

Trade name: Hardener FH-SuperNF for cds-Adhesive

Version: 2.0 / EN

Date revised 12.12.2022

Substance number: 13628

Replaces Version: - / EN

Print date: 12.12.2022

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

1.1. Product identifier

Hardener FH-SuperNF for cds-Adhesive

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

1.4. Emergency telephone number

cds-Labor / Tel. +49 (67 01) 93 50-28 (This number is reachable monday to friday from 8 am to 5 pm)

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. 1A	H314
Eye Dam. 1	H318
Skin Sens. 1	H317
Repr. 2	H361fd
STOT RE 1	H372
Aquatic Chronic 2	H411

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

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.
H372	Causes damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.

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Precautionary statements

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
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	3,6,9-Triazaundecan-1,11-diamin; 3-Aminopropyltriethoxysilan; 2-Piperazin-1-ylethylamin; 4-tert-Butylphenol; Phenol, styrolisiert; Fettsäuren, Tallöl-, Reaktionsprodukte m. Tetraethylenpentamin; m-Phenylenbis(methylamin); 2,2,4-Trimethylhexan-1,6-Diamin; Reaktionsprodukt von Para-Formaldehyd mit 4-tert-Butylphenol
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2.3. Other hazards

No special hazards have to be mentioned.

SECTION 3: Composition/information on ingredients**Hazardous ingredients****Phenol, styrolisiert**

CAS No.	61788-44-1
EINECS no.	262-975-0
Registration no.	01-2119980970-27-XXXX
Concentration	>= 10 < 25 %
Classification (Regulation (EC) No. 1272/2008)	
	Skin Irrit. 2 H315
	Skin Sens. 1A H317
	Aquatic Chronic 2 H411

2-Piperazin-1-ylethylamin

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

3,6,9-Triazaundecan-1,11-diamin

CAS No.	112-57-2
EINECS no.	203-986-2
Concentration	>= 10 < 25 %
Classification (Regulation (EC) No. 1272/2008)	
	Acute Tox. 4 H302
	Acute Tox. 4 H312
	Skin Corr. 1B H314
	Skin Sens. 1 H317
	Aquatic Chronic 2 H411

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Fettsäuren,Tallöl-,Reaktionsprodukte m. Tetraethylenpentamin

CAS No. 68953-36-6
 EINECS no. 273-201-6
 Registration no. 01-2119487006-38
 Concentration \geq 10 < 25 %
 Classification (Regulation (EC) No. 1272/2008)
 Skin Corr. 1A H314
 Skin Sens. 1 H317
 Aquatic Acute 1 H400
 Aquatic Chronic 1 H410

4-tert-Butylphenol

CAS No. 98-54-4
 EINECS no. 202-679-0
 Registration no. 01-2119489419-21-XXXX
 Concentration \geq 5 < 10 %
 Classification (Regulation (EC) No. 1272/2008)
 Skin Irrit. 2 H315
 Eye Dam. 1 H318
 Repr. 2 H361f
 Aquatic Chronic 1 H410

Concentration limits (Regulation (EC) No. 1272/2008)
 Aquatic Chronic H410 M = 1
 1

3-Aminopropyltriethoxysilan

CAS No. 919-30-2
 EINECS no. 213-048-4
 Registration no. 01-2119480479-24-XXXX
 Concentration \geq 5 < 10 %
 Classification (Regulation (EC) No. 1272/2008)
 Acute Tox. 4 H302
 Skin Corr. 1B H314

m-Phenylenbis(methylamin)

CAS No. 1477-55-0
 EINECS no. 216-032-5
 Registration no. 01-2119480150-50-XXXX
 Concentration \geq 5 < 10 %
 Classification (Regulation (EC) No. 1272/2008)
 Acute Tox. 4 H302
 Aquatic Chronic 3 H412
 Skin Corr. 1B H314
 Acute Tox. 4 H332
 Eye Dam. 1 H318
 Skin Sens. 1B H317

