freshwater sediment	
Concentration	5,27	mg/kg

Type of value	PNEC	
Type	Marine sediment	
Concentration	0,527	mg/kg

Type of value	PNEC	
Type	Soil	
Concentration	0,456	mg/kg

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

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

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

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
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

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
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

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
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	>=	0,3	mm
Breakthrough time	>=	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				
Melting point					
Remarks	not determined				
Freezing point					
Remarks	not determined				
Boiling point or initial boiling point and boiling range					
Value	>	100			°C
Pressure		1013	hPa		
Flammability					
evaluation	not determined				
Upper and lower explosive limits					
Remarks	not determined				
Flash point					
Value	>	65			°C
Ignition temperature					
Remarks	not determined				
Decomposition temperature					
Remarks	not determined				
pH value					
Value		11	to	12	
Concentration/H2O		1	%		
Viscosity					
Remarks	not determined				

Solubility(ies)
Remarks: not determined

Partition coefficient n-octanol/water (log value)
Remarks: not determined

Vapour pressure

Value	< 1		hPa
Temperature	50	°C	

Density and/or relative density

Value	0,95		g/cm³
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.

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	1.661,99	mg/kg

		05			
Method	calculated value (Regulation (EC) No. 1272/2008)				
Remarks	The classification criteria are met.				

Acute oral toxicity (Components)

benzyl alcohol

Species	mouse				
LD50		1040			mg/kg

benzyl alcohol

Species	rat				
LD50		1620			mg/kg

2-piperazin-1-ylethylamine

Species	rat				
LD50		2140			mg/kg

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

Species	rat				
LD50		910			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				

Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol

Species	rat				
LD50	>	2000			mg/kg
Method	OECD 423				

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				

4-methylpentan-2-one

Species	rat				
LD50		2080			mg/kg
Method	OECD 401				

Acute dermal toxicity

ATE		8.836,7347			mg/kg
Method	calculated value (Regulation (EC) No. 1272/2008)				
Remarks	Based on available data, the classification criteria are not met.				

Acute dermal toxicity (Components)

benzyl alcohol

Species	rabbit				
LD50	>	2000			mg/kg

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		

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

ATE	>	100	mg/l
Administration/Form	Vapors		
Method	calculated value (Regulation (EC) No. 1272/2008)		
ATE	>	20	mg/l
Administration/Form	Dust/Mist		
Method	calculated value (Regulation (EC) No. 1272/2008)		
Remarks	Based on available data, the classification criteria are not met.		

Acute inhalative toxicity (Components)

benzyl alcohol

Species	rat		
LC50	>	4,178	mg/l
Duration of exposure		4 h	
Administration/Form	Dust/Mist		
Method	OECD 403		

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

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

evaluation	Suspected of causing cancer.
Remarks	The classification criteria are met.

Specific Target Organ Toxicity (STOT)

Single exposure

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

Repeated exposure

Remarks	The classification criteria are met.
evaluation	May cause 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)

benzyl alcohol

Species	Fathead minnow (Pimephales promelas)		
LC50	460		mg/l
Duration of exposure	96	h	

benzyl alcohol

Species	golden orfe (Leuciscus idus)		
LC50	> 645		mg/l
Duration of exposure	96	h	

2-piperazin-1-ylethylamine

Species	Fathead minnow (Pimephales promelas)			
LC50	2190			mg/l
Duration of exposure	96	h		

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

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

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			

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)

benzyl alcohol

Species	Daphnia magna			
EC50	230			mg/l
Duration of exposure	48	h		

2-piperazin-1-ylethylamine

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

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

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

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				

(Z)-octadec-9-enylamine

Species	Daphnia magna				
EC50	>	0,01	to	0,1	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)

benzyl alcohol

Species	Pseudokirchneriella subcapitata		
IC50	770		mg/l
Duration of exposure	72	h	

2-piperazin-1-ylethylamine

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

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

Species	Scenedesmus subspicatus		
ErC50	43,5		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		

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			

2,4,6-tris(dimethylaminomethyl)phenol

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

2,4,6-tris(dimethylaminomethyl)phenol

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

(Z)-octadec-9-enylamine

Species	Desmodesmus subspicatus			
EC50	> 0,01	to	0,1	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)

benzyl alcohol

Species	Pseudomonas putida			
EC10	> 658			mg/l
Duration of exposure	16	h		

benzyl alcohol

Species	Pseudomonas putida			
EC50	390			mg/l
Duration of exposure	24	h		

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

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

2,4,6-tris(dimethylaminomethyl)phenol

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

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

not determined

Endocrine disrupting properties with respect to the envrionment

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

	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 l	1 l	
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

VOC

VOC (EU)	1,11	%	10,5	g/l

Other regulations, restrictions and prohibition regulations

Handling epoxy resin systems safely (published by PlasticsEurope) www.plasticseurope.org
This product meets the requirements of Regulation (EC) No. 1935/2004 on the limitation of VOC content.
EU2004/42/IIA(j)500(2010): <500g/l VOC

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)

Acute Tox. 4	H302	Calculation method
Skin Corr. 1B	H314	Calculation method
Eye Dam. 1	H318	Calculation method
Skin Sens. 1A	H317	Calculation method
Carc. 2	H351	Calculation method
Repr. 2	H361fd	Calculation method
STOT RE 2	H373	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
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 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.