

14.12.2017

### Kit Components

Product code	Description
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<b>1675-170710</b>	<b>ergo 1675</b>
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Components:

1664-150206	ergo 1664
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31.673	ergo 1673
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## Safety data sheet according to 1907/2006/EC, Article 31

Printing date 14.12.2017

Version number 3

Revision: 14.12.2017

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

#### - 1.1 Product identifier

- Trade name: ergo 1664

#### - 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

Telefon: +41-(0) 58-272 0 272

Telefax: +41-(0) 58-272 0 273

- Further information obtainable from: Safety Department

- Department issuing MSDS: ergo@kisling.com

- 1.4 Emergency telephone number: Tox Info Suisse: 145 / +41-44-2 51 51 51

### 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 Dam. 1 H318 Causes serious eye damage.

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 GHS05 GHS07 GHS09

- Signal word Danger

##### - Hazard-determining components of labelling:

dibenzoyl peroxide

[3-(2,3-epoxypropoxy)propyl]trimethoxysilane

##### - Hazard statements

H242 Heating may cause a fire.

H318 Causes serious eye damage.

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.

P220 Keep/Store away from clothing/combustible materials.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

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.

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P411+P235 Store at temperatures not exceeding 30°C. Keep cool.

- **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 Reg.nr.: 01-2119511472-50-xxxx	dibenzoyl peroxide Org. Perox. B, H241; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Eye Irrit. 2, H319; Skin Sens. 1, H317	30-<50%
CAS: 670241-72-2 ELINCS: 447-010-5	Isononylbenzoat Aquatic Chronic 2, H411	15-<25%
CAS: 2530-83-8 EINECS: 219-784-2 Reg.nr.: 01-2119513212-58-xxxx	[3-(2,3-epoxypropoxy)propyl]trimethoxysilane Eye Dam. 1, H318	1-<5%
CAS: 9038-95-3 EC number: 618-542-7	Polyalkylenglykolmonobutylether Acute Tox. 4, H302; Eye Irrit. 2, H319	1-<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.

### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.

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**- 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.

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

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- 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:

##### 94-36-0 dibenzoyl peroxide

MAK (Switzerland)	Short-term value: 5 e mg/m <sup>3</sup> Long-term value: 5 e mg/m <sup>3</sup>
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#### - DNELs

##### 94-36-0 dibenzoyl peroxide

Dermal	Langzeit, Systemische Effekte	6.6 mg/kg bw/day (all)
Inhalative	Langzeit, Systemische Effekte	11.75 mg/m <sup>3</sup> (all)

##### 2530-83-8 [3-(2,3-epoxypropoxy)propyl]trimethoxysilane

Dermal	Akut, Systemische Effekte	21 mg/kg bw (ber)
	Langzeit, Systemische Effekte	21 mg/kg bw/day (ber)
Inhalative	Akut, Systemische Effekte	147 mg/m <sup>3</sup> (ber)
	Langzeit, Systemische Effekte	147 mg/m <sup>3</sup> (ber)

#### - PNECs

##### 94-36-0 dibenzoyl peroxide

Oral	PNEC Oral	6.67 mg/kg Food (all)
	PNEC Süßwasser	0.000602 mg/l (all)
	PNEC Süßwassersediment	0.338 mg/kg Sediment (all)
	PNEC Meerwasser	0.0000602 mg/l (all)
	PNEC Boden	0.0758 mg/kg Boden (all)
	PNEC Kläranlage	0.35 mg/l (all)
	PNEC Meerwassersediment	0.0338 mg/kg Sediment (all) Keine Belastung zu erwarten.

##### 2530-83-8 [3-(2,3-epoxypropoxy)propyl]trimethoxysilane

	PNEC Süßwasser	1 mg/l
	PNEC Meerwasser	0.1 mg/l

- 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

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

##### - Protection of hands:

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.

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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 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**

**- Appearance:**

**Form:** Pasty

**Colour:** Blue

**- Odour:** Characteristic

**- Odour threshold:** Not determined.

**- pH-value:** Not applicable.

**- Change in condition**

**Melting point/freezing point:** Undetermined.

**Initial boiling point and boiling range:** Undetermined.

**- Flash point:** Not applicable.

**- Flammability (solid, gas):** May cause fire.

**- Decomposition temperature:** 50 °C (SADT)

**- Auto-ignition temperature:** Product is not self-igniting.

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

**- Explosion limits:**

**Lower:** Not determined.

**Upper:** Not determined.

**- Density at 20 °C:** 1,15 g/cm<sup>3</sup>

**- Relative density** Not determined.

**- Vapour density** Not applicable.

**- Evaporation rate** Not applicable.

**- Solubility in / Miscibility with water:**

Insoluble.

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

**- Viscosity:**

**Dynamic:** Not applicable.

**Kinematic:** Not applicable.

**- 9.2 Other information** No further relevant information available.

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### 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.

