



23.01.2023

Kit components

Product code	Description
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86962	Ultra Alu THX
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Components:

86962B	Ultra Alu THX Hardener Part B (BPO)
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86962A	Ultra Alu THX Part A
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Safety data sheet according to 1907/2006/EC, Article 31

Printing date 23.01.2023

Version number 4 (replaces version 3)

Revision: 19.01.2023

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

1.1 Product identifier

Trade name: **Ultra Alu THX Hardener Part B (BPO)**

Article number: 86962B

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

FOR PROFESSIONAL AND INDUSTRIAL USE ONLY

Application of the substance / the mixture Hardening agent / curing agent

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

KENT (United Kingdom) Ltd
Forsyth House
Pitreavie Drive
Pitreavie Business Park
Dunfermline
Fife
KY11 8US

Tel: +44 01383 723344 / 0800 136925 Monday - Thursday 8.30am - 5.30pm, Friday 9.00am - 3.00pm

Fax: +44 1383 620079

SDS@kenteurope.com

1.4 Emergency telephone number:

Tel: +44 01383 723344 During normal office hours - Monday - Thursday 8.30am - 5.30pm, Friday 9.00am - 3.00pm

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



flame

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



environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.



Eye Irrit. 2 H319 Causes serious eye irritation.

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

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 The product is classified and labelled according to the GB CLP regulation.

Hazard pictograms



GHS02



GHS07



GHS09

Signal word Warning

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· **Hazard-determining components of labelling:**

dibenzoyl peroxide

· **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**

P101 If medical advice is needed, have product container or label at hand.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

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.

P403+P235 Store in a well-ventilated place. Keep cool.

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 Mixtures**

· **Description:** Mixture of the substances listed below with harmless additions.

· **Dangerous components:**

CAS: 94-36-0 EINECS: 202-327-6 Reg.nr.: 01-2119511472-50	dibenzoyl peroxide Org. Perox. B, H241; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Eye Irrit. 2, H319; Skin Sens. 1, H317	25-50%
CAS: 131-11-3 EINECS: 205-011-6 Reg.nr.: 01-2119437229-36	dimethyl phthalate substance with a Community workplace exposure limit	25-50%
CAS: 107-21-1 EINECS: 203-473-3 Reg.nr.: 01-2119456816-28	Ethane-1,2-diol STOT RE 2, H373; Acute Tox. 4, H302	5-10%

· **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** Instantly remove any clothing soiled by the product.

· **After inhalation** Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

· **After skin contact**

Instantly wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

· **After eye contact** Rinse opened eye for several minutes under running water. If symptoms persist, consult doctor.

· **After swallowing** Do not induce vomiting; instantly call for medical help.

· **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, extinguishing powder or water haze. Fight larger fires with water haze or alcohol-resistant foam.

· **For safety reasons unsuitable extinguishing agents** Water jet.

· **5.2 Special hazards arising from the substance or mixture**

Formation of toxic gases is possible during heating or in case of fire.

Can form explosive gas-air mixtures.

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5.3 Advice for firefighters

Protective equipment:

Do not inhale explosion gases or combustion gases.
Wear self-contained breathing apparatus.

Additional information

Cool endangered containers with water spray jet.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Collect contaminated fire fighting water separately. It must not enter drains.

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

6.2 Environmental precautions:

Inform respective authorities in case product reaches water or sewage system.
Do not allow to enter drainage system, 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).
Send for recovery or disposal in suitable containers.
Dispose of contaminated material as waste according to item 13.

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 information on disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).
Open and handle container with care.
Keep away from heat and direct sunlight.
Keep containers tightly sealed.

Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.
Fumes can combine with air to form an explosive mixture.
Protect from heat.
Protect against electrostatic charges.
Prevent impact and friction.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Requirements to be met by storerooms and containers:

Store in cool location.
Store only in the original container.

Information about storage in one common storage facility: Store away from oxidising agents.

