



Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 06.02.2025

Version: 73 (replaces version 72)

Revision: 06.02.2025

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

- **1.1 Product identifier**
 - Trade name: **MONOPOX HB COATING**
 - Article number: D27-1
 - UFI: YK7S-G0GA-900N-CDM8
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
 - **Sector of Use**
 - SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
 - SU19 Building and construction work
 - SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
 - **Product category** PC9a Coatings and paints, thinners, paint removers
 - **Process category**
 - PROC7 Industrial spraying
 - PROC10 Roller application or brushing
 - PROC19 Manual activities involving hand contact
 - PROC13 Treatment of articles by dipping and pouring
 - **Application of the substance / the mixture** solvent based, two component epoxy coating base
- **1.3 Details of the supplier of the safety data sheet**
 - **Manufacturer/Supplier:**
 - Zandleven Coatings B.V.
 - Snekertrekweg 57-59, 8912 AA Leeuwarden, Netherlands
 - Tel: +31 58 2129545 Fax: +31 58 2155996
 - E-mail: info@zandleven.com Internet: www.zandleven.com
 - **Further information obtainable from:** R&D department: sds@zandleven.com
- **1.4 Emergency telephone number:**
 - Nationaal Vergiftigingen Informatie
 - +31 (0)88 755 8000
 - ORFILA (INRS) : + 33 (0)1 45 42 59 59
 - Centres Antipoison et de Toxicovigilance
 - ANGERS: 02 41 48 21 21
 - BORDEAUX: 05 56 96 40 80
 - LILLE: 0800 59 59 59
 - LYON: 04 72 11 69 11
 - MARSEILLE: 04 91 75 25 25
 - NANCY: 03 83 22 50 50
 - PARIS: 01 40 05 48 48
 - STRASBOURG: 03 88 37 37 37
 - TOULOUSE: 05 61 77 74 47
 - Giftnotruf der Charité, Berlin: 030/19240
 - Giftinformationszentrum-Nord der Länder Bremen, Hamburg, Niedersachsen und Schleswig-Holstein (GIZ-Nord) :0551/19 240
 - Informationszentrale gegen Vergiftungen Zentrum für Kinderheilkunde Universitätsklinikum Bonn: 0228/19240
 - Giftnotruf Erfurt Gemeinsames Giftinformationszentrum der Länder Mecklenburg-Vorpommern, Sachsen, Sachsen-Anhalt und Thüringen: 0361/730 730
 - Informations- und Beratungszentrum für Vergiftungsfälle Klinik für Kinder- und Jugendmedizin Universitätsklinikum des Saarlandes: 06841/19240
 - Giftinformationszentrum der Länder Rheinland-Pfalz und Hessen - Klinische Toxikologie - Universitätsmedizin der Johannes Gutenberg-Universität Mainz: 06131/19240
 - Vergiftungs-Informations-Zentrale Zentrum für Kinder- und Jugendmedizin Universitätsklinikum: 0761/19240
 - Giftnotruf München Toxikologische Abteilung der II. Med. Klinik und Poliklinik: 089/19240
 - Supplier
 - +31 (0)58 2677590 (during office hours)

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
 - **Classification according to Regulation (EC) No 1272/2008**

Flam. Liq. 3	H226 Flammable liquid and vapour.
Skin Irrit. 2	H315 Causes skin irritation.
Eye Dam. 1	H318 Causes serious eye damage.
Skin Sens. 1	H317 May cause an allergic skin reaction.

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

2.2 Label elements**Labelling according to Regulation (EC) No 1272/2008**

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

Hazard pictograms

GHS02 GHS05 GHS07

Signal word Danger**Hazard-determining components of labelling:**

bisphenol-A epoxy resin (Mw 700-1100)

butanol

Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol

maleic anhydride

Poly(oxy-1,2-ethandiyl),.alpha.-[(2Z)-3-carboxy-1-oxo-2-propenyl]-.omega.-hydroxy-, C9-11-alkyl ethers

Hazard statements

H226 Flammable liquid and vapour.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H317 May cause an allergic skin reaction.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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.