### 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:

**2530-83-8 [3-(2,3-epoxypropoxy)propyl]trimethoxysilane**

Oral	LD50	8,025 mg/kg (rat) (OECD TG 401)
Dermal	LD50	4,250 mg/kg (rab) (OECD TG 402)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**  
Causes serious eye damage.
- **Respiratory or skin sensitisation**  
May cause an allergic skin reaction.
- **Additional toxicological information:**  
No experimentally found toxicological data are available for this preparation.
- **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

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **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.
- **Ecotoxicological effects:**
- **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

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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.

**- 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** 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**- **ADR, IMDG, IATA**

UN3108

**- 14.2 UN proper shipping name**- **ADR**

3108 ORGANIC PEROXIDE TYPE E, SOLID (dibenzoyl peroxide), 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

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**- 14.5 Environmental hazards:**

- |                          |                        |
|--------------------------|------------------------|
| - Marine pollutant:      | Symbol (fish and tree) |
| - Special marking (ADR): | Symbol (fish and tree) |

**- 14.6 Special precautions for user**

- |                         |  |
|-------------------------|--|
| - Danger code (Kemler): | -  |
| - EMS Number:           | F-J,S-R  |
| - Segregation groups    | Peroxides  |
| - Stowage Category      | D  |
| - Stowage Code          | SW1 Protected from sources of heat.                                      |
| - Segregation Code      | SG35 Stow "separated from" acids.<br>SG36 Stow "separated from" alkalis. |

**- 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

**- Transport/Additional information:****- ADR**

- |                            |  |
|----------------------------|--|
| - Limited quantities (LQ)  | 500 g  |
| - Excepted quantities (EQ) | Code: E0<br>Not permitted as Excepted Quantity |
| - Transport category       | 2  |
| - Tunnel restriction code  | D  |

**- IMDG**

- |                            |  |
|----------------------------|--|
| - Limited quantities (LQ)  | 500 g  |
| - Excepted quantities (EQ) | Code: E0<br>Not permitted as Excepted Quantity |

**- UN "Model Regulation":**

UN 3108 ORGANIC PEROXIDE TYPE E, SOLID (DIBENZOYL PEROXIDE), 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.
- H302 Harmful if swallowed.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- 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.

**- Abbreviations and acronyms:**

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

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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  
Org. Perox. E: Organic peroxides – Type E/F  
Acute Tox. 4: Acute toxicity – Category 4  
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  
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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### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### - 1.1 Product identifier

- Trade name: ergo 1673

#### - 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

Telefon: +41-(0) 58-272 0 272

Telefax: +41-(0) 58-272 0 273

- Further information obtainable from: Safety Department

- Department issuing MSDS: ergo@kisling.com

- 1.4 Emergency telephone number: Tox Info Suisse: 145 / +41-44-2 51 51 51

### SECTION 2: Hazards identification

#### - 2.1 Classification of the substance or mixture

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

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.

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:

methacrylic acid

Propylidynetrimethanol, ethoxylated, esters with acrylic acid

2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, phosphate

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

methyl methacrylate

dodecane-1-thiol

##### - Hazard statements

H315 Causes skin irritation.

H318 Causes serious eye damage.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

H412 Harmful to aquatic life with long lasting effects.

##### - Precautionary statements

P261 Avoid breathing mist/vapours/spray.

P280 Wear protective gloves / eye protection.

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P302+P352 IF ON SKIN: Wash with plenty of soap and water.

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.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

**- 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:** Mixture of substances listed below with nonhazardous additions.**- Dangerous components:**

CAS: 79-41-4 EINECS: 201-204-4 Index number: 607-088-00-5 Reg.nr.: 01-2119463884-26-xxxx	methacrylic acid Acute Tox. 3, H311; Skin Corr. 1A, H314; Eye Dam. 1, H318; Acute Tox. 4, H302; Acute Tox. 4, H332	1-<5%
CAS: 28961-43-5 NLP: 500-066-5 Reg.nr.: 01-2119489900-30-xxxx	Propylidynetrimethanol, ethoxylated, esters with acrylic acid Eye Irrit. 2, H319; Skin Sens. 1, H317	1-<5%
CAS: 52628-03-2 EINECS: 258-053-2	2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, phosphate Eye Dam. 1, H318; Skin Irrit. 2, H315	1-<5%
CAS: 4740-78-7	1,3-dioxan-5-ol Repr. 2, H361fd; Eye Irrit. 2, H319	0.1-<1%
CAS: 103671-44-9 Reg.nr.: 01-2119979579-10-xxxx	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: 80-62-6 EINECS: 201-297-1 Index number: 607-035-00-6 Reg.nr.: 01-2119452498-28-xxxx	methyl methacrylate Flam. Liq. 2, H225; Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	0.1-<1%
CAS: 91-66-7 EINECS: 202-088-8 Index number: 612-054-00-8	N,N-diethylaniline Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; STOT RE 2, H373; Aquatic Chronic 2, H411	0.25-<1%
CAS: 112-55-0 EINECS: 203-984-1	dodecane-1-thiol Skin Corr. 1C, H314; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Skin Sens. 1A, H317	0.1-<0.25%
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	0.1-<1%

**- Additional information:** For the wording of the listed hazard phrases refer to section 16.**SECTION 4: First aid measures****- 4.1 Description of first aid measures****- General information:** Immediately remove any clothing soiled by the product.**- 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.

