

according to Regulation (EC) No 1907/2006

**Systopp - EcoRepair 1 (crosslinker)**

Print date: 19.03.2020

Product code: 43.700.999

Page 1 of 9

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Systopp - EcoRepair 1 (crosslinker)

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

Curing agent (crosslinking agent)

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

Company name:	KNOPP GmbH.	
Street:	Adolf - Oesterheld - Str. 1	
Place:	D-97337 Dettelbach	
Telephone:	+49932491990	Telefax: +499324919966
e-mail:	info@knopp-chemie.com	
Internet:	www.knopp-chemie.com	

**1.4. Emergency telephone number:**Tox Info Suisse Tel.: 145  
Giftnotruf Berlin (24 h): 030 30686700**Further Information**

Article no.: 43.700. \*

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Hazard categories:

Acute toxicity: Acute Tox. 4

Acute toxicity: Acute Tox. 4

Skin corrosion/irritation: Skin Corr. 1B

Serious eye damage/eye irritation: Eye Dam. 1

Respiratory or skin sensitisation: Skin Sens. 1

Specific target organ toxicity - repeated exposure: STOT RE 2

Hazardous to the aquatic environment: Aquatic Chronic 3

Hazard Statements:

Harmful if swallowed.

Harmful if inhaled.

Causes severe skin burns and eye damage.

Causes serious eye damage.

May cause an allergic skin reaction.

May cause damage to organs through prolonged or repeated exposure.

Harmful to aquatic life with long lasting effects.

**2.2. Label elements****Hazard components for labelling**

benzyl alcohol 100 %

Polymer aus Formaldehyd und Aminobenzol, hydriert

4,4'-Methylenebis(cyclohexylamine)

2,4,6-tris(dimethylaminomethyl)phenol 100 %

Signal word: Danger

Pictograms: GHS05-GHS07-GHS08

**Systopp - EcoRepair 1 (crosslinker)**

Print date: 19.03.2020

Product code: 43.700.999

Page 2 of 9

**Hazard statements**

H302+H332	Harmful if swallowed or if inhaled.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H373	May cause damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.

**Precautionary statements**

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.

**SECTION 3: Composition/information on ingredients****3.2. Mixtures****Hazardous components**

EC No	Chemical name	Quantity
CAS No	Classification according to Directive 67/548/EEC	
Index No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
REACH No		
202-859-9	benzyl alcohol 100 %	
100-51-6	Xn - Harmful R20/22	
603-057-00-5	Acute Tox. 4, Acute Tox. 4; H332 H302	
603-894-6	Polymer aus Formaldehyd und Aminobenzol, hydriert	25 - < 30 %
135108-88-2		
	Acute Tox. 4, Skin Corr. 1C, Skin Sens. 1, STOT RE 2, Aquatic Chronic 3; H302 H314 H317 H373 H412	
217-168-8	4,4'-Methylenebis(cyclohexylamine)	20 - < 25 %
1761-71-3	C - Corrosive, Xn - Harmful, N - Dangerous for the environment R22-35-43-48/22-51-53	
	Acute Tox. 4, Skin Corr. 1B, Skin Sens. 1, STOT RE 2, Aquatic Chronic 2; H302 H314 H317 H373 H411	
202-013-9	2,4,6-tris(dimethylaminomethyl)phenol 100 %	5 - < 10 %
90-72-2	Xn - Harmful, Xi - Irritant R22-36/38	
603-069-00-0	Acute Tox. 4, Eye Irrit. 2, Skin Irrit. 2; H302 H319 H315	

Full text of R, H and EUH phrases: see section 16.

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

**Systopp - EcoRepair 1 (crosslinker)**

Print date: 19.03.2020

Product code: 43.700.999

Page 3 of 9

**General information**

First aider: Pay attention to self-protection! Move victim out of danger zone.

**After inhalation**

Provide fresh air. In case of breathing difficulties administer oxygen. Medical treatment necessary.

**After contact with skin**

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. Medical treatment necessary.

**After contact with eyes**

In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.

**After ingestion**

Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. Hazards identification: Stomach perforation. Call a physician immediately. Do not allow a neutralisation agent to be drunk.

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings.

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

The product itself does not burn.

In case of fire may be liberated: Carbon monoxide Nitrogen oxides (NOx). Carbon dioxide (CO2).

**5.3. Advice for firefighters**

Wear a self-contained breathing apparatus and chemical protective clothing. Full protective suit.

**Additional information**

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Wear personal protection equipment.

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains.

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

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

**SECTION 7: Handling and storage****7.1. Precautions for safe handling****Advice on safe handling**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaustion at critical locations.