P362+P364 Take off contaminated clothing and wash it before reuse.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional information:

EUH205 Contains epoxy constituents. May produce an allergic reaction.

2.3 Other hazards**Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:**

68512-30-1 Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol

SECTION 3: Composition/information on ingredients**3.2 Mixtures****Description:** Mixture of substances listed below with nonhazardous additions.**Dangerous components:**

Percentages of the components are expressed as a percentage by weight

CAS: 25068-38-6	bisphenol-A epoxy resin (Mw 700-1100)	10-25%
NLP: 500-033-5	⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317, EUH205	
Index number: 603-074-00-8	Specific concentration limits: Eye Irrit. 2; H319: C ≥ 5 % Skin Irrit. 2; H315: C ≥ 5 %	

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CAS: 1330-20-7 EINECS: 215-535-7 Index number: 601-022-00-9 Reg.nr.: 01-2119488216-32	xylene ⚠ Flam. Liq. 3, H226; ⚠ Asp. Tox. 1, H304; ⚠ Acute Tox. 4, H312; ⚠ Acute Tox. 4, H332; ⚠ Skin Irrit. 2, H315; ⚠ Eye Irrit. 2, H319; ⚠ STOT SE 3, H335	10-25%
CAS: 78-83-1 EINECS: 201-148-0 Index number: 603-108-00-1 Reg.nr.: 01-2119484609-23	butanol ⚠ Flam. Liq. 3, H226; ⚠ Eye Dam. 1, H318; ⚠ Skin Irrit. 2, H315; ⚠ STOT SE 3, H335-H336	2.5-10%
CAS: 68512-30-1 EINECS: 270-966-8 Reg.nr.: 01-2119555274-38	Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol ⚠ Skin Irrit. 2, H315; ⚠ Skin Sens. 1B, H317; ⚠ Aquatic Chronic 3, H412 vPvB	2.5-10%
CAS: 100-41-4 EINECS: 202-849-4 Index number: 601-023-00-4 Reg.nr.: 01-2119489370-35	ethylbenzene ⚠ Flam. Liq. 2, H225; ⚠ STOT RE 2, H373; ⚠ Asp. Tox. 1, H304; ⚠ Acute Tox. 4, H332; ⚠ Aquatic Chronic 3, H412	2.5-10%
CAS: 128601-23-0 EC number: 918-668-5 Reg.nr.: 01-2119455851-35	C9-aromatics ⚠ Flam. Liq. 3, H226; ⚠ Asp. Tox. 1, H304; ⚠ Aquatic Chronic 2, H411; ⚠ Acute Tox. 4, H312; ⚠ STOT SE 3, H335-H336, EUH066	1-2.5%
CAS: 107-98-2 EINECS: 203-539-1 Index number: 603-064-00-3 Reg.nr.: 01-2119457435-35	1-Methoxy-2-propanol ⚠ Flam. Liq. 3, H226; ⚠ STOT SE 3, H336	1-2.5%
CAS: 1224635-08-8 EC number: 807-423-7	Poly(oxy-1,2-ethandiyl),.alpha.-[(2Z)-3-carboxy-1-oxo-2-propenyl]-.omega.-hydroxy-, C9-11-alkyl ethers ⚠ Skin Sens. 1, H317	<1%
CAS: 77-99-6 Reg.nr.: 01-2119486799-10	propylidynetrimethanol ⚠ Repr. 2, H361fd	0-<1%
CAS: 108-31-6 EINECS: 203-571-6 Index number: 607-096-00-9	maleic anhydride ⚠ Resp. Sens. 1, H334; ⚠ STOT RE 1, H372; ⚠ Skin Corr. 1B, H314; ⚠ Eye Dam. 1, H318; ⚠ Acute Tox. 4, H302; ⚠ Acute Tox. 4, H332; ⚠ Skin Sens. 1A, H317, EUH071 Specific concentration limit: Skin Sens. 1A; H317: C ≥ 0.001 %	0-<1%
• SVHC		
68512-30-1	Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol	
• 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.

