

Safety data sheet according to 1907/2006/EC, Article 31

Printing date 29.10.2019

Version number 7

Revision: 29.10.2019

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

- **1.1 Product identifier**
- **Trade name:** REPOX - A
- **Article number:** 502200-2
- **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
Località Fornaci, 24050 Mornico al Serio (BG) - Italy
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



GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS07

 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** GHS02, 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**
H226 Flammable liquid and vapour.
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**
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P241 Use explosion-proof electrical/ventilating/lighting equipment.

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- P261* Avoid breathing dust/fume/gas/mist/vapours/spray.
- 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.
- 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: 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: 141-78-6 EINECS: 205-500-4 Reg.nr.: 01-2119475103-46	ethyl acetate ⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2, H319; STOT SE 3, H336	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.

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SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **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).
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.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** 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:** 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 diisononyl phthalate

 WEL Long-term value: 5 mg/m³

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141-78-6 ethyl acetate

WEL	Short-term value: 1468 mg/m ³ , 400 ppm Long-term value: 734 mg/m ³ , 200 ppm
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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)

28553-12-0 diisononyl phthalate

Oral	DNEL Long-term-systemic effects	4.4 mg/Kg bw/day (General population)
Dermal	DNEL Long-term-systemic effects	220 mg/Kg bw/day (General population) 366 mg/Kg bw/day (Workers)
	DNEL Long-term-systemic effects	15.3 mg/m ³ (General population) 51.72 mg/m ³ (Workers)

141-78-6 ethyl acetate

Oral	DNEL Long-term-systemic effects	4.5 mg/Kg bw/day (General population)
Dermal	DNEL Long-term-systemic effects	37 mg/Kg bw/day (General population) 68 mg/Kg bw/day (Workers)
	DNEL (systemic)	1,468 mg/m ³ (Workers)
Inhalative	DNEL short-term systemic effects	734 mg/m ³ (General population) 1,468 mg/m ³ (Workers)
	DNEL Long-term-systemic effects	734 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)

· 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)
	6 mg/l (Fresh water)
	0.0006 mg/l (Marine water)

28553-12-0 diisononyl phthalate

PNEC	30 mg/Kg d.w. (Soil)
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141-78-6 ethyl acetate

PNEC	1.25 mg/Kg d.w. (Fresh water sediment)
	125 mg/Kg d.w. (Marine sediment)

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PNEC	650 mg/l (STP)
	0.26 mg/l (Fresh water)
	26 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

SECTION 9: Physical and chemical properties

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

· **General Information**

· **Appearance:**

Form: Pasty

Colour: Brown

· **Odour:** Characteristic

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· 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:	33 °C
· Flammability (solid, gas):	Not applicable.
· Ignition temperature:	420 °C
· Decomposition temperature:	Not determined.
· Auto-ignition temperature:	Product is not selfigniting.
· Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· Explosion limits: Lower:	Not determined.
Upper:	Not determined.
· Vapour pressure:	Not determined.
· Density:	Not determined.
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity: Dynamic at 20 °C:	60,000 mPas
Kinematic at 40 °C:	>51 mm²/s
· 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.
- **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.

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· LD/LC50 values relevant for classification:		
471-34-1 calcium carbonate		
Oral	LD50	6,450 mg/kg (rat)
Polyurethane resin		
Oral	LD50	>2,000 mg/kg (rat)
25068-38-6 Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700)		
Oral	LD50	15,000 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)
		23,000 mg/kg (rabbit)
28553-12-0 diisononyl phthalate		
Oral	LD50	>10,000 mg/kg (rat)
Dermal	LD50	>3,160 mg/kg (rabbit)
	EC50	>74 mg/l (Daphnia magna)
141-78-6 ethyl acetate		
Oral	LD50	>20,000 mg/kg (rabbit)
Dermal	LD50	>18,000 mg/kg (rabbit)
Inhalative	LC50/4 h	56 mg/l (rat)
68609-97-2 oxirane, mono[(C12-14-alkyloxy)methyl] derivs		
Oral	LD50	19,200 mg/kg (rat)
Dermal	LD50	>4,500 mg/kg (rabbit)
	DNEL (short term, local effects)	68 mg/cm ² (Workers)
Inhalative	LC50 (7h)	>0.15 mg/l (rat)
51274-00-1 Iron hydroxide oxide yellow		
Oral	LD50	>5,000 mg/kg (rat)
25154-52-3 nonylphenol		
Oral	LD50	580 mg/kg (rat)
Dermal	LD50	2,140 mg/kg (rabbit)
1309-37-1 diiron trioxide		
Oral	LD50	>5,000 mg/kg (rat)
1317-61-9 triiron tetraoxide		
Oral	LD50	>5,000 mg/kg (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.

