

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

Printing date 10.04.2023

Version number 8 (replaces version 7)

Revision: 10.04.2023

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

- 1.1 Product identifier

- Trade name: **1663 - Component A 1665**

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

No further relevant information available.

- Application of the substance / the mixture Adhesives

- 1.3 Details of the supplier of the safety data sheet

- Manufacturer/Supplier:

Kisling AG

Motorenstrasse 102

CH-8620 Wetzikon

Tel: +41- 58-272 0 272

- Further information obtainable from: Product safety department

- Department issuing MSDS: info@kisling.com

- 1.4 Emergency telephone number:

Tox Info Suisse: 145 / +41-44-2 51 51 51

+49-700-24 112 112 (KAR)

+1 872 5888271

SECTION 2: Hazards identification

- 2.1 Classification of the substance or mixture

- Classification according to Regulation (EC) No 1272/2008

Flam. Sol. 1 H228 Flammable solid.

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.

STOT SE 3 H335 May cause respiratory irritation.

- 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:

methyl methacrylate

methacrylic acid

Propylidynetrimethanol, ethoxylated, esters with acrylic acid

N,N-Bis-(2-hydroxyethyl)-para-toluidine, ethoxylated

- Hazard statements

H228 Flammable solid.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

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- 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.
- P261 Avoid breathing vapours.
- P280 Wear protective gloves / eye 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.
- P310 Immediately call a POISON CENTER/doctor.

- 2.3 Other hazards**- Results of PBT and vPvB assessment****- PBT:** Not applicable.**- vPvB:** Not applicable.**SECTION 3: Composition/information on ingredients****- 3.2 Mixtures****- Description:** Adhesive**- Dangerous components:**

CAS: 80-62-6 EINECS: 201-297-1 Index number: 607-035-00-6	methyl methacrylate Flam. Liq. 2, H225; Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	> 30 - ≤ 50%
CAS: 20882-04-6 EINECS: 244-096-4	{2-[(2-methyl-1-oxoallyl)oxy]ethyl} hydrogen succinate Skin Irrit. 2, H315; Eye Irrit. 2, H319	> 5 - < 10%
CAS: 79-41-4 EINECS: 201-204-4 Index number: 607-088-00-5	methacrylic acid Acute Tox. 3, H311; Skin Corr. 1A, H314; Eye Dam. 1, H318; Acute Tox. 4, H302; Acute Tox. 4, H332; STOT SE 3, H335 Specific concentration limit: STOT SE 3; H335: C ≥ 1 %	≥ 3 - < 5%
CAS: 28961-43-5 NLP: 500-066-5	Propylidynetrimethanol, ethoxylated, esters with acrylic acid Eye Irrit. 2, H319; Skin Sens. 1, H317	≥ 0.1 - < 1%
EC number: 911-490-9	N,N-Bis-(2-hydroxyethyl)-para-toluidine, ethoxylated Eye Dam. 1, H318; Acute Tox. 4, H302; Skin Irrit. 2, H315; Skin Sens. 1, H317; Aquatic Chronic 3, H412	≥ 0.1 - < 1%
CAS: 102-82-9 EINECS: 203-058-7	tributylamine Acute Tox. 3, H311; Acute Tox. 1, H330; Acute Tox. 4, H302; Skin Irrit. 2, H315	≤ 1%
CAS: 99-97-8 EINECS: 202-805-4 Index number: 612-056-00-9	N,N-dimethyl-p-toluidine Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 2, H330; Carc. 2, H351; STOT RE 2, H373; Aquatic Chronic 3, H412	< 1%
CAS: 26741-53-7	3,9-Bis(2,4-di-tert.-butyl phenoxy)-2,4,8,10-tetroxa-3,9-diphosphaspiro[5.5]undecane Aquatic Chronic 1, H410	≥ 0.025 - < 0.25%
CAS: 106-51-4 EINECS: 203-405-2 Index number: 606-013-00-3	p-benzoquinone Acute Tox. 3, H301; Acute Tox. 3, H331; Aquatic Acute 1, H400 (M=10); Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	< 0.025%