· **After inhalation:**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:** Immediately rinse with water.

· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:** If symptoms persist consult doctor.

· 4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

· 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

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- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**
Do not allow product to reach sewage system or any water course.
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 section 13.
Ensure adequate ventilation.
- **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.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Store material in original, well-closed packages in a cool, well-ventilated area according to local regulations.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Recommended storage temperature:** 5 - 30 °C
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**

Ingredients with limit values that require monitoring at the workplace:**1330-20-7 xylene**

IOELV	Short-term value: 442 mg/m ³ , 100 ppm Long-term value: 221 mg/m ³ , 50 ppm Skin
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100-41-4 ethylbenzene

IOELV	Short-term value: 884 mg/m ³ , 200 ppm Long-term value: 442 mg/m ³ , 100 ppm Skin
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107-98-2 1-Methoxy-2-propanol

IOELV	Short-term value: 568 mg/m ³ , 150 ppm Long-term value: 375 mg/m ³ , 100 ppm Skin
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· DNEL (Derived No Effect Level) for workers:**25068-38-6 bisphenol-A epoxy resin (Mw 700-1100)**

Dermal	Acute - systemic effects, worker	8.33 mg/kg bw/day (worker)
	Long-term - systemic effects, worker	8.33 mg/kg bw/day (worker)
Inhalative	Acute - systemic effects, worker	12.25 mg/m ³ (worker)
	Long-term - systemic effects, worker	12.25 mg/m ³ (worker)

1330-20-7 xylene

Dermal	Long-term - systemic effects, worker	212 mg/kg bw/day (worker)
Inhalative	Acute - systemic effects, worker	442 mg/m ³ (worker)
	Acute - local effects, worker	442 mg/m ³ (worker)
	Long-term - systemic effects, worker	221 mg/m ³ (worker)
	Long-term - local effects, worker	221 mg/m ³ (worker)

78-83-1 butanol

Inhalative	Long-term - local effects, worker	310 mg/m ³ (worker)
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68512-30-1 Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol

Dermal	Long-term - systemic effects, worker	3.5 mg/kg bw/day (worker)
Inhalative	Long-term - systemic effects, worker	1.41 mg/m ³ (worker)

100-41-4 ethylbenzene

Dermal	Long-term - systemic effects, worker	180 mg/kg bw/day (worker)
Inhalative	Acute - local effects, worker	293 mg/m ³ (worker)
	Long-term - systemic effects, worker	77 mg/m ³ (worker)

128601-23-0 C9-aromatics

Dermal	Long-term - systemic effects, worker	12.5 mg/kg bw/day (human)
Inhalative	Long-term - systemic effects, worker	151 mg/m ³ (human)

107-98-2 1-Methoxy-2-propanol

Dermal	Long-term - systemic effects, worker	50.6 mg/kg bw/day (worker)
Inhalative	Acute - local effects, worker	553.5 mg/m ³ (worker)
	Long-term - systemic effects, worker	369 mg/m ³ (worker)

77-99-6 propylidynetrimethanol

Dermal	Long-term - systemic effects, worker	0.94 mg/kg bw/day (worker)
Inhalative	Long-term - systemic effects, worker	19.54 mg/m ³ (worker)

108-31-6 maleic anhydride

Inhalative	Acute - systemic effects, worker	0.2 mg/m ³ (worker)
	Acute - local effects, worker	0.2 mg/m ³ (worker)
	Long-term - systemic effects, worker	0.081 mg/m ³ (worker)
	Long-term - local effects, worker	0.081 mg/m ³ (worker)

· DNEL (Derived No Effect Level) for the general population:**25068-38-6 bisphenol-A epoxy resin (Mw 700-1100)**

Oral	Acute - systemic effects, general population	0.75 mg/kg bw/day (general population)
	Long-term - systemic effects, general population	0.75 mg/kg bw/day (general population)
Dermal	Acute - systemic effects, general population	3.571 mg/kg bw/day (general population)
	Long-term - systemic effects, general population	3.571 mg/kg bw/day (general population)