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- **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:** 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.
- **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  
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.  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
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** No special precautions are necessary if used correctly.
- **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 receptacle tightly sealed.
- **Storage class (TRGS 510, Storage of hazardous substances in non-stationary containers):** 10-13

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- 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:

##### 79-41-4 methacrylic acid

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

##### 80-62-6 methyl methacrylate

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

- 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

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.

##### - Protection of hands:

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 protection: Tightly sealed goggles

### SECTION 9: Physical and chemical properties

#### - 9.1 Information on basic physical and chemical properties

##### - General Information

##### - Appearance:

Form:	Fluid
Colour:	Colourless

- Odour: Characteristic

- Odour threshold: Not determined.

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- 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.
- Decomposition temperature:	Not determined.
- Auto-ignition temperature:	Product is not self-igniting.
- Explosive properties:	Product does not present an explosion hazard.
- 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.
- Solubility in / Miscibility with water:	Not miscible or difficult to mix.
- Partition coefficient: n-octanol/water:	Not determined.
- Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
- 9.2 Other information	No further relevant information available.

### SECTION 10: Stability and reactivity

- 10.1 Reactivity No further relevant information available.
- 10.2 Chemical stability
- Thermal decomposition / conditions to be avoided:  
No decomposition if used and stored according to specifications.
- 10.3 Possibility of hazardous reactions  
No dangerous reactions if used and stored according to specifications.
- 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.

### 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:

##### 79-41-4 methacrylic acid

Oral	LD50	1,320 - 2,260 mg/kg (rat)
Dermal	LD50	500 - 1,000 mg/kg (rab)
Inhalative	LC50/4 h	7,100 mg/l (rat)

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103671-44-9 N,N-Bis-(2-hydroxyethyl)-para-toluidine, ethoxylated		
Oral	LD50	619 mg/kg
Dermal	LD50	> 2,000 mg/kg
80-62-6 methyl methacrylate		
Oral	LD50	7,872 mg/kg (rat)
Dermal	LD50	> 5,000 mg/kg (rab)
Inhalative	LC50/4 h	78,000 mg/l (rat)
91-66-7 N,N-diethylaniline		
Oral	LD50	606 mg/kg (rat)
Dermal	LD50	> 5,000 mg/kg (rat)
Inhalative	LC50/4 h => LC50/4	1.92 mg/l (rat)
102-82-9 tributylamine		
Inhalative	LC50/4 h	0.5 mg/l (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation**  
Causes skin irritation.
- **Serious eye damage/irritation**  
Causes serious eye damage.
- **Respiratory or skin sensitisation**  
May cause an allergic skin reaction.
- **Additional toxicological information:**  
No experimentally found toxicological data are available for this preparation.
- **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**  
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.

## SECTION 12: Ecological information

### - 12.1 Toxicity

#### - Aquatic toxicity:

#### 80-62-6 methyl methacrylate

EC50/48 h | 69 mg/l (DA)

- **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.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**  
Harmful to 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.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

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- 12.6 Other adverse effects No further relevant information available.

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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  |                 |
| - ADR, IMDG, IATA   | Void            |
| - 14.2 UN proper shipping name  |                 |
| - ADR, IMDG, IATA   | Void            |
| - 14.3 Transport hazard class(es)   |                 |
| - ADR, ADN, IMDG, IATA  |                 |
| - Class   | Void            |
| - 14.4 Packing group  |                 |
| - ADR, IMDG, IATA   | Void            |
| - 14.5 Environmental hazards:   | Not applicable. |
| - 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**

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **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.

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- H331 Toxic if inhaled.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.
- H373 May cause damage to organs through prolonged or repeated exposure.
- 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.
- H412 Harmful to aquatic life with long lasting effects.

**- Abbreviations and acronyms:**

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)

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

Acute Tox. 4: Acute toxicity – Category 4

Acute Tox. 3: Acute toxicity – Category 3

Acute Tox. 1: Acute toxicity – Category 1

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

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

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

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

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

Skin Sens. 1: Skin sensitisation – Category 1

Skin Sens. 1A: Skin sensitisation – Category 1A

Repr. 2: Reproductive toxicity – 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 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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