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

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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:**
After contact with skin, wash immediately with plenty of soap and water.
If skin irritation continues, consult a doctor.
- **After eye contact:**
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
- **After swallowing:**
Rinse out mouth and then drink plenty of water.
If swallowed, do not induce vomiting; seek medical advice and show this container or label.
- **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
- **5.2 Special hazards arising from the substance or mixture**
Can form explosive gas-air mixtures.
Formation of toxic gases is possible during heating or in case of fire.
- **5.3 Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Do not inhale explosion gases or combustion gases.
- **Additional information**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Keep away from ignition sources.
Use respiratory protective device against the effects of fumes/dust/aerosol.
- **6.2 Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow product to reach sewage system or any water course.
- **6.3 Methods and material for containment and cleaning up:**
Ensure adequate ventilation.
Pick up mechanically.
Flush away residues with plenty of water.
Dispose contaminated material as waste according to section 13.
- **6.4 Reference to other sections**
Fumes can combine with air to form an explosive mixture.
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.

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See Section 10 for information on "stability and reactivity".
See Section 13 for disposal information.

SECTION 7: Handling and storage

- 7.1 Precautions for safe handling

Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).

- 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 in a cool location.

Store only in the original receptacle.

- Information about storage in one common storage facility: Not required.

- Further information about storage conditions:

Keep receptacle tightly sealed.

Store receptacle in a well ventilated area.

- Storage class (TRGS 510, Storage of hazardous substances in non-stationary containers): 4.1 B

- 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:

80-62-6 methyl methacrylate

MAK (Switzerland)	Short-term value:	420 mg/m ³ , 100 ppm
	Long-term value:	210 mg/m ³ , 50 ppm
	S SSc;	

79-41-4 methacrylic acid

MAK (Switzerland)	Short-term value:	360 mg/m ³ , 100 ppm
	Long-term value:	180 mg/m ³ , 50 ppm
	SSc;	

106-51-4 p-benzoquinone

MAK (Switzerland)	Short-term value:	0.4 mg/m ³ , 0.1 ppm
	Long-term value:	0.4 mg/m ³ , 0.1 ppm
	S;	

- DNELs

80-62-6 methyl methacrylate

Dermal	Longterm System	13.67 mg/kg bw/day (Worker)
Inhalative	Longterm System	208 mg/m ³ (Worker)

- PNECs

80-62-6 methyl methacrylate

PNEC Freshwater	0.94 mg/l
PNEC Freshwater sed	5.74 mg/kg
PNEC Marinewater	0.94 mg/l
PNEC Soil	1.47 mg/kg

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

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- **8.2 Exposure controls**
- **Appropriate engineering controls** No further data; see section 7.
- **Individual protection measures, such as 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
 Wash hands before breaks and at the end of work.
 Avoid contact with the eyes and skin.
- **Respiratory protection:**
 Use suitable respiratory protective device in case of insufficient ventilation.
 Filter ABEK
- **Hand protection**
 Protective 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.
 Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
 Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**
 The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**
 The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye/face protection** Tightly sealed goggles

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
- **General Information**
- **Colour:** Beige
- **Odour:** Characteristic
- **Odour threshold:** Not determined.
- **Melting point/freezing point:** Undetermined.
- **Boiling point or initial boiling point and boiling range** Undetermined.
- **Flammability** Not determined.
- **Lower and upper explosion limit**
- **Lower:** Not determined.
- **Upper:** Not determined.
- **Flash point:** 27 °C (DIN EN ISO 3679)
- **Decomposition temperature:** Not determined.
- **pH at 20 °C** 4 - 5 (10%)
- **Viscosity:**
- **Kinematic viscosity** Not applicable.
- **Kinematic viscosity**
- **Dynamic:** Not applicable.
- **Solubility**
- **water:** Insoluble.
- **Partition coefficient n-octanol/water (log value)** Not determined.
- **Vapour pressure:** Not applicable.

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- Vapour pressure:	
- Density and/or relative density	
- Density at 20 °C:	0.99 g/cm ³
- Relative density	Not determined.
- Vapour density	Not applicable.
- 9.2 Other information	
- Appearance:	
- Form:	Pasty ADR 2.3.4: solid
- Important information on protection of health and environment, and on safety.	
- Ignition temperature:	Product is not self-igniting.
- Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
- Solvent separation test:	
- Solids content:	100.0 %
- Change in condition	
- Softening point/range	
- Oxidising properties	Not determined.
- Evaporation rate	Not applicable.
- Information with regard to physical hazard classes	
- Explosives	Void
- Flammable gases	Void
- Aerosols	Void
- Oxidising gases	Void
- Gases under pressure	Void
- Flammable liquids	Void
- 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 and stored according to specifications.
- **10.3 Possibility of hazardous reactions** Forms explosive gas mixture with air.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**
No dangerous products of decomposition if used and stored according to specifications.