Further information about storage conditions:

Keep container tightly sealed.
Protect from heat and direct sunlight.
<25°C

Storage class 5.2

7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Components with limit values that require monitoring at the workplace:

131-11-3 dimethyl phthalate

WEL	Short-term value: 10 mg/m ³ Long-term value: 5 mg/m ³
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107-21-1 Ethane-1,2-diol

WEL Short-term value: 104** mg/m³, 40** ppm
Long-term value: 10* 52** mg/m³, 20** ppm
Sk *particulate **vapour

· **Regulatory information** WEL: EH40/2020

· **DNELs****94-36-0 dibenzoyl peroxide**

Dermal	Acute systemic effect	6.6 mg/kg bw/day (Worker)
Inhalative	Acute systemic effect	11.75 mg/m ³ (Worker)

107-21-1 Ethane-1,2-diol

Dermal	Long term systemic effect	106 mg/kg/day (Worker)
Inhalative	Long term local effect	35 mg/m ³ (Worker)

· **PNECs****107-21-1 Ethane-1,2-diol**

PNEC	10 mg/l (Aqua (freshwater))
	10 mg/l (Aqua (intermittent))
	1 mg/l (Aqua (marine water))
	20.9 mg/kg (Freshwater sediment)
	3.7 mg/kg (Marine water sediment)
	199.5 mg/l (Sewage treatment plant)
	1.53 mg/l (Soil)

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

· **8.2 Exposure controls**

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

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

· **General protective and hygienic measures**

Keep away from foodstuffs, beverages and food.

Take off immediately all contaminated clothing

Wash hands during breaks and at the end of the work.

Do not inhale dust / smoke / mist.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

· **Breathing equipment:**

Ensure good ventilation. If this is not sufficient breathing protection must be used so that the vaporisation level is held under the workplace limit.

Filter A2 / P2 (EN 14387)

· **Hand protection**

Protective gloves.

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**

Wear suitable gloves tested to EN 374

Nitrile rubber, NBR

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**

Value for the permeation: Level 6 > 480 minutes

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**

Safety glasses (EN 166)

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· **Body protection:** Protective work clothing (EN-13034/6)

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Physical state	Fluid
· Colour:	Red
· Odour:	Characteristic
· Odour threshold:	Not determined.
· Melting point/freezing point:	Not determined
· Boiling point or initial boiling point and boiling range	Not determined
· Flammability	May cause fire.
· Lower and upper explosion limit	
· Lower:	Not determined.
· Upper:	Not determined.
· Flash point:	50 °C
· Decomposition temperature:	SADT 50 °C
· pH	Mixture is non-polar/aprotic.
· Viscosity:	
· Kinematic viscosity	Not determined.
· dynamic:	Not determined.
· Solubility	
· Water:	Not miscible / difficult to mix
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure at 20 °C:	<1 hPa
· Density and/or relative density	
· Density at 20 °C	1.15-1.25 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.

· 9.2 Other information

· Appearance:	
· Form:	Pasty
· Important information on protection of health and environment, and on safety.	
· Self-inflammability:	Product is not selfigniting.
· Explosive properties:	Product is not explosive. Risk of explosion by shock, friction, fire or other sources of ignition.
· Solvent content:	
· Organic solvents:	NIL VOC
· Change in condition	
· Evaporation rate	Not determined.

· Information with regard to physical hazard classes

· Explosives	Void
· Flammable gases	Void
· Aerosols	Void
· Oxidising gases	Void
· Gases under pressure	Void
· Flammable liquids	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.

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- | | |
|----------------------------------|------|
| · 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**
 Reacts with reducing agents
 Reacts with strong acids and alkali
 Forms explosive gases / fumes
- **10.4 Conditions to avoid** Heat. Hot surfaces. Sources of ignition. Flames.
- **10.5 Incompatible materials:**
 Rapid decomposition by dirt, dust, chemicals in particular concentrated acids, alkalis and accelerators
 Reducing agents
 Amines
 Heavy-metal compounds
- **10.6 Hazardous decomposition products:**
 Danger of toxic pyrolysis products
 Formation of toxic gases is possible during heating or in case of fire.

