

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 24.10.2019

Version number 7

Revision: 24.10.2019

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**Trade name: **Hardener for 2K Epoxy Primer**

Article number: 88112, 88132

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

No further relevant information available.

Application of the substance / the mixture

Priming
Hardening agent/ Curing agent**1.3 Details of the supplier of the safety data sheet**Manufacturer/Supplier: AKEMI chemisch technische Spezialfabrik GmbH
Lechstrasse 28
D 90451 NürnbergTel. +49(0)911-642960
Fax. +49(0)911-644456
e-mail info@akemi.de

Further information obtainable from:

Laboratory

1.4 Emergency telephone number:Product Safety Department AKEMI chemisch technische Spezialfabrik GmbH
Tel. +49(0)911-64296-59
Reachable during the following office hours:
Monday – Thursday from 07:30 a.m. to 16:30 p.m.
Friday from 07:30 a.m. to 13:30 p.m.
+44 (171) 635 91 91
National Poison Inform. Centre
Medical Toxicology Unit
Avalonley Road
London SE14 5ER**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture**

Classification according to Regulation (EC) No 1272/2008



GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS08 health hazard

STOT RE 2 H373 May cause damage to the central nervous system and the hearing organs through prolonged or repeated exposure. Route of exposure: Inhalation.

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.



GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

STOT SE 3 H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

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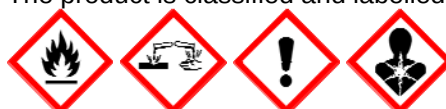
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- Response: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF exposed or concerned: Get medical advice/attention.
- Storage: Store in a well-ventilated place. Keep cool.
Store in a well-ventilated place. Keep container tightly closed.
Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

· **2.2 Label elements**

- Labelling according to Regulation (EC) No 1272/2008
- Hazard pictograms

The product is classified and labelled according to the CLP regulation.



GHS02 GHS05 GHS07 GHS08

-
- Signal word

Danger

-
- Hazard-determining components of labelling:

xylene
butanol
1-methoxy-2-propanol
ethylbenzene

-
- Hazard statements

H226 Flammable liquid and vapour.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.
H373 May cause damage to the central nervous system and the hearing organs through prolonged or repeated exposure. Route of exposure: Inhalation.

-
- Precautionary statements

H304 May be fatal if swallowed and enters airways.
H412 Harmful to aquatic life with long lasting effects.

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260 Do not breathe mist/vapours/spray.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P331 Do NOT induce vomiting.
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.
P312 Call a POISON CENTER/doctor if you feel unwell.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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- Additional information:

Contains 2,4,6-tris(dimethylaminomethyl)phenol. May produce an allergic reaction.

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- **2.3 Other hazards** The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds or formaldehydes.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures

- **Description:** Mixture: consisting of the following components.

Dangerous components:

CAS: 1330-20-7 EINECS: 215-535-7 Index number: 601-022-00-9 Reg.nr.: 01-2119555267-33 01-2119488216-32	xylene Flam. Liq. 3, H226 STOT RE 2, H373; Asp. Tox. 1, H304 Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	25-50%
CAS: 107-98-2 EINECS: 203-539-1 Index number: 603-064-00-3 Reg.nr.: 01-2119457435-35 02-2119752510-47-0000	1-methoxy-2-propanol Flam. Liq. 3, H226 STOT SE 3, H336	25-50%
CAS: 100-41-4 EINECS: 202-849-4 Index number: 601-023-00-4 Reg.nr.: 01-2119489370-35 01-2119892111-44	ethylbenzene Flam. Liq. 2, H225 STOT RE 2, H373; Asp. Tox. 1, H304 Acute Tox. 4, H332	1-5%
CAS: 71-36-3 EINECS: 200-751-6 Index number: 603-004-00-6 Reg.nr.: 01-2119484630-38	butanol Flam. Liq. 3, H226 Eye Dam. 1, H318 Acute Tox. 4, H302; Skin Irrit. 2, H315; STOT SE 3, H335-H336	1-5%
CAS: 445498-00-0	Formaldehyde, polymer with N1,N1-dimethyl-1,3-propanediamine and phenol Aquatic Acute 1, H400; Aquatic Chronic 1, H410 Acute Tox. 4, H302	1-5%
CAS: 123-86-4 EINECS: 204-658-1 Index number: 607-025-00-1 Reg.nr.: 01-2119485493-29	n-butyl acetate Flam. Liq. 3, H226 STOT SE 3, H336	1-5%
CAS: 90-72-2 EINECS: 202-013-9 Index number: 603-069-00-0 Reg.nr.: 01-2119560597-27-xxxx	2,4,6-tris(dimethylaminomethyl)phenol Skin Corr. 1C, H314; Eye Dam. 1, H318 Acute Tox. 4, H302; Skin Sens. 1B, H317 Aquatic Chronic 3, H412	<1%