Reaktionsprodukt von Para-Formaldehyd mit 4-tert-Butylphenol

EINECS no. 939-071-6
 Registration no. 01-2119977133-36-XXXX
 Concentration \geq 5 < 10 %
 Classification (Regulation (EC) No. 1272/2008)
 Repr. 2 H361
 Skin Corr. 1A H314
 Eye Dam. 1 H318

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Skin Sens. 1	H317
STOT SE 3	H335
Aquatic Chronic 2	H411

2,2,4-Trimethylhexan-1,6-Diamin

CAS No. 25513-64-8

EINECS no. 247-063-2

Registration no. 01-2119560598-25-XXXX

Concentration \geq 1 $<$ 3 %

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

Skin Corr. 1A H314

Acute Tox. 4 H302

Skin Sens. 1A H317

Eye Dam. 1 H318

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.

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.

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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.

Storage classes

Storage class according to TRGS 510 6.1C

Combustible substances of acute toxicity, category 3 / hazardous substances that are toxic or produce chronic effects

Further information on storage conditions

Do not keep at temperatures above 20 °C.

SECTION 8: Exposure controls/personal protection

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8.1. Control parameters

Exposure limit values

m-Phenylenbis(methylamin)

List	ACGIH		
Type	C		
Value	0,1	mg/m ³	

m-Phenylenbis(methylamin)

List	MAK(GKV 2003)		
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4-tert-Butylphenol

List	TRGS 900		
Type	AGW		
Value	0,5	mg/m ³	0,08 ppm(V)

Biological limit values

4-tert-Butylphenol

List	BGW (TRGS 903)		
Value	2	mg/l	
Parameter	4-tert-Butylphenol		
Testing material	Urine (U)		
Test date	End of exposure or end of shift (b)		

Other information

Contains no substances with occupational exposure limit values.

Derived No/Minimal Effect Levels (DNEL/DMEL)

2-Piperazin-1-ylethylamin

Reference substance	2-Piperazin-1-ylethylamin		
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	2-Piperazin-1-ylethylamin		
Reference group	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	

Type of value	2-Piperazin-1-ylethylamin		
Reference group	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	2-Piperazin-1-ylethylamin		
Reference group	Derived No Effect Level (DNEL)		
Reference group	Worker		
Duration of exposure	Short term		
Route of exposure	inhalative		
Mode of action	Local effects		

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Concentration 0,08 mg/m³

Type of value 2-Piperazin-1-ylethylamin
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 2-Piperazin-1-ylethylamin
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

m-Phenylenbis(methylamin)

Type of value Derived No Effect Level (DNEL)

Reference group Worker

Route of exposure dermal

Concentration 0,33 mg/kg

Type of value Derived No Effect Level (DNEL)

Reference group Worker

Route of exposure inhalative

Concentration 1,2 mg/m³

Phenol, styrolisiert

Reference substance Phenol, styrolisiert

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 2,1 mg/kg

Type of value Phenol, styrolisiert
Derived No Effect Level (DNEL)

Reference group Worker

Duration of exposure Long term

Route of exposure inhalative

Mode of action Systemic effects

Concentration 7,4 mg/m³

4-tert-Butylphenol

Type of value Derived No Effect Level (DNEL)

Reference group Worker

Duration of exposure Long term

Route of exposure dermal

Concentration 0,071 mg/kg

Type of value Derived No Effect Level (DNEL)

Reference group Worker

Duration of exposure Long term

Route of exposure inhalative

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Concentration 0,5 mg/m³

Predicted No Effect Concentration (PNEC)

4-tert-Butylphenol

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

Type of value PNEC
 Type Marine
 Concentration 0,001 mg/l

2-Piperazin-1-ylethylamin

Reference substance 2-Piperazin-1-ylethylamin
 Type of value PNEC
 Type Freshwater
 Concentration 0,058 mg/l

Type of value 2-Piperazin-1-ylethylamin
 PNEC
 Type Marine
 Concentration 0,0058 mg/l