1330-20-7 xylene

Oral	Long-term - systemic effects, general population	12.5 mg/kg bw/day (general population)
Dermal	Long-term - systemic effects, general population	125 mg/kg bw/day (general population)
Inhalative	Acute - systemic effects, general population	260 mg/m ³ (general population)
	Acute - local effects, general population	260 mg/m ³ (general population)
	Long-term - systemic effects, general population	65.3 mg/m ³ (general population)
	Long-term - local effects, general population	65.3 mg/m ³ (general population)

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78-83-1 butanol		
Inhalative	Long-term - local effects, general population	55 mg/m ³ (general population)
68512-30-1 Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol		
Oral	Long-term - systemic effects, general population	0.2 mg/kg bw/day (general population)
Dermal	Long-term - systemic effects, general population	1.67 mg/kg bw/day (general population)
Inhalative	Long-term - systemic effects, general population	0.348 mg/m ³ (general population)
100-41-4 ethylbenzene		
Oral	Long-term - systemic effects, general population	1.6 mg/kg bw/day (general population)
Inhalative	Long-term - systemic effects, general population	15 mg/m ³ (general population)
128601-23-0 C9-aromatics		
Oral	Long-term - systemic effects, general population	7.5 mg/kg bw/day (human)
Dermal	Long-term - systemic effects, general population	7.5 mg/kg bw/day (human)
Inhalative	Long-term - systemic effects, general population	32 mg/m ³ (human)
107-98-2 1-Methoxy-2-propanol		
Oral	Long-term - systemic effects, general population	3.3 mg/kg bw/day (general population)
Dermal	Long-term - systemic effects, general population	18.1 mg/kg bw/day (general population)
Inhalative	Long-term - systemic effects, general population	43.9 mg/m ³ (general population)
77-99-6 propylidynetrimethanol		
Oral	Long-term - systemic effects, general population	0.34 mg/kg bw/day (general population)
Dermal	Long-term - systemic effects, general population	0.34 mg/kg bw/day (gnd)
Inhalative	Long-term - systemic effects, general population	0.58 mg/m ³ (gni)
· PNEC (Predicted No Effect Concentration) values:		
25068-38-6 bisphenol-A epoxy resin (Mw 700-1100)		
Aquatic compartment - freshwater		0.006 mg/L (not specified)
Aquatic compartment - marine water		0.0006 mg/L (not specified)
Aquatic compartment - water, intermittent releases		0.018 mg/L (not specified)
Aquatic compartment - sediment in freshwater		0.996 mg/kg sed dw (not specified)
Aquatic compartment - sediment in marine water		0.0996 mg/kg sed dw (not specified)
Terrestrial compartment - soil		0.196 mg/kg dw (not specified)
Sewage treatment plant		10 mg/L (not specified)
Oral secondary poisoning		11 mg/kg food (not specified)
1330-20-7 xylene		
Aquatic compartment - freshwater		0.327 mg/L (freshwater)
Aquatic compartment - marine water		0.327 mg/L (marine water)
Aquatic compartment - water, intermittent releases		0.327 mg/L (intermittent release water)
Aquatic compartment - sediment in freshwater		12.46 mg/kg sed dw (sediment fresh water)
Aquatic compartment - sediment in marine water		12.46 mg/kg sed dw (sediment marine water)
Terrestrial compartment - soil		2.31 mg/kg dw (soil)
Sewage treatment plant		6.58 mg/L (sewage treatment plant)
78-83-1 butanol		
Aquatic compartment - freshwater		0.4 mg/L (freshwater)
Aquatic compartment - marine water		0.04 mg/L (marine water)
Aquatic compartment - water, intermittent releases		11 mg/L (intermittent release water)
Aquatic compartment - sediment in freshwater		1.52 mg/kg sed dw (sediment fresh water)
Aquatic compartment - sediment in marine water		0.152 mg/kg sed dw (sediment marine water)
Terrestrial compartment - soil		0.0699 mg/kg dw (not specified)
Sewage treatment plant		10 mg/L (sewage treatment plant)
68512-30-1 Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol		
Aquatic compartment - freshwater		0.0014 mg/L (freshwater)
Aquatic compartment - marine water		0.00014 mg/L (marine water)

