

Safety data sheet according to Regulation (EU) 2015/830

Printing date 03.08.2017

Version number 7

Revision: 03.08.2017

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

- **1.1 Product identifier**
- **Trade name:** ZERO% - A
- **Article number:** 502224-6
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
Two-component epoxy-polyurethane adhesive for wood floors
- **Manufacturer/Supplier:**
VERMEISTER S.p.A.
Loc. Fornaci
I-24050 Mornico al Serio (Bergamo)
Tel. +39/035.4428190 Fax: +39/035.4428075
- **Further information obtainable from:** roberta.fracchiolla@vermeister.com
- **1.4 Emergency telephone number:** +39/035 4428190

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
The product is classified according to Reg (EC) No 1272/2008



- Skin Irrit. 2 H315 Causes skin irritation.
- Eye Irrit. 2 H319 Causes serious eye irritation.
- Skin Sens. 1 H317 May cause an allergic skin reaction.
- 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** GHS07
- **Signal word** Warning
- **Hazard-determining components of labelling:**
Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700) oxirane, mono[(C12-14-alkyloxy)methyl] derivs
- **Hazard statements**
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H412 Harmful to aquatic life with long lasting effects.
- **Precautionary statements**
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P273 Avoid release to the environment.
P280 Wear protective gloves / eye protection / face protection.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321 Specific treatment (see on this label).
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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- **Additional information:**
Contains epoxy constituents. May produce an allergic reaction.
- **2.3 Other hazards**
- **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 of hazardous substances according to Reg. (EC) No. 1272/2008 and /or substances with a Community workplace exposure limit and/or substances classified as PBT/vPvB or included in Candidate List listed below

· **Dangerous components:**

CAS: 25068-38-6 NLP: 500-033-5 Reg.nr.: 01-2119456619-26	Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700) ⚠ Aquatic Chronic 2, H411; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	2.5-10%
CAS: 68609-97-2 EINECS: 271-846-8 Reg.nr.: 01-2119485289-22	oxirane, mono[(C12-14-alkyloxy)methyl] derivs ⚠ Skin Irrit. 2, H315; Skin Sens. 1, H317	≤ 2.5%

- **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**
- **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 wash with water and soap and rinse thoroughly.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, 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:** Use fire extinguishing methods suitable to surrounding conditions.
- **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.

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SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Not required.
- **6.2 Environmental precautions:**
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).
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** Prevent formation of aerosols.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **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:**

28553-12-0 di-"isononyl" phthalate

WEL	Long-term value: 5 mg/m ³
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· **DNELs**

25068-38-6 Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700)

Dermal	DNEL Long-term-systemic effects	8.33 mg/Kg bw/day (Workers)
	DNEL - Short-term systemic effects	8.33 mg/Kg/day (Workers)
Inhalative	DNEL short-term systemic effects	0.75 mg/m ³ (Workers)
	DNEL Long-term-systemic effects	12.3 mg/m ³ (Workers)

68609-97-2 oxirane, mono[(C12-14-alkyloxy)methyl] derivs

Dermal	DNEL Long-term-systemic effects	3.9 mg/Kg bw/day (Workers)
	DNEL - Short-term systemic effects	17 mg/Kg/day (Workers)
Inhalative	DNEL (systemic)	13.8 mg/m ³ (Workers)
	DNEL short-term systemic effects	29 mg/m ³ (Workers)

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· PNECs

25068-38-6 Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700)

PNEC	0.00627 mg/Kg d.w. (Marine sediment)
PNEC	0.0627 mg/l (Fresh water sediment)
	10 mg/l (STP)
	0.006 mg/l (Fresh water)
	0.0006 mg/l (Marine water)

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

· 8.2 Exposure controls

· Personal protective equipment:

· General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Avoid contact with the eyes and skin.

· Respiratory protection:



Not necessary in well-ventilated environments. In the case of insufficient ventilation, use a mask with a filter type A (EN 14387).

· Protection of hands:



Use protective gloves that guarantee complete protection in compliance with standard EN 374.

· Material of gloves PVC, neoprene or rubber

· Eye protection:



If there is a risk of spray, wear safety spectacles. Eye protection must meet standard EN 166.

· Body protection:

No special precautions are required. In any case, wear clothing in cotton or rubber, for example, that guarantees complete protection of the skin.