Type of value 2-Piperazin-1-ylethylamin
 PNEC
 Type Water (intermittent release)
 Concentration 0,58 mg/l

Type of value 2-Piperazin-1-ylethylamin
 PNEC
 Type Sewage treatment plant (STP)
 Concentration 250 mg/l

Type of value 2-Piperazin-1-ylethylamin
 PNEC
 Type Sediment
 Concentration 215 mg/kg

Type of value 2-Piperazin-1-ylethylamin
 PNEC
 Type Marine sediment
 Concentration 21,5 mg/kg

Type of value 2-Piperazin-1-ylethylamin
 PNEC
 Type Soil
 Concentration 1 mg/kg

m-Phenylenbis(methylamin)

Type of value PNEC
 Type Freshwater
 Concentration 0,094 mg/l

Type of value PNEC
 Type Marine
 Concentration 0,0094 mg/l

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2,2,4-Trimethylhexan-1,6-Diamin

Type of value	PNEC	
Type	Freshwater	
Concentration	0,102	mg/l
Type of value	PNEC	
Type	Marine	
Concentration	0,01	mg/l

Phenol, styrolisiert

Reference substance	Phenol, styrolisiert	
Type of value	PNEC	
Type	Freshwater	
Concentration	0,03	mg/l
Type of value	Phenol, styrolisiert	
Type	PNEC	
Type	Marine	
Concentration	0,003	mg/l

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.

Hand protection

Chemical resistant gloves
Appropriate Material neoprene

Eye protection

Safety glasses with side protection shield; Face shield

Body protection

Clothing as usual in the chemical industry. Protective shoes

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Form	liquid
Odour threshold	
Remarks	not determined
pH value	
Remarks	not determined
Melting point	
Remarks	not determined
Freezing point	
Remarks	not determined

Initial boiling point and boiling range

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Remarks not determined

Flash point

Value > 100 °C

Evaporation rate (ether = 1) :

Remarks not determined

Flammability (solid, gas)

not determined

Upper/lower flammability or explosive limits

Remarks not determined

Vapour pressure

Remarks not determined

Vapour density

Remarks not determined

DensityValue 0,96 g/cm³
Temperature 23 °C**Solubility in water**

Remarks not determined

Solubility(ies)

Remarks not determined

Partition coefficient: n-octanol/water

Remarks not determined

Ignition temperature

Remarks not determined

Decomposition temperature

Remarks not determined

Viscosity

Remarks not determined

Explosive properties

evaluation not determined

Oxidising properties

Remarks not determined

9.2. Other information**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.

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10.5. Incompatible materials

None known

10.6. Hazardous decomposition products

Toxic gases/vapours, Irritant gases/vapours

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Acute oral toxicity**

ATE	4.508,96 84	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)**3,6,9-Triazaundecan-1,11-diamin**

Species	rat	
LD50	3990	mg/kg

2-Piperazin-1-ylethylamin

Reference substance	Ethylbenzene	
Species	rat	
LD50	2140	mg/kg

m-Phenylenbis(methylamin)

Species	mouse	
LD50	1180	mg/kg

m-Phenylenbis(methylamin)

Species	rat	
LD50	980	mg/kg

2,2,4-Trimethylhexan-1,6-Diamin

Species	rat	
LD50	910	mg/kg

Phenol, styrolisiert

Species	rat	
LD50	> 2000	mg/kg

4-tert-Butylphenol

Species	rat	
LD50	> 2000	mg/kg

Fettsäuren,Tallöl-,Reaktionsprodukte m. Tetraethylenpentamin

Species	rat	
LD50	> 2000	mg/kg

Acute dermal toxicity

ATE	2.730,37 99	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)**2-Piperazin-1-ylethylamin**

Reference substance	2-Piperazin-1-ylethylamin	
Species	rabbit	
LD50	866	mg/kg

m-Phenylenbis(methylamin)

Species	rabbit	
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LD50 3100 mg/kg

m-Phenylenbis(methylamin)