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- **General information:** Immediately remove any clothing soiled by the product. Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident. Position and transport stably in side position.
- **After inhalation:** Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. In case of unconsciousness place patient stably in side position for transportation.

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- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- After swallowing: Do not induce vomiting; call for medical help immediately.
- **4.2 Most important symptoms and effects, both acute and delayed**
 - Headache
 - Dizziness
 - Dizziness
- **4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- Suitable extinguishing agents: CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- For safety reasons unsuitable extinguishing agents: Water with full jet
- **5.2 Special hazards arising from the substance or mixture**

In case of fire, the following can be released:
Carbon monoxide (CO)
Formation of toxic gases is possible during heating or in case of fire.
- **5.3 Advice for firefighters**
- Protective equipment:

Mount respiratory protective device.
Wear self-contained respiratory protective device.
Do not inhale explosion gases or combustion gases.
- Additional information

Cool endangered receptacles with water spray.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**

Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
Keep away from ignition sources.
Ensure adequate ventilation
Use respiratory protective device against the effects of fumes/dust/aerosol.
- **6.2 Environmental precautions:**

Do not allow to penetrate the ground/soil.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralising agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
- **6.4 Reference to other sections**

See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

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SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**

Keep away from heat and direct sunlight.
 Ensure good ventilation/exhaustion at the workplace.
 Prevent formation of aerosols.
 Wear suitable respiratory protective device when decanting larger quantities without extractor facilities.
 Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).

- **Information about fire - and explosion protection:**

Fumes can combine with air to form an explosive mixture.
 Do not spray onto a naked flame or any incandescent material.
 Use explosion-proof apparatus / fittings and spark-proof tools.
 Keep ignition sources away - Do not smoke.
 Protect against electrostatic charges.
 Keep respiratory protective device available.

- **7.2 Conditions for safe storage, including any incompatibilities**

- **Storage:**

- **Requirements to be met by storerooms and receptacles:**

Prevent any seepage into the ground.

- **Information about storage in one common storage facility:**

VCI-Konzept für die Zusammenlagerung von Chemikalien beachten.
 Do not store together with reducing agents, heavy-metal compounds, acids and alkalis.

- **Further information about storage conditions:**

Store in cool, dry conditions in well sealed receptacles.
 Protect from heat and direct sunlight.
 Protect from frost.
 Keep container tightly sealed.

- **Storage class:**

3

- **7.3 Specific end use(s)**

No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:**

No further data; see item 7.

- **8.1 Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**

107-98-2 1-methoxy-2-propanol

WEL Short-term value: 560 mg/m³, 150 ppm
 Long-term value: 375 mg/m³, 100 ppm
 Sk

100-41-4 ethylbenzene

WEL Short-term value: 552 mg/m³, 125 ppm
 Long-term value: 441 mg/m³, 100 ppm
 Sk