· Risk management measures

All the personal protective equipment must comply with the European reference standards (such as EN 374 for the gloves, EN 166 for the safety spectacles and EN14387 for the safety mask). Such equipment must be kept in good working order and stored appropriately. The service life of the protective equipment against chemical agents depends on various factors (type of use, climate factors and methods of storage), which may considerably reduce the service life envisaged by the EN standards. Always consult the supplier of the protective equipment. Instruct the worker on how to use the equipment provided.

Thermal risks: None

Environmental exposure controls: None

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SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Viscous

Colour: Brown

· **Odour:** Characteristic

· **Odour threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/freezing point: Undetermined.

Initial boiling point and boiling range: 214 °C

· **Flash point:** 139 °C

· **Flammability (solid, gas):** Not applicable.

· **Ignition temperature:**

Decomposition temperature: Not determined.

· **Auto-ignition temperature:** Product is not selfigniting.

· **Explosive properties:** Product does not present an explosion hazard.

· **Explosion limits:**

Lower: Not determined.

Upper: Not determined.

· **Vapour pressure:** Not determined.

· **Density at 20 °C:** 1.58 g/cm³

· **Relative density** Not determined.

· **Vapour density** Not determined.

· **Evaporation rate** Not determined.

· **Partition coefficient: n-octanol/water:** Not determined.

· **Viscosity:**

Dynamic at 20 °C: 60000 mPas

Kinematic: Not determined.

· **9.2 Other information** See the product label for information on the provisions of Directive 2004/42/EC about VOCs (if applicable).

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 toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**

25068-38-6 Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700)

Oral	LD50	15000 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rat) 23000 mg/kg (rabbit)

68609-97-2 oxirane, mono[(C12-14-alkyloxy)methyl] derivs

Oral	LD50	19200 mg/kg (rat)
Dermal	LD50	>4500 mg/kg (rabbit)
	DNEL (short term, local effects)	68 mg/cm2 (Workers)
Inhalative	LC50 (7h)	>0.15 mg/l (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes skin irritation.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation**
May cause an allergic skin reaction.
- **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.
- **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.

SECTION 12: Ecological information

Ecological data about the product: not available.

· **12.1 Toxicity**

· **Aquatic toxicity:**

25068-38-6 Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700)

IC50 (3h)	>100 mg/l (Bacteria)
EC50 (24h)	3.6 mg/l (Daphnia magna)
EC50 (48h)	1.8 mg/l (Daphnia magna)
EC50 (72h)	11 mg/l (Algae)
LC50 (96h)	2 mg/l (Leucisus idus)

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68609-97-2 oxirane, mono[(C12-14-alkyloxy)methyl] derivs

EC50 (48h) | 1-10 mg/l (Daphnia magna)

· 12.2 Persistence and degradability

25068-38-6 Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700)

Biodegradability | 5 % (/)

68609-97-2 oxirane, mono[(C12-14-alkyloxy)methyl] derivs

Biodegradability | 87 % (/)

· 12.3 Bioaccumulative potential

25068-38-6 Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700)

BCF (Bioconcentration factor) | 31 (/)

LogPow | 2.64-3.78 (/)

68609-97-2 oxirane, mono[(C12-14-alkyloxy)methyl] derivs

LogPow | 3.77 (/)

· 12.4 Mobility in soil No further relevant information available.

· Ecotoxicological 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.

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

Harmful to aquatic organisms

· 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

Disposal of not hardened product, EC waste code 08 04 09*: waste adhesives and sealants containing organic solvents or other dangerous substances

Disposal of hardened product, EC waste code 08 04 10: waste adhesives and sealants other than those mentioned in 08 04 09

· Uncleaned packaging: Empty containers should be disposed or recovered.

· Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

· 14.1 UN-Number

· ADR, IMDG, IATA

Void

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· 14.2 UN proper shipping name · ADR, IMDG, IATA	Void
· 14.3 Transport hazard class(es) · ADR, ADN · Class	Void
· 14.4 Packing group · ADR, IMDG, IATA	Void
· 14.5 Environmental hazards: · Marine pollutant:	No
· 14.6 Special precautions for user	Not applicable.
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR · Remarks:	void
· IMDG · Remarks:	void
· UN "Model Regulation":	Void

SECTION 15: Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
Reg. (EC) No.1907/2006 (REACH) and further modifications;
Reg. (EC) No. 1272/2008 (CLP) and further modifications;
Dir. 2004/42/EC (VOC), if applicable.
- **Chemical safety assessment not available**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 46a, 52a