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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:**

80-62-6 methyl methacrylate

Oral	LD50	7,872 mg/kg (Rat, male/female)
Dermal	LD50	> 5,000 mg/kg (Rabbit)
Inhalative	LC50/4 h	78,000 mg/l (Rat, male/female)

79-41-4 methacrylic acid

Oral	LD50	1,320 - 2,260 mg/kg (Rat, male/female)
Dermal	LD50	500 - 1,000 mg/kg (Rabbit)
Inhalative	LC50/4 h	7,100 mg/l (Rat, male/female)

N,N-Bis-(2-hydroxyethyl)-para-toluidine, ethoxylated

Oral	LD50	619 mg/kg
Dermal	LD50	> 2,000 mg/kg

102-82-9 tributylamine

Inhalative	LC50/4 h	0.5 mg/l (Rat, male/female)
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99-97-8 N,N-dimethyl-p-toluidine

Inhalative	LC50/4 h	1.4 mg/l (Rat, male/female)
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106-51-4 p-benzoquinone

Oral	LD50	130 mg/kg (Rat, male/female)
Inhalative	LC50/4 h	0.51 mg/l

- **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**

May cause respiratory irritation.

- **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.

- **Additional toxicological information:**

No experimentally found toxicological data are available for this preparation.

- **11.2 Information on other hazards**

- **Endocrine disrupting properties**

None of the ingredients is listed.

SECTION 12: Ecological information

- **12.1 Toxicity**

- **Aquatic toxicity:** No further relevant information available.

- **Toxicity to fish:**

106-51-4 p-benzoquinone

LC50/96 h	0.472 mg/l (Fish)
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- **12.2 Persistence and degradability** No further relevant information available.

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- **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:** Not applicable.
- **12.6 Endocrine disrupting properties**
The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Danger to drinking water if even small quantities leak into the ground.
Do not allow product to reach ground water, water course or undiluted sewage system.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation** Disposal must be made according to official regulations.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- 14.1 UN number or ID number	UN3175
- ADR, IMDG, IATA	
- 14.2 UN proper shipping name	3175 SOLIDS CONTAINING FLAMMABLE LIQUID, N.O.S. (METHYL METHACRYLATE, MONOMER, STABILIZED)
- ADR	
- IMDG, IATA	SOLIDS CONTAINING FLAMMABLE LIQUID, N.O.S. (METHYL METHACRYLATE, MONOMER, STABILIZED)
- 14.3 Transport hazard class(es)	
- ADR	
	
- Class	4.1 (F1) Flammable solids, self-reactive substances, polymerizing substances and solid desensitized explosives
- Label	4.1
- IMDG, IATA	
	
- Class	4.1 Flammable solids, self-reactive substances, polymerizing substances and solid desensitized explosives
- Label	4.1

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- 14.4 Packing group - ADR, IMDG, IATA	II
- 14.5 Environmental hazards:	Not applicable.
- 14.6 Special precautions for user	Warning: Flammable solids, self-reactive substances, polymerizing substances and solid desensitized explosives
- Hazard identification number (Kemler code):	40
- EMS Number:	F-A,S-I
- Stowage Category	B
- 14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
- Transport/Additional information:	
- ADR	
- Limited quantities (LQ)	1 kg
- Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 g
	Maximum net quantity per outer packaging: 500 g
- Transport category	2
- Tunnel restriction code	E
- UN "Model Regulation":	UN 3175 SOLIDS CONTAINING FLAMMABLE LIQUID, N.O.S. (METHYL METHACRYLATE, MONOMER, STABILIZED), 4.1, II

* SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

- National regulations:

- Waterhazard class: Water hazard class 2 (Self-assessment): hazardous for water.

- 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.

- Relevant phrases

H225 Highly flammable liquid and vapour.

H301 Toxic if swallowed.

H302 Harmful if swallowed.

H311 Toxic 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.

H330 Fatal if inhaled.

H331 Toxic if inhaled.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

H351 Suspected of causing cancer.