71-36-3 butanol

WEL Short-term value: 154 mg/m³, 50 ppm
 Sk

123-86-4 n-butyl acetate

WEL Short-term value: 966 mg/m³, 200 ppm
 Long-term value: 724 mg/m³, 150 ppm

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· DNELs**1330-20-7 xylene**

Oral	DNEL (Langzeit-wiederholt)	1.6 mg/kg bw/day (BEV)
Dermal	DNEL (Langzeit-wiederholt)	180 mg/kg bw/day (ARB) 108 mg/kg bw/day (BEV)
Inhalative	DNEL (Kurzzeit-akut)	289 mg/m ³ Air (ARB) 174 mg/m ³ Air (BEV)
	DNEL (Langzeit-wiederholt)	77 mg/m ³ Air (ARB) 14.8 mg/m ³ Air (BEV)

107-98-2 1-methoxy-2-propanol

Oral	DNEL (Langzeit-wiederholt)	3.3 mg/kg bw/day (BEV)
Dermal	DNEL (Langzeit-wiederholt)	50.6 mg/kg bw/day (ARB) 18.1 mg/kg bw/day (BEV)
Inhalative	DNEL (Kurzzeit-akut)	553.5 mg/m ³ Air (ARB)
	DNEL (Langzeit-wiederholt)	369 mg/m ³ Air (ARB) 43.9 mg/m ³ Air (BEV)

100-41-4 ethylbenzene

Oral	DNEL (Langzeit-wiederholt)	1.6 mg/kg bw/day (BEV)
Dermal	DNEL (Langzeit-wiederholt)	180 mg/kg bw/day (ARB)
Inhalative	DNEL (Kurzzeit-akut)	293 mg/m ³ Air (ARB)
	DNEL (Langzeit-wiederholt)	77 mg/m ³ Air (ARB) 15 mg/m ³ Air (BEV)

71-36-3 butanol

Oral	DNEL (Langzeit-wiederholt)	3.125 mg/kg bw/day (BEV)
Dermal	DNEL (Langzeit-wiederholt)	3,125 mg/kg bw/day (BEV)
Inhalative	DNEL (Langzeit-wiederholt)	310 mg/m ³ Air (ARB) 55 mg/m ³ Air (BEV)

123-86-4 n-butyl acetate

Oral	DNEL (Kurzzeit-akut)	2 mg/kg bw/day (BEV)
	DNEL (Langzeit-wiederholt)	2 mg/kg bw/day (BEV)
Dermal	DNEL (Kurzzeit-akut)	11 mg/kg bw/day (ARB) 6 mg/kg bw/day (BEV)
	DNEL (Langzeit-wiederholt)	11 mg/kg bw/day (ARB) 6 mg/kg bw/day (BEV)
Inhalative	DNEL (Kurzzeit-akut)	960 mg/m ³ Air (ARB) 860 mg/m ³ Air (BEV)
	DNEL (Langzeit-wiederholt)	480 mg/m ³ Air (ARB) 102.34 mg/m ³ Air (BEV)

90-72-2 2,4,6-tris(dimethylaminomethyl)phenol

Inhalative	DNEL (Langzeit-wiederholt)	0.31 mg/m ³ Air (ARB)
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· PNECs**1330-20-7 xylene**

PNEC (wässrig)	6.58 mg/l (KA) 0.327 mg/l (MW) 0.327 mg/l (SW) 0.327 mg/l (WAS)
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PNEC (fest)	2.31 mg/kg Trockengew (BO) 12.46 mg/kg Trockengew (MWS) 12.46 mg/kg Trockengew (SWS)
107-98-2 1-methoxy-2-propanol	
PNEC (wässrig)	100 mg/l (KA) 1 mg/l (MW) 10 mg/l (SW) 100 mg/l (WAS)
PNEC (fest)	4.59 mg/kg Trockengew (BO) 5.2 mg/kg Trockengew (MWS) 52.3 mg/kg Trockengew (SWS)
100-41-4 ethylbenzene	
PNEC (wässrig)	9.6 mg/l (KA) 0.1 mg/l (SW) 0.1 mg/l (WAS)
PNEC (fest)	2.68 mg/kg Trockengew (BO) 1.37 mg/kg Trockengew (MWS) 13.7 mg/kg Trockengew (SWS)
71-36-3 butanol	
PNEC (wässrig)	2,476 mg/l (KA) 0.008 mg/l (MW) 0.082 mg/l (SW) 2.25 mg/l (WAS)
PNEC (fest)	0.015 mg/kg Trockengew (BO) 0.018 mg/kg Trockengew (MWS) 0.178 mg/kg Trockengew (SWS)
123-86-4 n-butyl acetate	
PNEC (wässrig)	35.6 mg/l (KA) 0.018 mg/l (MW) 0.18 mg/l (SW) 0.36 mg/l (WAS)
PNEC (fest)	0.0903 mg/kg Trockengew (BO) 0.0981 mg/kg Trockengew (MWS) 0.981 mg/kg Trockengew (SWS)
90-72-2 2,4,6-tris(dimethylaminomethyl)phenol	
PNEC (wässrig)	0.2 mg/l (KA) 0.0084 mg/l (MW) 0.084 mg/l (SW) 0.84 mg/l (WAS)