**Further information on storage conditions**

storage temperature:

### Systopp - EcoRepair 1 (crosslinker)

Print date: 19.03.2020

Product code: 43.700.999

Page 4 of 9

of °C: +5 up to °C: +30

Maximum period of storage (time): 12 Monate

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Additional advice on limit values

To date, no national critical limit values exist.

### 8.2. Exposure controls

#### Occupational exposure controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

#### Protective and hygiene measures

Remove contaminated, saturated clothing immediately. Protect skin by using skin protective cream. After work, wash hands and face. When using do not eat or drink.

#### Respiratory protection

If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn.

Suitable respiratory protective equipment: Filter respirator (DIN EN 147). Combination filter device (DIN EN 141).. \*

Filtertyp: AX \*

#### Hand protection

Single-use gloves. NBR (Nitrile rubber).

Breakthrough times and swelling properties of the material must be taken into consideration.

penetration time (maximum wearing period): 10 min &lt; BTT &lt; 480 min \* (BTT = Break Through Time) \*

Thickness of glove material: &gt; 0,4 mm \*

German Industry Norms (DIN) / European Norms (EN): DIN EN 374

#### Eye protection

Suitable eye protection: Tightly sealed safety glasses. Tightly sealed safety glasses.

German Industry Norms (DIN) / European Norms (EN): DIN EN 166 \*

#### Skin protection

Suitable protective clothing: Single-use suit. Overall. Boots.

## SECTION 9: Physical and chemical properties

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

Physical state:	liquid
Colour:	colourless
Odour:	characteristic

#### Test method

pH-Value (at 20 °C):

#### Changes in the physical state

Initial boiling point and boiling range:	206 °C
Flash point:	>100 °C
Ignition temperature:	380 °C
Vapour pressure: (at 50 °C)	< 5 hPa
Density (at 20 °C):	1,0 g/cm <sup>3</sup>
Water solubility:	partially soluble

**Systopp - EcoRepair 1 (crosslinker)**

Print date: 19.03.2020

Product code: 43.700.999

Page 5 of 9

Viscosity / dynamic:  
(at 20 °C) 280 mPa·s

Solvent content: 40,60 %

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

No hazardous reactions when handling and storage.

**10.2. Chemical stability**

No decomposition if stored and handled correctly.

**10.3. Possibility of hazardous reactions**

Polymerization does not occur.

**10.4. Conditions to avoid**

Materials to avoid:  
Lewis-acid. Acid, concentrated.  
Carbon dioxide. Nitrite.  
Alcohols. aldehydes.

**10.5. Incompatible materials**

Brass. Copper containing metals.

**10.6. Hazardous decomposition products**

Ammonia. Hydrocarbons, aromatic. Amines.  
Carbon dioxide. Carbon monoxide.

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

Acute toxicity, inhalant. Acute toxicity, dermal.

CAS No	Chemical name	Exposure route	Method	Dose	Species	Source
100-51-6	benzyl alcohol 100 %	oral	LD50	1230 mg/kg	Rat	GESTIS
		inhalation vapour	ATE	11 mg/l		
		inhalation aerosol	ATE	1,5 mg/l		
135108-88-2	Polymer aus Formaldehyd und Aminobenzol, hydriert	oral	ATE	500 mg/kg		
1761-71-3	4,4'-Methylenebis(cyclohexylamine)	oral	ATE	500 mg/kg		
90-72-2	2,4,6-tris(dimethylaminomethyl)phenol 100 %	oral	ATE	500 mg/kg		

**Irritation and corrosivity**

after ingestion: Irritation and etching. Hazards identification: Stomach perforation.

**Sensitising effects**

May cause sensitization by skin contact.

**Severe effects after repeated or prolonged exposure**

Danger of serious damage to health by prolonged exposure.

## Systopp - EcoRepair 1 (crosslinker)

Print date: 19.03.2020

Product code: 43.700.999

Page 6 of 9

### Additional information on tests

The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

## SECTION 12: Ecological information

### 12.1. Toxicity

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

LC50: *Lepomis macrochirus* 96 h: 10 mg/l (Benzylalkohol)

LC50: *Leuciscus idus* (golden orfe) 96 h: 46 - 100 mg/l

(2,2'-Dimethyl-4,4'-methylenbis(cyclohexylamin)3-Aminomethyl-3,5,5-trimethylcyclohexylamin

### 12.2. Persistence and degradability

No data available

### 12.3. Bioaccumulative potential

No data available

### Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
100-51-6	benzyl alcohol 100 %	1,05

### 12.4. Mobility in soil

No data available

### Further information

Do not allow to enter into surface water or drains. The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Advice on disposal

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

Waste disposal according to EC Directives 75/442/EEC and 91/689/EEC on waste and hazardous waste in their latest versions. \*