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**
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H411 Toxic to aquatic life with long lasting effects.
- **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)

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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

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Skin Sens. 1: Skin sensitisation – 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

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

- **1.1 Product identifier**
- **Trade name: ZERO% - B**
- **Article number: 502228**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
Two-component epoxy-polyurethane adhesive for wood floors
- **Manufacturer/Supplier:**

VERMEISTER S.p.A.
Loc. Fornaci
I-24050 Mornico al Serio (Bergamo)
Tel. +39/035.4428190 Fax: +39/035.4428075
- **Further information obtainable from: roberta.fracchiolla@vermeister.com**
- **1.4 Emergency telephone number: +39/035 4428190**

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
The product is classified according to Reg (EC) No 1272/2008



GHS05 corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.
Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Skin Sens. 1 H317 May cause an allergic skin reaction.
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** GHS05, GHS07
- **Signal word** Danger
- **Hazard-determining components of labelling:**
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine
2,4,6-tris(dimethylaminomethyl)phenol
Amines, polyethylenepoly-, tetraethylenepentamine fraction
Fatty acids, C-18, unsaturated trimers, compounds with 9-octadecen-1-amine
Fatty acids, tall-oil, compounds with oleylamine
Triethylenetetramine
- **Hazard statements**
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H412 Harmful to aquatic life with long lasting effects.

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Precautionary statements

P303+P361+P353 *IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/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.*

P321 *Specific treatment (see on this label).*

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

P405 *Store locked up.*

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

2.3 Other hazards**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 of hazardous substances according to Reg. (EC) No. 1272/2008 and /or substances with a Community workplace exposure limit and/or substances classified as PBT/vPvB or included in Candidate List listed below

Dangerous components:

CAS: 68082-29-1 NLP: 500-191-5 Reg.nr.: 01-2119972320-44	Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine ☠ Eye Dam. 1, H318; ☠ Aquatic Chronic 2, H411; ☠ Skin Irrit. 2, H315; Skin Sens. 1, H317	10-25%
CAS: 90-72-2 EINECS: 202-013-9 Reg.nr.: 01-2119560597-27	2,4,6-tris(dimethylaminomethyl)phenol ☠ Skin Corr. 1B, H314; ☠ Eye Dam. 1, H318; ☠ Acute Tox. 4, H302; Skin Sens. 1B, H317	2.5-10%
CAS: 90640-66-7 EINECS: 292-587-7	Amines, polyethylenepoly-, tetraethylenepentamine fraction ☠ Skin Corr. 1B, H314; ☠ Aquatic Chronic 2, H411; ☠ Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317	2.5-10%
CAS: 64-17-5 EINECS: 200-578-6 Reg.nr.: 01-2119457610-43	ethanol ☠ Flam. Liq. 2, H225; ☠ Acute Tox. 4, H302; Eye Irrit. 2, H319	≤2.5%
CAS: 64742-95-6 EINECS: 265-199-0	Solvent naphtha (petroleum), light arom. ☠ Flam. Liq. 3, H226; ☠ Asp. Tox. 1, H304; ☠ Aquatic Chronic 2, H411; ☠ Acute Tox. 4, H332; STOT SE 3, H335-H336	≤2.5%
CAS: 67-63-0 EINECS: 200-661-7 Reg.nr.: 01-2119457558-25	Isopropyl alcohol ☠ Flam. Liq. 2, H225; ☠ Eye Irrit. 2, H319; STOT SE 3, H336	≤1%
CAS: 147900-93-4 EC number: 604-612-4 Reg.nr.: 01-2119971821-33	Fatty acids, C-18, unsaturated trimers, compounds with 9-octadecen-1-amine ☠ STOT RE 2, H373; ☠ Aquatic Chronic 2, H411; ☠ Acute Tox. 4, H302; Skin Sens. 1, H317	≤1%
CAS: 85711-55-3 EINECS: 288-315-1 Reg.nr.: 01-2119974148-28	Fatty acids, tall-oil, compounds with oleylamine ☠ STOT RE 2, H373; ☠ Eye Dam. 1, H318; ☠ Skin Sens. 1, H317	≤1%

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CAS: 90640-67-8	Triethylenetetramine	≤1%
EINECS: 292-588-2	⚠ Skin Corr. 1B, H314; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312;	
Reg.nr.: 01-2119487919-13	Skin Sens. 1, H317; Aquatic Chronic 3, H412	
· 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 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:** Drink plenty of water and provide fresh air. Call for a doctor immediately.
- **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:** Use fire extinguishing methods suitable to surrounding conditions.
- **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:**
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.
- **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** Prevent formation of aerosols.
- **Information about fire - and explosion protection:** No special measures required.