· Additional information:

The lists valid during the making were used as basis.

· **8.2 Exposure controls**· Personal protective equipment:· General protective and hygienic measures:

Do not eat, drink, smoke or sniff while working.
Use skin protection cream for skin protection.
Clean skin thoroughly immediately after handling the product.
Keep away from foodstuffs, beverages and feed.

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· Respiratory protection:

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

Store protective clothing separately.

Short term filter device:

Filter A-P3

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· Protection of hands:

Preventive skin protection by use of skin-protecting agents is recommended.

After use of gloves apply skin-cleaning agents and skin cosmetics.



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

Fluorocarbon rubber (Viton)

Nitrile rubber, NBR

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove materialValue for the permeation: Level ≤ 6

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· For the permanent contact gloves made of the following materials are suitable:

Fluorocarbon rubber (Viton)

Vitoject (KCL, Art_No. 890)

Butyl rubber, BR

· As protection from splashes gloves made of the following materials are suitable:

Nitrile rubber, NBR

Camatril (KCL, 730, 731, 732, 733)

Butoject (KCL, Art_No. 897, 898)

Butyl rubber, BR

· Not suitable are gloves made of the following materials:

Leather gloves

Strong material gloves

· Eye protection:

Tightly sealed goggles

· Body protection:

Protective work clothing

SECTION 9: Physical and chemical properties· **9.1 Information on basic physical and chemical properties**· General Information· Appearance:Form:

Fluid

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· <u>Colour:</u>	Amber coloured
· <u>Odour:</u>	Amine-like
· <u>Odour threshold:</u>	Not determined.
· <u>pH-value:</u>	Not applicable
· <u>Change in condition</u>	
<u>Melting point/freezing point:</u>	Undetermined.
<u>Initial boiling point and boiling range:</u>	>100 °C
· <u>Flash point:</u>	23 °C
· <u>Flammability (solid, gas):</u>	Not applicable.
· <u>Ignition temperature:</u>	270 °C
· <u>Decomposition temperature:</u>	Not determined.
· <u>Auto-ignition temperature:</u>	Product is not selfigniting.
· <u>Explosive properties:</u>	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· <u>Explosion limits:</u>	
<u>Lower:</u>	1.1 Vol %
<u>Upper:</u>	~20 Vol %
· <u>Vapour pressure at 20 °C:</u>	12 hPa
· <u>Density at 20 °C:</u>	0.94 g/cm ³
· <u>Relative density</u>	Not determined.
· <u>Vapour density</u>	Not determined.
· <u>Evaporation rate</u>	Not determined.
· <u>Solubility in / Miscibility with water:</u>	Not miscible or difficult to mix.
· <u>Partition coefficient: n-octanol/water:</u>	Not determined.
· <u>Viscosity:</u>	
<u>Dynamic:</u>	Not determined.
<u>Kinematic at 20 °C:</u>	12-15 s (DIN 53211/4)
· <u>Solvent content:</u>	
<u>Organic solvents:</u>	69.1 %
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** Forms explosive gas mixture with air.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

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SECTION 11: Toxicological information· **11.1 Information on toxicological effects**· Acute toxicity Based on available data, the classification criteria are not met.· LD/LC50 values relevant for classification:**ATE (Acute Toxicity Estimates)**