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 that are relevant for classification:**
- | 94-36-0 dibenzoyl peroxide | | |
|-----------------------------|-------------|--------------------|
| Oral | LD50 | >5,000 mg/kg (Rat) |
| Inhalative | LC50 (4 hr) | 24.3 mg/l (Rat) |
| 131-11-3 dimethyl phthalate | | |
| Oral | LD50 | 6,800 mg/kg (Rat) |
| 107-21-1 Ethane-1,2-diol | | |
| Oral | LD50 | 5,840 mg/kg (Rat) |
| Dermal | LD50 | 9,530 mg/kg (rbt) |
- **Serious eye damage/irritation** Causes serious eye irritation.
 - **Respiratory or skin sensitisation** May cause an allergic skin reaction.
 - **11.2 Information on other hazards**
 - **Endocrine disrupting properties**
 None of the ingredients is listed.

SECTION 12: Ecological information

- **12.1 Toxicity**
 - **Aquatic toxicity:**
- | 94-36-0 dibenzoyl peroxide | |
|-----------------------------|---|
| EC50 (48 hr) | 2.9 mg/l (Daphnia magna) |
| EC50 (72 hr) | 0.0711 mg/l (Pseudokirchneriella subcapitata) |
| LC50 (96 hr) | 0.0602 mg/l (Oncorhynchus mykiss) |
| 131-11-3 dimethyl phthalate | |
| EC50 (48 hr) | 52 mg/l (Daphnia magna) |
| LC50 (96 hr) | 39 mg/l (Fish) |
| 107-21-1 Ethane-1,2-diol | |
| EC50 (96 hr) | 6.5-13 mg/l (Algae) |
| | 6,500-13,000 mg/l (Selenastrum capricornutum) |

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EC50 (48 hr)	>100 mg/l (<i>Daphnia magna</i>)
LC50 (96 hr)	40,761 mg/l (Fish)
	72,860 mg/l (<i>Pimephales promelas</i>)
NOEC (21 days)	15,380 mg/l (<i>Pimephales promelas</i>)

- **12.2 Persistence and degradability** No further relevant information available.
- **Other information:** The product is biodegradable.
- **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**
- **Remark:** Very toxic for fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.
Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.
Also poisonous for fish and plankton in water bodies.
Very toxic for aquatic organisms

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **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 (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.

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**Trade name: Ultra Alu THX Hardener Part B
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· 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:	Yes Symbol (fish and tree)
· Special marking (ADR):	Symbol (fish and tree)
· 14.6 Special precautions for user	Warning: Organic peroxides.
· Kemler Number:	-
· EMS Number:	F-J,S-R
· Stowage Category	D
· 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 (DIBENZOYL PEROXIDE), 5.2, ENVIRONMENTALLY HAZARDOUS

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category**
P6b SELF-REACTIVE SUBSTANCES AND MIXTURES and ORGANIC PEROXIDES
E1 Hazardous to the Aquatic Environment
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 50 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
- **National regulations**
- **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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SECTION 16: Other information

These data are based on our present knowledge. However, they 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.
- H319 Causes serious eye irritation.
- 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.

· **Department issuing data specification sheet:** Environment protection department

· **Abbreviations and acronyms:**

- RID: (Regulations Concerning the International Transport of Dangerous Goods by Rail)
- ICAO: International Civil Aviation Organisation
- ADR: 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 (UK REACH)
- PNEC: Predicted No-Effect Concentration (UK 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 Irrit. 2: Serious eye damage/eye irritation – Category 2
- Skin Sens. 1: Skin sensitisation – Category 1
- 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

· **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: **Ultra Alu THX Part A**

Article number: 86962A

1.2 Relevant identified uses of the substance or mixture and uses advised against
FOR PROFESSIONAL AND INDUSTRIAL USE ONLY

Application of the substance / the mixture *Filler and surfacer*

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

KENT (United Kingdom) Ltd

Forsyth House

Pitreavie Drive

Pitreavie Business Park

Dunfermline

Fife

KY11 8US

Tel: +44 01383 723344 / 0800 136925 Monday - Thursday 8.30am - 5.30pm, Friday 9.00am - 3.00pm

Fax: +44 1383 620079

SDS@kenteurope.com

1.4 Emergency telephone number:

Tel: +44 01383 723344 During normal office hours - Monday - Thursday 8.30am - 5.30pm, Friday 9.00am - 3.00pm

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



health hazard

Repr. 2 H361d Suspected of damaging the unborn child.