H373 May cause damage to organs through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

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H410 Very toxic to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

- Abbreviations and acronyms:

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

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids – Category 2

Flam. Sol. 1: Flammable solids – Category 1

Acute Tox. 4: Acute toxicity – Category 4

Acute Tox. 3: Acute toxicity – Category 3

Acute Tox. 1: Acute toxicity – Category 1

Acute Tox. 2: Acute toxicity – Category 2

Skin Corr. 1A: Skin corrosion/irritation – Category 1A

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

Carc. 2: Carcinogenicity – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

- * Data compared to the previous version altered.

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

- 1.1 Product identifier

- Trade name: **1664 - Component B 1665 1670 1680**

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

No further relevant information available.

- Application of the substance / the mixture Adhesives

- 1.3 Details of the supplier of the safety data sheet

- Manufacturer/Supplier:

Kisling AG

Motorenstrasse 102

CH-8620 Wetzikon

Tel: +41- 58-272 0 272

- Further information obtainable from: Product safety department

- Department issuing MSDS: info@kisling.com

- 1.4 Emergency telephone number:

Tox Info Suisse: 145 / +41-44-2 51 51 51

+49-700-24 112 112 (KAR)

+1 872 5888271

SECTION 2: Hazards identification

- 2.1 Classification of the substance or mixture

- Classification according to Regulation (EC) No 1272/2008

Org. Perox. E H242 Heating may cause a fire.

Eye Irrit. 2 H319 Causes serious eye irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic 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



GHS09

- Signal word Warning

- Hazard-determining components of labelling:

dibenzoyl peroxide

bis[4-(2,3-epoxypropoxy)phenyl]propane

- Hazard statements

H242 Heating may cause a fire.

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

H410 Very toxic 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.

P261 Avoid breathing vapours.

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- P280 Wear protective gloves / eye 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.
 P410 Protect from sunlight.
 P411+P235 Store at temperatures not exceeding 30°C. Keep cool.
- 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: Not applicable.

SECTION 3: Composition/information on ingredients

- 3.2 Mixtures**
- Description: Adhesive

- Dangerous components:

CAS: 94-36-0 EINECS: 202-327-6 Index number: 617-008-00-0	dibenzoyl peroxide Org. Perox. B, H241; Aquatic Acute 1, H400 (M=10); Aquatic Chronic 1, H410 (M=10); Eye Irrit. 2, H319; Skin Sens. 1, H317	> 30 - ≤ 100%
CAS: 1675-54-3 EINECS: 216-823-5 Index number: 603-073-00-2	bis[4-(2,3-epoxypropoxy)phenyl]propane Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317, EUH205 Specific concentration limits: Eye Irrit. 2; H319: C ≥ 5 % Skin Irrit. 2; H315: C ≥ 5 %	≥ 2.5 - < 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**
- General information:
 Immediately remove any clothing soiled by the product.
 Put contaminated clothing in water to prevent fire.
- 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:**
 After contact with skin, wash immediately with plenty of soap and water.
 If skin irritation continues, consult a doctor.
- After eye contact:**
 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 Rinse cautiously with water for several minutes.
 Remove contact lenses, if present and easy to do. Continue rinsing.
- After swallowing:**
 Rinse out mouth and then drink plenty of water.
 If swallowed, do not induce vomiting; seek medical advice and show this container or label.
- 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:** Use fire extinguishing methods suitable to surrounding conditions.
- **5.2 Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
May cause fire. May re-ignite itself after fire is extinguished. This material increases the risk of fire and may aid combustion. In a fire or if heated, a pressure increase will occur and the container may burst. Runoff to sewer may create fire or explosion hazard.
- **5.3 Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Do not inhale explosion gases or combustion gases.
- **Additional information**
Cool endangered receptacles with water spray.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Keep away from ignition sources.
- **6.2 Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow product to reach sewage system or any water course.
- **6.3 Methods and material for containment and cleaning up:**
Pick up mechanically.
Flush away residues with plenty of water.
Never use saw-dust or other flammable substances.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders).
Never replace spilled product into original containers (danger of decomposition).
Dispose of the material collected according to regulations.
- **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 10 for information on "stability and reactivity".
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** Keep receptacles tightly sealed.
- **Information about fire - and explosion protection:**
Keep away from heat and direct sunlight.
The product may cause fire due to release of oxygen. May be explosive, when combined with flammable substances.
Violent release of gases on decomposition.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.
- **Information about storage in one common storage facility:**
Store away from flammable substances.
Do not store together with reducing agents, heavy-metal compounds, acids and alkalis.
Store away from foodstuffs.
- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Protect from heat and direct sunlight.