Oral	LD50	15,000-100,000 mg/kg (rat)
Dermal	LD50	6,667 mg/kg (rbt)
Inhalative	LC50/4 h	478 mg/l (rat)

1330-20-7 xylene

Oral	LD50	4,300 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rbt)
Inhalative	LC50/4h	29,000 mg/m3 (rat)
	LC50/4 h	21.7 mg/l (rat)
	LC50/48h	86 mg/l (Leuciscus idus)

107-98-2 1-methoxy-2-propanol

Oral	LD50	4,016 mg/kg (rat)
Dermal	LD50	2,000 mg/kg (rbt)
Inhalative	LC50	27.596 mg/l (rat)
	LC50/4 h	54.6 mg/l (rat)

100-41-4 ethylbenzene

Oral	LD50	3,500 mg/kg (rat)
Dermal	LD50	15,000 mg/kg (rbt)
Inhalative	LC50/4 h	17.2 mg/l (rat)

71-36-3 butanol

Oral	LD50	3,430 mg/kg (rabbit) (OECD 402)
		2,292 mg/kg (rat) (OECD 401)
Dermal	LD50	3,400 mg/kg (rbt)
Inhalative	LC50/4h	17.76 mg/m3 (rat)
	LC50/4 h	8,000 mg/l (rat)

445498-00-0 Formaldehyde, polymer with N1,N1-dimethyl-1,3-propanediamine and phenol

Oral	LD50	300-2,000 mg/kg (rat)
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123-86-4 n-butyl acetate

Oral	LD50	10,800 mg/kg (rat) (OECD 423)
Dermal	LD50	>17,600 mg/kg (rabbit) (OECD 402)
Inhalative	LC50/4 h	>21 mg/l (rat) (OECD 403)
	LC50	390 mg/m3 (rat)
	LC50/48h	64 mg/l (Brachydanio rerio)

90-72-2 2,4,6-tris(dimethylaminomethyl)phenol

Oral	LD50	2,169 mg/kg (rat)
	LD50	>971 mg/kg (rat)

· Primary irritant effect:· Skin corrosion/irritation Causes skin irritation.· Serious eye damage/irritation Causes serious eye damage.· Respiratory or skin sensitisation Based on available data, the classification criteria are not met.· CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)· Germ cell mutagenicity Based on available data, the classification criteria are not met.· Carcinogenicity Based on available data, the classification criteria are not met.

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- Reproductive toxicity Based on available data, the classification criteria are not met.
- STOT-single exposure May cause respiratory irritation. May cause drowsiness or dizziness.
- STOT-repeated exposure May cause damage to the central nervous system and the hearing organs through prolonged or repeated exposure. Route of exposure: Inhalation.
- Aspiration hazard May be fatal if swallowed and enters airways.

SECTION 12: Ecological information**· 12.1 Toxicity****· Aquatic toxicity:****1330-20-7 xylene**

EC50/24h	>175 mg/l (bacteria)
	165 mg/l (daphnia magna)
EC50	10 mg/l (bacteria)
IC50	96 mg/l (BES)
	1 mg/l (daphnia magna)
LC50	2 mg/l (piscis)
LC50/24h	32 mg/l (lepomis macrochirus)
IC50/72h	2.2 mg/l (green alge)
	3.3 mg/l (Pseudokirchneriella subcapitata)
EC50/48h	8 mg/l (daphnia magna)
NOEC	0.96-1.17 mg/l (daphnia magna)
	>1.3 mg/l (Oncorhynchus mykiss)
	0.44 mg/l (Pseudokirchneriella subcapitata) (OECD 201)
EC50/72h	4.7 mg/l (Pseudokirchneriella subcapitata)
	2.2 mg/l (selenastrum capricornutum) (OECD 201)
LC50/96h	16.9 mg/l (carassius auratus)
	1.57 mg/l (Cyprinus carpio)
	3.77-13.5 mg/l (piscis)
	20.9 mg/l (lepomis macrochirus)
	7.6 mg/l (Oncorhynchus mykiss)
	26.7 mg/l (pimephales promelas)