STOT RE 1 H372 Causes damage to the hearing organs through prolonged or repeated exposure.



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.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 The product is classified and labelled according to the GB CLP regulation.

Hazard pictograms



GHS02



GHS07



GHS08

Signal word *Danger*

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Trade name: Ultra Alu THX Part A

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Hazard-determining components of labelling:styrene
maleic anhydride**Hazard statements**

H226 Flammable liquid and vapour.
 H315 Causes skin irritation.
 H319 Causes serious eye irritation.
 H317 May cause an allergic skin reaction.
 H361d Suspected of damaging the unborn child.
 H372 Causes damage to the hearing organs through prolonged or repeated exposure.

Precautionary statements

P202 Do not handle until all safety precautions have been read and understood.
 P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P260 Do not breathe mist/vapours/spray.
 P280 Wear protective clothing / eye protection.
 P308+P313 IF exposed or concerned: Get medical advice/attention.
 P403+P235 Store in a well-ventilated place. Keep cool.
 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 Mixtures****Description:** Mixture of the substances listed below with harmless additions.**Dangerous components:**

CAS: 100-42-5 EINECS: 202-851-5 Reg.nr.: 01-2119457861-32	styrene ⚠ Flam. Liq. 3, H226; ⚠ Repr. 2, H361d; STOT RE 1, H372; Asp. Tox. 1, H304; ⚠ Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335; Aquatic Chronic 3, H412	10-25%
CAS: 7429-90-5 EINECS: 231-072-3 Reg.nr.: 01-2119529243-45	aluminium ⚠ Flam. Sol. 1, H228	<3%
CAS: 91-99-6 EINECS: 202-114-8 Reg.nr.: 01-2120791683-42	2,2'-(m-tolylimino)diethanol ⚠ STOT RE 2, H373; ⚠ Eye Dam. 1, H318; ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Skin Sens. 1B, H317	<1%
CAS: 108-65-6 EINECS: 203-603-9 Reg.nr.: 01-2119475791-29	2-methoxy-1-methylethyl acetate ⚠ Flam. Liq. 3, H226	<1%
CAS: 141-78-6 EINECS: 205-500-4 Reg.nr.: 1-2119475103-46	Ethyl acetate ⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2, H319; STOT SE 3, H336, EUH066	<1%
CAS: 2687-91-4 EINECS: 220-250-6 Reg.nr.: 01-2119472138-36	N-Ethyl-2-Pyrrolidone ⚠ Repr. 1B, H360D; ⚠ Eye Irrit. 2, H319	<0.5%
CAS: 108-31-6 EINECS: 203-571-6 Reg.nr.: 01-2119472428-21	maleic anhydride ⚠ Resp. Sens. 1, H334; STOT RE 1, H372; ⚠ Skin Corr. 1B, H314; Eye Dam. 1, H318; ⚠ Acute Tox. 4, H302; Skin Sens. 1A, H317, EUH071 Specific concentration limit: Skin Sens. 1A; H317: C ≥ 0.001 %	<0.1%

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**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
 Instantly remove any clothing soiled by the product.

After inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
 In case of unconsciousness bring patient into stable side position for transport.

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- **After skin contact**
Instantly wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
- **After eye contact** Rinse opened eye for several minutes under running water. Then consult doctor.
- **After swallowing** Do not induce vomiting; instantly call for medical help.
- **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, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents** Water with a full water jet.
- **5.2 Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
Can form explosive gas-air mixtures.
- **5.3 Advice for firefighters**
- **Protective equipment:**
Do not inhale explosion gases or combustion gases.
Wear self-contained breathing apparatus.
Wear full protective suit.
- **Additional information**
Cool endangered containers with water spray jet.
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
Ensure adequate ventilation
- **6.2 Environmental precautions:**
Prevent material from reaching sewage system, holes and cellars.
Inform respective authorities in case product reaches water or sewage system.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Send for recovery or disposal in suitable containers.
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 information on disposal.