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Aquatic compartment - water, intermittent releases	0.014 mg/L (intermittent release water)
Aquatic compartment - sediment in freshwater	1,064 mg/kg sed dw (sediment fresh water)
Aquatic compartment - sediment in marine water	106.4 mg/kg sed dw (sediment marine water)
Terrestrial compartment - soil	212.2 mg/kg dw (soil)
Sewage treatment plant	2.4 mg/L (sewage treatment plant)
Oral secondary poisoning	8.89 mg/kg food (food sec poisoning)
100-41-4 ethylbenzene	
Aquatic compartment - freshwater	0.1 mg/L (not specified)
Aquatic compartment - marine water	0.01 mg/L (not specified)
Aquatic compartment - water, intermittent releases	0.1 mg/L (not specified)
Aquatic compartment - sediment in freshwater	13.7 mg/kg sed dw (not specified)
Aquatic compartment - sediment in marine water	1.37 mg/kg sed dw (not specified)
Terrestrial compartment - soil	2.68 mg/kg dw (not specified)
Sewage treatment plant	9.6 mg/L (not specified)
Oral secondary poisoning	0.02 mg/kg food (not specified)
107-98-2 1-Methoxy-2-propanol	
Aquatic compartment - freshwater	10 mg/L (not specified)
Aquatic compartment - marine water	1 mg/L (not specified)
Aquatic compartment - water, intermittent releases	100 mg/L (not specified)
Aquatic compartment - sediment in freshwater	52.3 mg/kg sed dw (not specified)
Aquatic compartment - sediment in marine water	5.2 mg/kg sed dw (not specified)
Terrestrial compartment - soil	5.49 mg/kg dw (not specified)
Sewage treatment plant	100 mg/L (not specified)
108-31-6 maleic anhydride	
Aquatic compartment - freshwater	0.038 mg/L (freshwater)
Aquatic compartment - marine water	0.004 mg/L (marine water)
Aquatic compartment - water, intermittent releases	0.379 mg/L (intermittent release water)
Aquatic compartment - sediment in freshwater	0.296 mg/kg sed dw (sediment fresh water)
Aquatic compartment - sediment in marine water	0.03 mg/kg sed dw (sediment marine water)
Terrestrial compartment - soil	0.037 mg/kg dw (soil)
Sewage treatment plant	44.6 mg/L (sewage treatment plant)

· **Additional information:** The lists valid during the making were used as basis.

· 8.2 Exposure controls

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

· **Appropriate engineering controls** No further data; see section 7.

· **Individual protection measures, such as personal protective equipment**

· **General protective and hygienic measures:**

Provide readily accessible eye wash stations and safety showers.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the skin.

Avoid contact with the eyes and skin.

· **Respiratory protection:**

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.

Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If

workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

For organic vapors and solvents type of filter A1 or A2, for dust type of filter P (according to EN 140)

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· Hand protection



Protective gloves

Chemical resistant gloves (EN 374)

Check protective gloves prior to each use for their proper condition.

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

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

· Material of gloves

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.

Fluorocarbon rubber (Viton)

Nitrile rubber, NBR

· Penetration time of glove material

KCL Vitoject 890

breakthrough time > 480 min.

thickness: 0,7 mm

at limited contact

KCL Camatril 730

breakthrough time 30 min.

thickness: 0,4 mm

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

· Not suitable are gloves made of the following materials: All other materials

· Eye/face protection



Tightly sealed goggles

Safety glasses according to EN 166 or equivalent

· Body protection:

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved before the product is used by a specialist.

If there is a risk of ignition by static electricity, anti-static protective clothing should be worn. For the best protection against static discharge, clothing should consist of anti-static overalls, boots and gloves.

For further information on materials and design requirements and test methods consult the European standard EN 1149.

· Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Physical state

Liquid

· Colour:

According to product specification

· Odour:

Characteristic

· Odour threshold:

Not determined.

· Melting point/freezing point:

Undetermined.