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- 7.2 Conditions for safe storage, including any incompatibilities
- Storage:
 - Requirements to be met by storerooms and receptacles: No special requirements.
 - Information about storage in one common storage facility: Not required.
 - Further information about storage conditions: Keep container tightly sealed.
- 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:	
64-17-5 ethanol	
WEL	Long-term value: 1920 mg/m ³ , 1000 ppm
67-63-0 Isopropyl alcohol	
WEL	Short-term value: 1250 mg/m ³ , 500 ppm Long-term value: 999 mg/m ³ , 400 ppm

· DNELs

68082-29-1 Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine		
Oral	DNEL Long-term-systemic effects	1.1 mg/Kg bw/day (Workers)
Dermal	DNEL Long-term-systemic effects	0.56 mg/Kg bw/day (Consumers)
Inhalative	DNEL Long-term-systemic effects	3.9 mg/m ³ (Workers)
		0.97 mg/m ³ (Consumers)
90-72-2 2,4,6-tris(dimethylaminomethyl)phenol		
Dermal	DNEL Long-term-systemic effects	0.2 mg/Kg bw/day (Workers)
Inhalative	DNEL Long-term-systemic effects	0.31 mg/m ³ (Workers)
90640-66-7 Amines, polyethylenepoly-, tetraethylenepentamine fraction		
Dermal	DNEL Long-term-systemic effects	0.32 mg/Kg bw/day (Operator)
		0.74 mg/Kg bw/day (Consumers)
Inhalative	DNEL short-term systemic effects	6,940 mg/m ³ (Consumers)
		DNEL Long-term-systemic effects

· PNECs

68082-29-1 Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine	
PNEC	434.02 mg/Kg d.w. (Fresh water sediment)
	43.4 mg/Kg d.w. (Marine sediment)
	86.78 mg/Kg d.w. (Soil)
PNEC	0.00434 mg/l (Fresh water)
	0.000434 mg/l (Marine water)
90-72-2 2,4,6-tris(dimethylaminomethyl)phenol	
PNEC	84 mg/l (Fresh water)
	0.0084 mg/l (Marine water)

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90640-66-7 Amines, polyethylenepoly-, tetraethylenepentamine fraction

PNEC	746 mg/Kg d.w. (Marine sediment)
	274 mg/Kg d.w. (Soil)
PNEC	4.6 mg/l (STP)
	0.0068 mg/l (Fresh water)
	0.0068 mg/l (Marine water)

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

· **8.2 Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Avoid contact with the eyes and skin.

· **Respiratory protection:**



Not necessary in well-ventilated environments. In the case of insufficient ventilation, use a mask with a filter type A (EN 14387).

· **Protection of hands:**



Use protective gloves that guarantee complete protection in compliance with standard EN 374.

· **Material of gloves** PVC, neoprene or rubber

· **Eye protection:**



If there is a risk of spray, wear safety spectacles.
Eye protection must meet standard EN 166.

· **Body protection:**

No special precautions are required. In any case, wear clothing in cotton or rubber, for example, that guarantees complete protection of the skin.

· **Risk management measures**

All the personal protective equipment must comply with the European reference standards (such as EN 374 for the gloves, EN 166 for the safety spectacles and EN 14387 for the safety mask). Such equipment must be kept in good working order and stored appropriately. The service life of the protective equipment against chemical agents depends on various factors (type of use, climate factors and methods of storage), which may considerably reduce the service life envisaged by the EN standards. Always consult the supplier of the protective equipment. Instruct the worker on how to use the equipment provided.

Thermal risks: None

Environmental exposure controls: None

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SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· Form:	Viscous
· Colour:	Brown
· Odour:	Characteristic
· Odour threshold:	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

· Melting point/freezing point:	Undetermined.
· Initial boiling point and boiling range:	Undetermined.

· **Flash point:** 141 °C

· **Flammability (solid, gas):** Not applicable.

· **Ignition temperature:** 335 °C

· **Decomposition temperature:** Not determined.