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- **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:

Polyurethane resin

EC50 (48h) >100 mg/l (*Daphnia magna*)

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*)

28553-12-0 diisononyl phthalate

LC50 (96h) >102 mg/l (*Danio rerio*)

141-78-6 ethyl acetate

LC50 (48h) 5,600 mg/l (*Desmodesmus subspicatus*)

EC50 (48h) 165 mg/l (*Daphnia magna*)

LC50 (96h) 230 mg/l (*Pimephales promelas*)

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

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

25154-52-3 nonylphenol

EC50 (48h) 0.19 mg/l (*Daphnia magna*)

EC50 (72h) 1.48 mg/l (*Pseudokirchneriella subcapitata*)

LC50 (96h) 0.19 mg/l (*Oncorhynchus mykiss*)

· 12.2 Persistence and degradability

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

Biodegradability 5 % (/)

141-78-6 ethyl acetate

Biodegradability >70 % (/)

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 (/)

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141-78-6 ethyl acetate

 BCF (Bioconcentration factor) 30 (*Leucisus idus*)

LogPow 0.68 (/)

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
UN1133 |
| · 14.2 UN proper shipping name
· ADR, IMDG
· IATA | Void
ADHESIVES containing a flammable liquid |
| · 14.3 Transport hazard class(es)
· ADR, ADN
· Class | Void |

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· IMDG	Void
· IATA	
	
Class 3, flammable liquids.	
· 14.4 Packing group	
· ADR, IMDG	Void
· IATA	III
· 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:	It is not subject to the provisions of ADR Code for packing up to 450L (see ADR Code section 2.2.3.1.5).
· IMDG	
· Remarks:	It is not subject to the provisions of IMDG Code for packing up to 30L (see IMDG Code section 2.3.2.5).
· 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.
 This Material Safety Data Sheet has been worked out according to Regulation n. 1907/2006 and Regulation n. 453/2010.
- **Chemical safety assessment not available**
- **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, 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.

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· Relevant phrases

H225 Highly flammable liquid and vapour.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
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)
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
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
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
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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Safety data sheet according to Regulation (EU) 2015/830

Printing date 07.09.2018

Version number 7

Revision: 07.09.2018

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

- **1.1 Product identifier**
- **Trade name:** REPOX - B
- **Article number:** 502204
- **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
3,6,9-triazaundecamethylenediamine
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: 112-57-2 EINECS: 203-986-2 Reg.nr.: 01-2119487290-37	3,6,9-triazaundecamethylenediamine ⚠ 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:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **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.

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- **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:**

64-17-5 ethanol

WEL Long-term value: 1920 mg/m³, 1000 ppm

67-63-0 Isopropyl alcohol

WEL Short-term value: 1250 mg/m³, 500 ppm
Long-term value: 999 mg/m³, 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)

112-57-2 3,6,9-triazaundecamethylenediamine

Oral	DNEL Long-term-systemic effects	0.53 mg/Kg bw/day (Consumers)
Dermal	DNEL Long-term-systemic effects	0.74 mg/Kg bw/day (Workers) 0.32 mg/Kg bw/day (Consumers)
Inhalative	DNEL Long-term-systemic effects	0.0038 mg/m ³ (Consumers)

· **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)

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	0.0084 mg/l (Marine water)
112-57-2 3,6,9-triazaundecamethylenediamine	
PNEC	3.34 mg/Kg d.w. (Fresh water sediment)
	343 mg/Kg d.w. (Marine sediment)
	683 mg/Kg d.w. (Soil)
PNEC	0.00068 mg/l (Fresh water)
	0.00068 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:	Fluid
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: >60 °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: 1.55 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:	15,000 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)

112-57-2 3,6,9-triazaundecamethylenediamine

Oral	LD50	3,250 mg/kg (rat)
Dermal	LD50	660 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)

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

 LC50 (24h) 222 mg/l (*Oncorhynchus mykiss*)

 LC50 (96h) 718 mg/l (*Daphnia magna*)

112-57-2 3,6,9-triazaundecamethylenediamine

 LC0 (96h) 200 mg/l (*Leucisus idus*)

 EC0 500 mg/l (*Pseudomonas fluorescens*)

 EC50 (48h) >14-24 mg/l (*Daphnia magna*)

EC50 (72h) >6.8 mg/l (Algae)

LC50 (96h) >100 mg/l (Fish)

· 12.2 Persistence and degradability

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

Biodegradability 4 % (/) (OECD 301D (28 days))

112-57-2 3,6,9-triazaundecamethylenediamine

Biodegradability <60 % (/) (OECD 301D)

· 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 (/)

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

LogPow 219 (/)

112-57-2 3,6,9-triazaundecamethylenediamine

LogPow ≤1.05 (/)

· 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.

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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 | Void |
| · ADR, IMDG, IATA | Void |
| · 14.2 UN proper shipping name | Void |
| · 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

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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 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