· Boiling point or initial boiling point and boiling range

108 °C (78-83-1 butanol)

· Flammability

Flammable.

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· Lower and upper explosion limit	
· Lower:	1.1 Vol % (1330-20-7 xylene)
· Upper:	7 Vol % (1330-20-7 xylene)
· Flash point:	28 °C (1330-20-7 xylene)
· Auto-ignition temperature:	390 °C (78-83-1 butanol)
· Decomposition temperature:	Not determined.
· pH	Not determined.
· Viscosity:	
· Kinematic viscosity	at 40 °C: > 20,5 mm ² /s
· Dynamic at 20 °C:	1,200 mPas
· Solubility	
· water:	Not miscible or difficult to mix.
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure at 20 °C:	6.7-8.2 hPa (1330-20-7 xylene)
· Density and/or relative density	
· Density at 20 °C:	>1.58-1.59 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.

· 9.2 Other information	
· Appearance:	
· Form:	Fluid
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Product is not selfigniting.
· Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· Change in condition	
· Evaporation rate	Not determined.

· Information with regard to physical hazard classes	
· Explosives	Void
· Flammable gases	Void
· Aerosols	Void
· Oxidising gases	Void
· Gases under pressure	Void
· Flammable liquids	Flammable liquid and vapour.
· Flammable solids	Void
· Self-reactive substances and mixtures	Void
· Pyrophoric liquids	Void
· Pyrophoric solids	Void
· Self-heating substances and mixtures	Void
· Substances and mixtures, which emit flammable gases in contact with water	Void
· Oxidising liquids	Void
· Oxidising solids	Void
· Organic peroxides	Void
· Corrosive to metals	Void
· Desensitised explosives	Void

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** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.

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· **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

SECTION 11: Toxicological information

· **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**· **Acute toxicity** Based on available data, the classification criteria are not met.· **LD/LC50 values relevant for classification:**

25068-38-6 bisphenol-A epoxy resin (Mw 700-1100)

Oral	LD50	30,000 mg/kg (rat)
Dermal	LD50	>1,200 mg/kg (rat)
		>2,000 mg/kg (rabbit)

1330-20-7 xylene

Oral	LD50	3,523 mg/kg (rat)
Dermal	LD50	2,000 mg/kg (rabbit)

78-83-1 butanol

Oral	LD50	2,460 mg/kg (rat)
Dermal	LD50	3,400 mg/kg (rabbit)

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Oral	LD50	>2,000 mg/kg (rat) (OECD 423)
Dermal	LD50	>2,000 mg/kg (rat) (OECD 402)
Inhalative	LC50/4 h	>4.9 mg/l (rat) (OECD 403)

100-41-4 ethylbenzene

Oral	LD50	3,500 mg/kg (rat)
Dermal	LD50	17,800 mg/kg (rabbit)

128601-23-0 C9-aromatics

Oral	LD50	5,558-7,093 mg/kg (rat)
Dermal	LD50	2,000-3,160 mg/kg (rabbit)

107-98-2 1-Methoxy-2-propanol

Oral	LD50	5,660 mg/kg (rat)
Dermal	LD50	13,000 mg/kg (rabbit)

77-99-6 propylidynetrimethanol

Oral	LD50	14,100 mg/kg (rat)
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108-31-6 maleic anhydride

Oral	LD50	1,090 mg/kg (rat)
Dermal	LD50	2,620 mg/kg (rabbit)
Inhalative	LC50/4 h	>4.35 mg/l (mouse)

· **Primary irritant effect:**· **Skin corrosion/irritation** Causes skin irritation.· **Serious eye damage/irritation** Causes serious eye damage.· **Respiratory or skin sensitisation** May cause an allergic skin reaction.· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.· **Carcinogenicity** Based on available data, the classification criteria are not met.· **Reproductive toxicity** Based on available data, the classification criteria are not met.· **STOT-single exposure** Based on available data, the classification criteria are not met.· **STOT-repeated exposure** Based on available data, the classification criteria are not met.· **Aspiration hazard** Based on available data, the classification criteria are not met.· **11.2 Information on other hazards**· **Endocrine disrupting properties**

None of the ingredients is listed.