107-98-2 1-methoxy-2-propanol

EC50/96h	>1,000 mg/l (BES)
EC50	>1,000 mg/l (BES)
	>1,000 mg/l (Pseudokirchneriella subcapitata)
LC 0/96h	>4,600 mg/l (Leuciscus idus)
EC50/48h	23,300 mg/l (daphnia magna)
LC50/96h	>100 mg/l (daphnia magna)
	>100 mg/l (Desmodesmus subspicatus)
	6,812 mg/l (Leuciscus idus)
	>1,000 mg/l (Oncorhynchus mykiss)
	20,800 mg/l (pimephales promelas)

100-41-4 ethylbenzene

LC50/24h	26.74-43.67 mg/l (lepomis macrochirus)
EC5	12 mg/l (pseudomonas putida)
EC50/48h	1.37-4.4 mg/l (daphnia magna)

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EC50/16h	>12 mg/l (bacteria)
EC50/30min	600 mg/l (BES)
EC50/72h	4.9 mg/l (Skeletonema costatum (Kieselalge)) 5.4 mg/l (Pseudokirchneriella subcapitata) 4.6 mg/l (selenastrum capricornutum)
LC50/96h	94.44 mg/l (carassius auratus) 32 mg/l (Iepomis macrochirus) 4.2 mg/l (Oncorhynchus mykiss) 12.1 mg/l (pimephales promelas)

71-36-3 butanol

EC50/96h	225 mg/l (Pseudokirchneriella subcapitata) (OECD 201)
EC50	4,400 mg/l (pseudomonas putida)
IC50/72h	>500 mg/l (Desmodesmus subspicatus)
NOEC/21d	4.1 mg/l (daphnia magna)
EC50/48h	1,328 mg/l (daphnia magna) (OECD 202)
EC50/72h	8,500 mg/l (green alge)
LC50/96h	1,200 mg/l (Leuciscus idus) 1,376 mg/l (pimephales promelas) (OECD 203) >500 mg/l (Scenedesmus subspicatus)

445498-00-0 Formaldehyde, polymer with N1,N1-dimethyl-1,3-propanediamine and phenol

EC50/48h	24 mg/l (daphnia magna)
EC50/72h	>219 mg/l (selenastrum capricornutum)
LC50/96h	40 mg/l (Brachydanio rerio)

123-86-4 n-butyl acetate

EC50/24h	72.8 mg/l (daphnia magna) (DIN 38412)
EC50/96h	320 mg/l (green alge)
LC50/24h	205 mg/l (daphnia magna)
IC50/72h	648 mg/l (Desmodesmus subspicatus)
EC10/18h	959 mg/l (pseudomonas putida)
EC50/48h	44 mg/l (daphnia magna)
EC50/16h	959 mg/l (pseudomonas putida)
NOEC	200 mg/kg (Desmodesmus subspicatus)
EC50/72h	647.7 mg/l (Desmodesmus subspicatus) (Zellvermehrungshemmtest) 674 mg/l (Scenedesmus subspicatus)
LC50/96h	62 mg/l (Danio rerio.) 81 mg/l (piscis) 100 mg/l (Iepomis macrochirus) 62 mg/l (Leuciscus idus) (DIN 38412) 18 mg/l (pimephales promelas) (OECD 203)

90-72-2 2,4,6-tris(dimethylaminomethyl)phenol

EC50/96h	718 mg/l (Palaemonetes)
LC50/24h	222 mg/l (Oncorhynchus mykiss)
ErC50/72h	84 mg/l (green alge)
NOELR/72h	6.25 mg/l (green alge)
LC50/96h	175 mg/l (Cyprinus carpio) 718 mg/l (daphnia magna)

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LC50/72h 84 mg/l (Scenedesmus subspicatus)

· **12.2 Persistence and degradability**

No further relevant information available.

· **12.3 Bioaccumulative potential**

No further relevant information available.

· **12.4 Mobility in soil**

No further relevant information available.