· **Auto-ignition temperature:** Product is not selfigniting.

· **Explosive properties:** Product does not present an explosion hazard.

· **Explosion limits:**

· Lower:	1.3 Vol %
· Upper:	13 Vol %

· **Vapour pressure:** Not determined.

· **Density at 20 °C:** 1.56 g/cm³

· **Relative density** Not determined.

· **Vapour density** Not determined.

· **Evaporation rate** Not determined.

· **Partition coefficient: n-octanol/water:** Not determined.

· **Viscosity:**

· Dynamic at 20 °C:	10,000 mPas
· Kinematic:	Not determined.

· **9.2 Other information** See the product label for information on the provisions of Directive 2004/42/EC about VOCs (if applicable).

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 toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**

68082-29-1 Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine

Oral	LD50	>2,000 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)
	EC50	7.07 mg/l (Fish)
	LC50(72h)	1.25 mg/l (Algae)

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

Oral	LD50	2,169 mg/kg (rat)
Dermal	LD50	1,242 mg/kg (rabbit)
Inhalative	LC50 (1h)	0.5 mg/l (rat)
	LC50(72h)	84 mg/l (Fish)

90640-66-7 Amines, polyethylenepoly-, tetraethylenepentamine fraction

Oral	LD50	>3,250 mg/kg (rat)
Dermal	LD50	1,260 mg/kg (rabbit)

64742-95-6 Solvent naphtha (petroleum), light arom.

Oral	LD50	>6,800 mg/kg (rat)
Dermal	LD50	>3,400 mg/kg (rab)
Inhalative	LC50/4 h	>10.2 mg/l (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes severe skin burns and eye damage.
- **Serious eye damage/irritation**
Causes serious eye damage.
- **Respiratory or skin sensitisation**
May cause an allergic skin reaction.
- **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.
- **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.

SECTION 12: Ecological information

Ecological data about the product: not available.

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· 12.1 Toxicity

· Aquatic toxicity:

68082-29-1 Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine

LC50 (96h)	10 mg/l (Fish)
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90-72-2 2,4,6-tris(dimethylaminomethyl)phenol

LC50 (24h)	222 mg/l (Oncorhynchus mykiss)
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LC50 (96h)	718 mg/l (Daphnia magna)
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90640-66-7 Amines, polyethylenepoly-, tetraethylenepentamine fraction

EC50 (48h) (static)	24.1 mg/l (Daphnia magna)
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EC50 (72h) (static)	6.8 mg/l (Algae)
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LC50 (96h) (static)	420 mg/l (Poecilia reticulata)
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· 12.2 Persistence and degradability

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

Biodegradability	4 % (/) (OECD 301D (28 days))
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90640-66-7 Amines, polyethylenepoly-, tetraethylenepentamine fraction

Biodegradability	0 % (/)
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· 12.3 Bioaccumulative potential

68082-29-1 Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine

BCF (Bioconcentration factor)	77.4 (/)
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90-72-2 2,4,6-tris(dimethylaminomethyl)phenol

LogPow	219 (/)
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· 12.4 Mobility in soil No further relevant information available.

· Ecotoxicological 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

· 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

Disposal of not hardened product, EC waste code 08 04 09*: waste adhesives and sealants containing organic solvents or other dangerous substances

Disposal of hardened product, EC waste code 08 04 10: waste adhesives and sealants other than those

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mentioned in 08 04 09

- **Uncleaned packaging:** Empty containers should be disposed or recovered.
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

· 14.1 UN-Number · ADR, IMDG, IATA	Void
· 14.2 UN proper shipping name · ADR, IMDG, IATA	Void
· 14.3 Transport hazard class(es) · ADR, ADN · Class	Void
· 14.4 Packing group · ADR, IMDG, IATA	Void
· 14.5 Environmental hazards: · Marine pollutant:	No
· 14.6 Special precautions for user	Not applicable.
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· UN "Model Regulation":	Void

SECTION 15: Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
Reg. (EC) No.1907/2006 (REACH) and further modifications;
Reg. (EC) No. 1272/2008 (CLP) and further modifications;
Dir. 2004/42/EC (VOC), if applicable.
- **Chemical safety assessment not available**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

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.

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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 organs through prolonged or repeated exposure.

H411 Toxic to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

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. 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

Skin Sens. 1: Skin sensitisation – Category 1

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 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