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- Store in a cool place.
- **Maximum storage temperature:** 30 °C
 - **Minimum storage temperature:** 5 °C
 - **Storage class (TRGS 510, Storage of hazardous substances in non-stationary containers):** 5.2
 - **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:

94-36-0 dibenzoyl peroxide

MAK (Switzerland)	Short-term value: 5 e mg/m ³
	Long-term value: 5 e mg/m ³

- DNELs

94-36-0 dibenzoyl peroxide

Dermal	Longterm System	6.6 mg/kg bw/day (General population)
Inhalative	Acute, System	6.6 mg/m ³ (General population)
	Longterm System	11.75 mg/m ³ (General population)

1675-54-3 bis[4-(2,3-epoxypropoxy)phenyl]propane

Oral	Acute, System	0.5 mg/kg (General population)
Dermal	Longterm System	0.0893 mg/kg bw/day (General population)
		0.75 mg/kg bw/day (Worker)
Inhalative	Longterm System	0.89 mg/m ³ (General population)
		4.93 mg/m ³ (Worker)

- PNECs

94-36-0 dibenzoyl peroxide

Oral	PNEC oral	6.67 mg/kg Food (General population)
	PNEC Freshwater	0.000602 mg/l (General population)
	PNEC Freshwater sed	0.338 mg/kg (General population)
	PNEC Marinewater	0.000602 mg/l (General population)
	PNEC Soil	0.0758 mg/kg (General population)
	PNEC STP	0.35 mg/l (General population)
	PNEC Marinewater sed	0.0338 mg/kg (General population)

1675-54-3 bis[4-(2,3-epoxypropoxy)phenyl]propane

Oral	PNEC oral	11 mg/kg Food
	PNEC Freshwater	0.006 mg/l
	PNEC Freshwater sed	0.341 mg/kg
	PNEC Marinewater	0.001 mg/l
	PNEC Soil	0.065 mg/kg
	PNEC STP	10 mg/l
	PNEC Marinewater sed	0.034 mg/kg

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

- 8.2 Exposure controls

- **Appropriate engineering controls** No further data; see section 7.
- **Individual protection measures, such as personal protective equipment**
- **General protective and hygienic measures:**
The usual precautionary measures are to be adhered to when handling chemicals.

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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 eyes and skin.

- Respiratory protection:

Use suitable respiratory protective device in case of insufficient ventilation.

Filter A/P2

- Hand protection

Protective 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.

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

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

- Material of gloves

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

- Penetration time of glove material

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

- Eye/face protection Tightly sealed goggles

- Body protection: Use protective suit.

SECTION 9: Physical and chemical properties

- 9.1 Information on basic physical and chemical properties

- General Information

- Colour:	Blue
- Odour:	Characteristic
- Odour threshold:	Not determined.
- Melting point/freezing point:	Undetermined.
- Boiling point or initial boiling point and boiling range	Undetermined.
- Flammability	May cause fire.
- Lower and upper explosion limit	
- Lower:	Not determined.
- Upper:	Not determined.
- Flash point:	Not applicable.
- Decomposition temperature:	≥50 °C (SADT)
- pH at 20 °C	6 - 7 (10%)
- Viscosity:	
- Kinematic viscosity	Not applicable.
- Kinematic viscosity	
- Dynamic:	Not applicable.
- Solubility	
- water:	Insoluble.
- Partition coefficient n-octanol/water (log value)	Not determined.
- Vapour pressure:	Not applicable.
- Vapour pressure:	
- Density and/or relative density	
- Density at 20 °C:	1.15 g/cm ³
- Relative density	Not determined.
- Vapour density	Not applicable.