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SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity:

25068-38-6 bisphenol-A epoxy resin (Mw 700-1100)

EC50/48 h	2.1 mg/l (Daphnia magna)
LC50/96 h	1.3 mg/l (Oncorhynchus mykiss)
LC50/72 h	>11 mg/l (algae)

1330-20-7 xylene

EC50/72 h	2.2 mg/l (algae)
EC50/48 h	>3.4 mg/l (Ceriodaphnia dubia)
LC50/96 h	2.6 mg/l (Oncorhynchus mykiss)
LC50/24 h	1 mg/l (Daphnia magna)

78-83-1 butanol

LC50/96 h	1.33-2.03 mg/l (fish)
LC50/48 h	1.03-1.19 mg/l (crustaceans)

100-41-4 ethylbenzene

EC50/72 h	3.6-4.2 mg/l (algae)
EC50/24 h	2.2 mg/l (Daphnia magna)
LC50/96 h	4.2 mg/l (Oncorhynchus mykiss)

107-98-2 1-Methoxy-2-propanol

EC50/48 h	23,300 mg/l (Daphnia magna)
LC50/96 h	6,812 mg/l (Leuciscus idus)

· **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.

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

· **PBT:** Not applicable.

· vPvB:

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· **12.6 Endocrine disrupting properties** For information on endocrine disrupting properties see section 11.

· **12.7 Other adverse effects**

· **Remark:** Harmful to fish

· **Additional ecological information:**

· **General notes:**

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

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

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

Danger to drinking water if even small quantities leak into the ground.

Harmful to aquatic organisms

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
HP3	Flammable

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HP4	Irritant - skin irritation and eye damage
HP13	Sensitising
HP14	Ecotoxic

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

Transport in accordance with ADR/RID, IMDG and ICAO/IATA.

· 14.1 UN number or ID number	Void
· ADR/RID/ADN, ADN, IMDG	UN1263
· IATA	
· 14.2 UN proper shipping name	Void
· ADR/RID/ADN, ADN, IMDG	PAINT
· IATA	
· 14.3 Transport hazard class(es)	
· ADR/RID/ADN, ADN, IMDG	Void
· Class	
· IATA	
	
· Class	3 Flammable liquids.
· Label	3
· 14.4 Packing group	Void
· ADR/RID/ADN, IMDG	III
· IATA	
· 14.5 Environmental hazards:	
· Marine pollutant:	No
· 14.6 Special precautions for user	Not applicable.
· 14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
· Transport/Additional information:	
· ADR/RID/ADN	
· Remarks:	Up to 450 litre exempted according to ADR 2.2.3.1.5.
· IMDG	
· Remarks:	Up to 450 litre: Transport in accordance with Packs 2.3.2.5 of the IMDG Code.
· IATA	
· Remarks:	The "viscosity exemption" provisions do NOT apply to air transport.
· UN "Model Regulation":	Void

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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

DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients is listed.

REGULATION (EU) 2019/1148

Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients is listed.

Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

Regulation (EC) No 273/2004 on drug precursors

108-88-3 toluene

3

Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

108-88-3 toluene

3

National regulations:

Other regulations, limitations and prohibitive regulations

Substances of very high concern (SVHC) according to REACH, Article 57

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15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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.

Classification according to Regulation (EC) No 1272/2008

The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.

Contact: J. Dijkstra

Date of previous version: 28.04.2023

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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 relatif au transport international 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

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids – Category 2

Flam. Liq. 3: Flammable liquids – Category 3

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Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
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
Resp. Sens. 1: Respiratory sensitisation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
Skin Sens. 1A: Skin sensitisation – Category 1A
Skin Sens. 1B: Skin sensitisation – Category 1B
Repr. 2: Reproductive toxicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Asp. Tox. 1: Aspiration hazard – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

Sources

- ECHA European Chemical Agency - <http://echa.europa.eu/information-on-chemicals>
- SDS of raw materials supplied by producer/supplier.

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

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