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 protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Use explosion-proof apparatus / fittings and spark-proof tools.
Fumes can combine with air to form an explosive mixture.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and containers:**
Store in cool location.
Store only in the original container.
- **Information about storage in one common storage facility:** Store away from oxidising agents.
- **Further information about storage conditions:**
Store in cool, dry conditions in well sealed containers.
Protect from heat and direct sunlight.
- **Storage class** 3

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7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Components with limit values that require monitoring at the workplace:

100-42-5 styrene

WEL Short-term value: 1080 mg/m³, 250 ppm
Long-term value: 430 mg/m³, 100 ppm

108-65-6 2-methoxy-1-methylethyl acetate

WEL Short-term value: 548 mg/m³, 100 ppm
Long-term value: 274 mg/m³, 50 ppm
Sk

141-78-6 Ethyl acetate

WEL Short-term value: 1468 mg/m³, 400 ppm
Long-term value: 734 mg/m³, 200 ppm

108-31-6 maleic anhydride

WEL Short-term value: 3 mg/m³
Long-term value: 1 mg/m³
Sen

Regulatory information WEL: EH40/2020

DNELs

100-42-5 styrene

Dermal	Long term systemic effect	406 mg/kg bw/dy (Worker)
Inhalative	Long term systemic effect	85 mg/m ³ (Worker)
	Acute local effect	306 mg/m ³ (Worker)
	Acute systemic effect	289 mg/m ³ (Worker)

108-65-6 2-methoxy-1-methylethyl acetate

Dermal	Long term systemic effect	796 mg/kg/day (Worker)
Inhalative	Long term systemic effect	275 mg/m ³ (Worker)
	Long term local effect	550 mg/m ³ (Worker)

141-78-6 Ethyl acetate

Dermal	Long term systemic effect	63 mg/kg bw/day (Worker)
Inhalative	Long term systemic effect	734 mg/m ³ (Worker)
	Acute local effect	1,468 mg/m ³ (Worker)
	Long term local effect	734 mg/m ³ (Worker)
	Acute systemic effect	1,468 mg/m ³ (Worker)

108-31-6 maleic anhydride

Dermal	Acute systemic effect	0.04 mg/kg bw/day (Worker)
	Acute local effect	0.04 mg/kg (Worker)
	Long term systemic effect	0.04 mg/kg (Worker)
Inhalative	Long term systemic effect	0.4 mg/m ³ (Worker)
	Acute local effect	0.8 mg/m ³ (Worker)

PNECs

100-42-5 styrene

PNEC	0.028 mg/l (Aqua (freshwater))
	0.04 mg/l (Aqua (intermittent))
	0.0028 mg/l (Aqua (marine water))
	0.614 mg/kg (Freshwater sediment)
	0.0614 mg/kg (Marine water sediment)
	5 mg/l (Sewage treatment plant)
	0.2 mg/kg (Soil)

108-65-6 2-methoxy-1-methylethyl acetate

PNEC	0.635 mg/l (Aqua (freshwater))
	1.27 mg/l (Aqua (intermittent))
	0.0127 mg/l (Aqua (marine water))

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	26,670 mg/kg (Marine water sediment) 38.3 mg/l (Sewage treatment plant) 53,182 mg/kg (Soil)
141-78-6 Ethyl acetate	
PNEC	0.24 mg/l (Aqua (freshwater)) 0.024 mg/l (Aqua (marine water)) 1.15 mg/kg (Freshwater sediment) 0.115 mg/kg (Marine water sediment) 650 mg/l (Sewage treatment plant)
108-31-6 maleic anhydride	
PNEC	0.04281 mg/l (Aqua (freshwater)) 0.004281 mg/l (Aqua (marine water)) 0.344 mg/kg (Marine water sediment) 44.6 mg/l (Sewage treatment plant) 0.0415 mg/kg (Soil)

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

· 8.2 Exposure controls

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

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

· **General protective and hygienic measures**

Be sure to clean skin thoroughly after work and before breaks.