#### Waste disposal number of waste from residues/unused products

080499 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU of adhesives and sealants (including waterproofing products); wastes not otherwise specified

#### Waste disposal number of used product

080499 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU of adhesives and sealants (including waterproofing products); wastes not otherwise specified

#### Waste disposal number of contaminated packaging

150104 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); metallic packaging

#### Contaminated packaging

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

## SECTION 14: Transport information

**Systopp - EcoRepair 1 (crosslinker)**

Print date: 19.03.2020

Product code: 43.700.999

Page 7 of 9

**Land transport (ADR/RID)**

<b>14.1. UN number:</b>	UN2735
<b>14.2. UN proper shipping name:</b>	AMINES, LIQUID, CORROSIVE, N.O.S.
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	II
Hazard label:	8
Classification code:	C7
Special Provisions:	274
Limited quantity:	1 L
Transport category:	2
Hazard No:	80
Tunnel restriction code:	E

**Other applicable information (land transport)**

E2

**Inland waterways transport (ADN)**

<b>14.1. UN number:</b>	UN2735
<b>14.2. UN proper shipping name:</b>	AMINES, LIQUID, CORROSIVE, N.O.S.
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	II
Hazard label:	8
Classification code:	C7
Special Provisions:	274
Limited quantity:	1 L

**Other applicable information (inland waterways transport)**

E2

**Marine transport (IMDG)**

<b>14.1. UN number:</b>	UN2735
<b>14.2. UN proper shipping name:</b>	AMINES, LIQUID, CORROSIVE, N.O.S.
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	II
Hazard label:	8
Special Provisions:	274
Limited quantity:	1 L
EmS:	F-A, S-B

**Other applicable information (marine transport)**

E2

**Air transport (ICAO-TI/IATA-DGR)**

<b>14.1. UN number:</b>	UN2735
<b>14.2. UN proper shipping name:</b>	AMINES, LIQUID, CORROSIVE, N.O.S.
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	II
Hazard label:	8
Special Provisions:	A3 A803
Limited quantity Passenger:	0.5 L
IATA-packing instructions - Passenger:	851
IATA-max. quantity - Passenger:	1 L

according to Regulation (EC) No 1907/2006

**Systopp - EcoRepair 1 (crosslinker)**

Print date: 19.03.2020

Product code: 43.700.999

Page 8 of 9

IATA-packing instructions - Cargo: 855  
 IATA-max. quantity - Cargo: 30 L

**Other applicable information (air transport)**

E2  
 Passenger-LQ: Y840

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: no

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

1999/13/EC (VOC): 54 % (540 g/l)

**Additional information**

Jugendarbeitsschutzverordnung (ArGV 5, SR 822.115): Jugendliche bis zum vollendeten 18. Altersjahr dürfen bei ihrer Arbeit nur dann mit dieser Zubereitung in Kontakt kommen oder dieser ausgesetzt werden, sofern das Bundesamt für Berufsbildung und Technologie (BBT) oder das Staatssekretariat für Wirtschaft (SECO) eine Ausnahme bewilligt hat. \*

**National regulatory information**

Employment restrictions: Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

Water contaminating class (D): 2 - clearly water contaminating

**15.2. Chemical safety assessment**

For this mixture a chemical safety assessment has been carried out.

**SECTION 16: Other information****Relevant R phrases (number and full text)**

20/22 Harmful by inhalation and if swallowed.  
 22 Harmful if swallowed.  
 35 Causes severe burns.  
 36/38 Irritating to eyes and skin.  
 43 May cause sensitisation by skin contact.  
 48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.  
 51 Toxic to aquatic organisms.  
 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
 53 May cause long-term adverse effects in the aquatic environment.

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

H302 Harmful if swallowed.  
 H302+H332 Harmful if swallowed or if inhaled.  
 H314 Causes severe skin burns and eye damage.  
 H315 Causes skin irritation.  
 H317 May cause an allergic skin reaction.  
 H319 Causes serious eye irritation.  
 H332 Harmful if inhaled.  
 H373 May cause damage to organs through prolonged or repeated exposure.  
 H411 Toxic to aquatic life with long lasting effects.  
 H412 Harmful to aquatic life with long lasting effects.

**Further Information**

\* Data changed compared with the previous version  
 Die vorliegende Ausgabe des Sicherheitsdatenblatts ersetzt alle vorherigen Ausgaben .



**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Systopp - EcoRepair 1 (crosslinker)**

Print date: 19.03.2020

Product code: 43.700.999

Page 9 of 9

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

The information is based on present level of our knowledge. It does not, however, give assurances of product properties and establishes no contract legal rights.

The receiver of our product is singularly responsible for adhering to existing laws and regulations.

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