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- | | |
|--|---|
| - 9.2 Other information | |
| - Appearance: | |
| - Form: | Pasty |
| - Important information on protection of health and environment, and on safety. | |
| - Ignition temperature: | Product is not self-igniting. |
| - Explosive properties: | Product does not present an explosion hazard. |
| - Solvent separation test: | |
| - Solids content: | 100.0 % |
| - Change in condition | |
| - Softening point/range | |
| - Oxidising properties | Not determined. |
| - Evaporation rate | Not applicable. |
-
- | | |
|--|------|
| - Information with regard to physical hazard classes | |
| - Explosives | Void |
| - Flammable gases | Void |
| - Aerosols | Void |
| - Oxidising gases | Void |
| - Gases under pressure | Void |
| - Flammable liquids | Void |
| - 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 | |
| Heating may cause a fire. | |
| - 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:**
 SADT (Self-Accelerating Decomposition Temperature): is the lowest temperature at which self accelerating decomposition may occur with a substance in the packaging as used in transport.
 A dangerous self-accelerating decomposition reaction and, under certain circumstances, explosion or fire can be caused by thermal decomposition at and above the given temperature. Contact with incompatible substances can cause decomposition at or below the SADT.
 Protect from heat and direct sunlight.
- **10.3 Possibility of hazardous reactions** Reacts with heavy metals.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** Metal-salts, amines
- **10.6 Hazardous decomposition products:**
 No dangerous products of decomposition if used and stored according to specifications.

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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:

1675-54-3 bis[4-(2,3-epoxypropoxy)phenyl]propane

Oral	LD50	15,000 mg/kg (Rat, male/female)
Dermal	LD50	23,000 mg/kg (Rabbit)

- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.

- Serious eye damage/irritation

Causes serious eye irritation.

- 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.

- Additional toxicological information:

No experimentally found toxicological data are available for this preparation.

- 11.2 Information on other hazards

- Endocrine disrupting properties

None of the ingredients is listed.

SECTION 12: Ecological information

- 12.1 Toxicity

- **Aquatic toxicity:** No further relevant information available.

- Toxicity to fish:

1675-54-3 bis[4-(2,3-epoxypropoxy)phenyl]propane

LC50/96 h	2 mg/l (Fish)
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- **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:** Not applicable.

- 12.6 Endocrine disrupting properties

The product does not contain substances with endocrine disrupting properties.

- **12.7 Other adverse effects** No further relevant information available.

- **Remark:** Very toxic for fish

- Additional ecological information:

- General notes:

Also very poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms

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

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

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

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SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation** Disposal must be made according to official regulations.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- 14.1 UN number or ID number

- ADR, IMDG, IATA

UN3108

- 14.2 UN proper shipping name

- ADR

3108 ORGANIC PEROXIDE TYPE E, SOLID,
ENVIRONMENTALLY HAZARDOUS

- IMDG

ORGANIC PEROXIDE TYPE E, SOLID (dibenzoyl
peroxide), MARINE POLLUTANT

- IATA

ORGANIC PEROXIDE TYPE E, SOLID (dibenzoyl
peroxide)

- 14.3 Transport hazard class(es)

- ADR



- Class

5.2 (P1) Organic peroxides.

- Label

5.2

- IMDG



- Class

5.2 Organic peroxides.

- Label

5.2

- IATA



- Class

5.2 Organic peroxides.

- Label

5.2

- 14.4 Packing group

- ADR, IMDG, IATA

Void

- 14.5 Environmental hazards:

- Marine pollutant:

Symbol (fish and tree)

- Special marking (ADR):

Symbol (fish and tree)

- 14.6 Special precautions for user

Warning: Organic peroxides.

- Hazard identification number (Kemler code):

-

- EMS Number:

F-J,S-R

- Segregation groups

(SGG16) Peroxides

- Stowage Category

D

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- Stowage Code	SW1 Protected from sources of heat.
- Segregation Code	SG35 Stow "separated from" SGG1-acids SG36 Stow "separated from" SGG18-alkalis.
- 14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
- Transport/Additional information:	
- ADR	
- Limited quantities (LQ)	500 g
- Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
- Transport category	2
- Tunnel restriction code	D
- IMDG	
- Limited quantities (LQ)	500 g
- Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
- UN "Model Regulation":	UN 3108 ORGANIC PEROXIDE TYPE E, SOLID, 5.2, ENVIRONMENTALLY HAZARDOUS

* SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations:**
- **Waterhazard class:** Water hazard class 2 (Self-assessment): hazardous for water.
- **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.

- Relevant phrases

- H241 Heating may cause a fire or explosion.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
- H411 Toxic to aquatic life with long lasting effects.
- EUH205 Contains epoxy constituents. May produce an allergic reaction.

- Abbreviations and acronyms:

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
 vPvB: very Persistent and very Bioaccumulative
 Org. Perox. B: Organic peroxides – Type B

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Org. Perox. E: Organic peroxides – Type E/F

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 Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

- * Data compared to the previous version altered.

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