Species rat

LD50 > 3100 mg/kg

Phenol, styrolisiert

Species rat

LD50 > 2000 mg/kg

4-tert-Butylphenol

Species rabbit

LD50 > 2000 mg/kg

3,6,9-Triazaundecan-1,11-diamin

Species rabbit

LD50 1260 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)**4-tert-Butylphenol**

Species rat

LC50 5600 mg/l

Duration of exposure 4 h

Method OECD 403

m-Phenylenbis(methylamin)

Species rat

LC50 1,34 mg/l

Duration of exposure 4 h

Administration/Form Dust/Mist

Phenol, styrolisiert

Species mouse

LC50 158,3 mg/l

Duration of exposure 4 h

Skin corrosion/irritation

evaluation corrosive

Remarks The classification criteria are met.

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.

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

Repeated exposureRemarks The classification criteria are met.
evaluation Causes damage to organs through prolonged or repeated exposure**Aspiration hazard**

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

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)**3,6,9-Triazaundecan-1,11-diamin**Species guppy (*Poecilia reticulata*)
LC50 420 mg/l
Duration of exposure 96 h**m-Phenylenbis(methylamin)**Species rainbow trout (*Oncorhynchus mykiss*)
LC50 > 100 mg/l
Duration of exposure 96 h**m-Phenylenbis(methylamin)**Species *Oryzias latipes*
LC50 87,6 mg/l
Duration of exposure 96 h**2,2,4-Trimethylhexan-1,6-Diamin**Species golden orfe (*Leuciscus idus*)
LC50 174 mg/l
Duration of exposure 48 h**4-tert-Butylphenol**Species rainbow trout (*Oncorhynchus mykiss*)
LC50 > 1 mg/l
Duration of exposure 96 h**4-tert-Butylphenol**Species Fathead minnow (*Pimephales promelas*)
LC50 5,1 mg/l
Duration of exposure 96 h**4-tert-Butylphenol**Species golden orfe (*Leuciscus idus*)
LC50 1,5 mg/l
Duration of exposure 48 h

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2-Piperazin-1-ylethylamin

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

Phenol, styrolisiert

Reference substance	Phenol, styrolisiert	
Species	zebra fish (Brachydanio rerio)	
LC50	5,6	mg/l
Duration of exposure	96	h

Fettsäuren,Tallöl-,Reaktionsprodukte m. Tetraethylenpentamin

Species	zebra fish (Brachydanio rerio)	
LC50	0,19	mg/l
Duration of exposure	96	h

Reaktionsprodukt von Para-Formaldehyd mit 4-tert-Butylphenol

Species	rainbow trout (Oncorhynchus mykiss)	
LL50	7,9	mg/l
Duration of exposure	96	h

Daphnia toxicity (Components)**3,6,9-Triazaundecan-1,11-diamin**

Species	Daphnia magna	
EC50	24	mg/l
Duration of exposure	48	h

m-Phenylenbis(methylamin)

Species	Daphnia magna	
EC50	15,2	mg/l
Duration of exposure	48	h

2,2,4-Trimethylhexan-1,6-Diamin

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

Phenol, styrolisiert

Reference substance	Phenol, styrolisiert	
Species	Daphnia magna	
EC50	4,6	mg/l
Duration of exposure	48	h

4-tert-Butylphenol

Species	Daphnia magna	
EC50	3,9	mg/l
Duration of exposure	48	h

2-Piperazin-1-ylethylamin

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

Fettsäuren,Tallöl-,Reaktionsprodukte m. Tetraethylenpentamin

Species	Daphnia magna	
EC50	0,18	mg/l
Duration of exposure	48	h

Reaktionsprodukt von Para-Formaldehyd mit 4-tert-Butylphenol

Species	Daphnia magna	
EL50	8,98	mg/l
Duration of exposure	48	h

Algae toxicity (Components)**3,6,9-Triazaundecan-1,11-diamin**

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Species	Pseudokirchneriella subcapitata		
IC50	2		mg/l
Duration of exposure	72	h	

m-Phenylenbis(methylamin)