Keep away from foodstuffs, beverages and food.

Take off immediately all contaminated clothing

Wash hands during breaks and at the end of the work.

Store protective clothing separately.

Do not inhale dust / smoke / mist.

Avoid contact with the eyes and skin.

· **Breathing equipment:**

Use breathing protection in case of insufficient ventilation.

Filter A2 / P2 (EN 14387)

· **Hand protection**



Protective gloves.

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**

Wear suitable gloves tested to EN 374

Nitrile rubber, NBR

Fluorocarbon rubber (Viton)

Recommended thickness of the material: ≥ 0.7 mm

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**

Value for the permeation: Level 6 > 480 minutes

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**



Safety glasses (EN 166)

· **Body protection:** Protective work clothing (EN-13034/6)

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

· Physical state	Fluid
· Colour:	Silver grey
· Odour:	Characteristic
· Odour threshold:	Not determined.
· Melting point/freezing point:	Not determined
· Boiling point or initial boiling point and boiling range	145 °C
· Flammability	Flammable.
· Lower and upper explosion limit	
· Lower:	0.7 Vol %
· Upper:	7 Vol %
· Flash point:	23 °C
· Decomposition temperature:	Not determined.
· pH	Mixture is non-soluble (in water).
· Viscosity:	
· Kinematic viscosity	Not determined.
· dynamic:	Not determined.
· Solubility	
· Water:	Not miscible / difficult to mix
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure at 20 °C:	6.7 hPa
· Density and/or relative density	
· Density at 20 °C	1.78-1.81 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.

9.2 Other information

· Appearance:	
· Form:	Pasty
· Important information on protection of health and environment, and on safety.	
· Self-flammability:	Product is not selfigniting.
· Explosive properties:	Product is not explosive. However, formation of explosive air/steam mixtures is possible.
· Solvent content:	
· Organic solvents:	max 250 g/l VOC
· Change in condition	
· Evaporation rate	Not determined.

Information with regard to physical hazard classes

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

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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:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions**
Reacts with peroxides and other radical forming substances
Exothermic polymerisation
- **10.4 Conditions to avoid** Heat. Hot surfaces. Sources of ignition. Flames.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** Formation of toxic gases is possible during heating or in case of fire.

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 that are relevant for classification:**

100-42-5 styrene

Oral	LD50	5,000 mg/kg (Rat)
Inhalative	LC50 (4 hr)	12 mg/l (Rat)

108-65-6 2-methoxy-1-methylethyl acetate

Oral	LD50	8,500 mg/kg (Rat)
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141-78-6 Ethyl acetate

Oral	LD50	4,935 mg/kg (rbt)
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- **Skin corrosion/irritation** Causes skin irritation.
- **Serious eye damage/irritation** Causes serious eye irritation.
- **Respiratory or skin sensitisation** May cause an allergic skin reaction.
- **Reproductive toxicity** Suspected of damaging the unborn child.
- **STOT-repeated exposure** Causes damage to the hearing organs through prolonged or repeated exposure.
- **11.2 Information on other hazards**

- **Endocrine disrupting properties**

None of the ingredients is listed.

SECTION 12: Ecological information

- **12.1 Toxicity**

- **Aquatic toxicity:**

100-42-5 styrene

EC50 (48 hr)	4.7 mg/l (Daphnia magna)
EC50 (72 hr)	4.9 mg/l (Pseudokirchneriella subcapitata)
LC50 (96 hr)	4.02 mg/l (Pimephales promelas)

7429-90-5 aluminium

LC50 (96 hr)	12 mg/l (Fish) (Rainbow trout)
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91-99-6 2,2'-(m-tolylimino)diethanol

EC50 (48 hr)	107 mg/l (Daphnia magna)
EC50 (72 hr)	>100 mg/l (Pseudokirchneriella subcapitata)
LC50 (48 hr)	>102 mg/l (Fish)