· **Additional ecological information:**

· **General notes:**

Do not allow product to reach ground water, water course or sewage system.

Must not reach sewage water or drainage ditch undiluted or unneutralised.

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

· **12.5 Results of PBT and vPvB assessment**

· **PBT:**

Not applicable.

· **vPvB:**

Not applicable.

· **12.6 Other adverse effects**

No further relevant information available.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**

· **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **European waste catalogue**

08 00 00	WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS
----------	---

08 01 00	wastes from MFSU and removal of paint and varnish
----------	---

08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances
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· **Uncleaned packaging:**

· **Recommendation:**

Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.

Disposal must be made according to official regulations.

SECTION 14: Transport information

· **14.1 UN-Number**

· **ADR, IMDG, IATA**

UN1263

· **14.2 UN proper shipping name**

· **ADR**

1263 PAINT RELATED MATERIAL

· **IMDG, IATA**

PAINT RELATED MATERIAL

· **14.3 Transport hazard class(es)**

· **ADR**



· **Class**

3 (F1) Flammable liquids.

· **Label**

3

· **IMDG, IATA**



· **Class**

3 Flammable liquids.

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· <u>Label</u>	3
· 14.4 Packing group · <u>ADR, IMDG, IATA</u>	III
· 14.5 Environmental hazards:	Not applicable.
· 14.6 Special precautions for user · <u>Danger code (Kemler):</u> · <u>EMS Number:</u> · <u>Stowage Category</u>	Warning: Flammable liquids. 30 F-E, S-E A
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· <u>Transport/Additional information:</u>	
· <u>ADR</u> · <u>Limited quantities (LQ)</u> · <u>Excepted quantities (EQ)</u>	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <u>Transport category</u> · <u>Tunnel restriction code</u>	3 D/E
· <u>IMDG</u> · <u>Limited quantities (LQ)</u> · <u>Excepted quantities (EQ)</u>	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <u>UN "Model Regulation":</u>	UN 1263 PAINT RELATED MATERIAL, 3, III

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

- Directive 2012/18/EU
- Named dangerous substances - ANNEX I None of the ingredients is listed.
- Seveso category P5c FLAMMABLE LIQUIDS
- Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t
- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
- National regulations:
- Information about limitation of use: Employment restrictions concerning pregnant and lactating women must be observed.
Employment restrictions concerning juveniles must be observed.
- Waterhazard class: Water hazard class 2 (Self-assessment): hazardous for water.
- VOC EU 649.5 g/l
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant phrases

H225 Highly flammable liquid and vapour.
 H226 Flammable liquid and vapour.
 H302 Harmful if swallowed.
 H304 May be fatal if swallowed and enters airways.
 H312 Harmful 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.
 H373 May cause damage to the central nervous system and the hearing organs through prolonged or repeated exposure. Route of exposure: Inhalation.
 H400 Very toxic to aquatic life.
 H410 Very toxic to aquatic life with long lasting effects.
 H412 Harmful to aquatic life with long lasting effects.
 refer to Technical Data Sheet (TDS)

· Recommended restriction of use· Department issuing SDS:

Laboratory

· Contact:

Dieter Zimmermann

· Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
 ICAO: International Civil Aviation Organisation
 ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 DNEL: Derived No-Effect Level (REACH)
 PNEC: Predicted No-Effect Concentration (REACH)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative
 Flam. Liq. 2: Flammable liquids – Category 2
 Flam. Liq. 3: Flammable liquids – Category 3
 Acute Tox. 4: Acute toxicity – Category 4
 Skin Corr. 1C: Skin corrosion/irritation – Category 1C
 Skin Irrit. 2: Skin corrosion/irritation – Category 2
 Eye Dam. 1: Serious eye damage/eye irritation – Category 1
 Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
 Skin Sens. 1B: Skin sensitisation – Category 1B
 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
 STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
 Asp. Tox. 1: Aspiration hazard – Category 1
 Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
 Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
 Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3
 REACH directive 1907/2006/EC

· Sources· * Data compared to the previous version altered.

Adaptation in accordance with REACH directive 1907/2006/EC