Species	Pseudokirchneriella subcapitata		
EC50	33,3		mg/l
Duration of exposure	72	h	

2,2,4-Trimethylhexan-1,6-Diamin

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

Phenol, styrolisiert

Reference substance	Phenol, styrolisiert		
Species	Scenedesmus subspicatus		
EL50	3,14		mg/l
Duration of exposure	72	h	

4-tert-Butylphenol

Species	Selenastrum capricornutum		
EC50	<	100	mg/l
Duration of exposure	72	h	

4-tert-Butylphenol

Species	Pseudokirchneriella subcapitata		
EC50	14		mg/l
Duration of exposure	72	h	

2-Piperazin-1-ylethylamin

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

Fettsäuren,Tallöl-,Reaktionsprodukte m. Tetraethylenpentamin

Species	Pseudokirchneriella subcapitata		
EC50	0,638		mg/l
Duration of exposure	72	h	

Reaktionsprodukt von Para-Formaldehyd mit 4-tert-Butylphenol

Species	Pseudokirchneriella subcapitata		
EL50	4,94		mg/l
Duration of exposure	72	h	

Bacteria toxicity (Components)**m-Phenylenbis(methylamin)**

Species	activated sludge		
EC50	>	1000	mg/l
Duration of exposure	0,5	h	

2,2,4-Trimethylhexan-1,6-Diamin

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

4-tert-Butylphenol

Species	activated sludge		
EC50	10		mg/l
Duration of exposure	3	h	

Fettsäuren,Tallöl-,Reaktionsprodukte m. Tetraethylenpentamin

Species	activated sludge		
EC50	114		mg/l
Duration of exposure	3	h	

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Reaktionsprodukt von Para-Formaldehyd mit 4-tert-Butylphenol

Species	activated sludge		
EC50	66		mg/l
Duration of exposure	3	h	

12.2. Persistence and degradability**General information**

not determined

12.3. Bioaccumulative potential**General information**

not determined

Partition coefficient: n-octanol/water

Remarks not determined

12.4. Mobility in soil**General information**

not determined

12.5. Results of PBT and vPvB assessment**General information**

not determined

12.6. 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
Tunnel restriction code	E		
14.1. UN number	2735	2735	2735
14.2. UN proper shipping name	POLYAMINES, LIQUID, CORROSIVE, N.O.S. (2-Piperazin-1-ylethylamin, 3,6,9-Triazaundecan-1,11-diamin)	POLYAMINES, LIQUID, CORROSIVE, N.O.S. (2-Piperazin-1-ylethylamin, 3,6,9-Triazaundecan-1,11-diamin)	POLYAMINES, LIQUID, CORROSIVE, N.O.S. (2-Piperazin-1-ylethylamin, 3,6,9-Triazaundecan-1,11-diamin)
14.3. Transport hazard class(es)	8	8	8
Label			
14.4. Packing group	III	III	III
Limited Quantity	5 l		
Transport category	3		
14.5. Environmental hazards	 ENVIRONMENTALLY HAZARDOUS	Marine Pollutant 	 ENVIRONMENTALLY HAZARDOUS

SECTION 15: Regulatory information

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

Water Hazard Class (Germany)

Water Hazard Class WGK 2
(Germany)

VOC

VOC (EU) 14,5 % 139,2 g/l

15.2. Chemical safety assessment

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

SECTION 16: Other information

Hazard statements listed in Chapter 3

H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.

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H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H361	Suspected of damaging fertility or the unborn child.
H361f	Suspected of damaging fertility.
H372	Causes 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 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
Eye Dam. 1	Serious eye damage, Category 1
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
Skin Sens. 1B	Skin sensitization, Category 1B
STOT RE 1	Specific target organ toxicity - repeated exposure, Category 1
STOT SE 3	Specific target organ toxicity - single exposure, Category 3

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.