108-65-6 2-methoxy-1-methylethyl acetate

EC50 (48 hr)	>100 mg/l (Crustacea)
EC50 (72 hr)	>100 mg/l (Algae)
LC50 (96 hr)	>100 mg/l (Fish)
NOEC	100 mg/l (Crustacea)
	>10 mg/l (Fish)

141-78-6 Ethyl acetate

EC50 (48 hr)	165 mg/l (Daphnia magna)
EC50 (72 hr)	>900 mg/l (Algae)

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LC50 (96 hr) | 230 mg/l (Pimephales promelas)

- **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**
- **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 bodies or sewage system.
- Danger to drinking water if even small quantities leak into soil.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- **14.1 UN number or ID number**
- **ADR, IMDG, IATA** UN3269
- **14.2 UN proper shipping name**
- **ADR** 3269 POLYESTER RESIN KIT
- **IMDG, IATA** POLYESTER RESIN KIT
- **14.3 Transport hazard class(es)**
- **ADR**
- 
- **Class** 3 (F3) Flammable liquids.
- **Label** 3
- **IMDG, IATA**
- 
- **Class** 3 Flammable liquids.
- **Label** 3
- **14.4 Packing group**
- **ADR, IMDG, IATA** III
- **14.5 Environmental hazards:**
- **Marine pollutant:** No
- **14.6 Special precautions for user** Warning: Flammable liquids.
- **Kemler Number:** -
- **EMS Number:** F-E,S-D
- **Stowage Category** A

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14.7 Maritime transport in bulk according to IMO instruments

Not applicable.

Transport/Additional information:

ADR

- Limited quantities (LQ)

5L

- Excepted quantities (EQ)

Code: E0

Not permitted as Excepted Quantity

- Transport category

3

- Tunnel restriction code

E

IMDG

- Limited quantities (LQ)

5L

- Excepted quantities (EQ)

Code: See SP340

- UN "Model Regulation":

UN 3269 POLYESTER RESIN KIT, 3, III

SECTION 15: Regulatory information

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

- Directive 2012/18/EU

- Named dangerous substances - ANNEX I None of the ingredients is listed.

- Seveso category P5c FLAMMABLE LIQUIDS

- Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t

- Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t

- National regulations

- Technical instructions (air):

Class	Share in %
NK	17.0

- Water hazard 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

These data are based on our present knowledge. However, they 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.

H228 Flammable solid.

H302 Harmful if swallowed.

H304 May be fatal if swallowed and enters airways.

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.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 May cause respiratory irritation.

H336 May cause drowsiness or dizziness.

H360D May damage the unborn child.

H361d Suspected of damaging the unborn child.

H372 Causes damage to organs through prolonged or repeated exposure.

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

H412 Harmful to aquatic life with long lasting effects.

EUH066 Repeated exposure may cause skin dryness or cracking.

EUH071 Corrosive to the respiratory tract.

- Department issuing data specification sheet: Environment protection department

- Abbreviations and acronyms:

RID: (Regulations Concerning the International Transport of Dangerous Goods by Rail)

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ICAO: International Civil Aviation Organisation
 ADR: 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 (UK REACH)
 PNEC: Predicted No-Effect Concentration (UK 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
 Flam. Sol. 1: Flammable solids – Category 1
 Acute Tox. 4: Acute toxicity – Category 4
 Skin Corr. 1B: Skin corrosion/irritation – Category 1B
 Skin Irrit. 2: Skin corrosion/irritation – Category 2
 Eye Dam. 1: Serious eye damage/eye irritation – Category 1
 Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
 Resp. Sens. 1: Respiratory sensitisation – Category 1
 Skin Sens. 1: Skin sensitisation – Category 1
 Skin Sens. 1A: Skin sensitisation – Category 1A
 Skin Sens. 1B: Skin sensitisation – Category 1B
 Repr. 1B: Reproductive toxicity – Category 1B
 Repr. 2: Reproductive toxicity – Category 2
 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
 STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
 STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
 Asp. Tox. 1: Aspiration hazard – Category 1
 Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

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

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