Safety data sheet

Acryl Leichtspachtel

Uniprox Safety data sheet in accordance with regulation (EC) 1907/2006
Product: Acryl Leichtspachtel
Date/ Revised: 15.12.2022
Document No.: M10_1_Acryl_Leichtspachtel_006_EN

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1. Substance/preparation and company identification

Trade name: Acryl Leichtspachtel (M10-1)
Application of the substance/ the preparation: Filler for orthopaedic technology

Uniprox GmbH & Co. KG
Heinrich-Heine-Straße 4
D- 07937 Zeulenroda-Triebes
Telefon: +49 (0) 36628-66-33 00
Telefax: +49 (0) 36628-66-33-55
E-Mail: info@uniprox.de

Emergency information: Giftzentrale Göttingen
Telephone: +49 (0)551-19240

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2. Hazards Identification

2.1 Classification of the substance or mixture

The product has been classified according to the legislation in force.

Classification according to Regulation (EC) No 1272/2008 as amended.

Physical Hazards

Flammable liquids	Category 2	H225: Highly flammable liquid and vapor.

Health Hazards

Skin irritation	Category 2	H315: Causes skin irritation.
Skin sensitizer	Category 1	H317: May cause an allergic skin reaction.
Specific Target Organ Toxicity - Single Exposure	Category 3	H335: May cause respiratory irritation.

2.2. Label elements

Contains: Methyl methacrylate
triethyleneglycol dimethacrylate

Signal word Danger

GHS pictogram

Hazard Statement(s):

H225: Highly flammable liquid and vapor.
H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H335: May cause respiratory irritation.

Precautionary Statements

Prevention:

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233: Keep container tightly closed.
P261: Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P272: Contaminated work clothing should not be allowed out of the workplace.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P333+P313: If skin irritation or rash occurs: Get medical advice/attention.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312: Call a POISON CENTER/doctor if you feel unwell.
P370 + P378: In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

2.3. Other hazards

Polymerization with heat evolution may occur in the presence of radical forming substances (e.g. peroxides), reducing substances, and/or heavy metal ions. Take precautionary measures against static discharges.

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3. Composition/information on ingredients

3.2. Mixtures

General information: Solution of an acrylic polymer in an acrylic acid ester

Chemical name	Concentration	CAS-No. EC No. REACH Registration No.	M-Factor	Notes
Methyl methacrylate	40 – 70 %	80-62-6 201-297-1 01-2119452498-28	No data available.	#
triethyleneglycol dimethacrylate	3 – 7 %	109-16-0 203-652-6 01-2119969287-21	No data available.	
(2-hydroxy-4-methoxyphenyl)phenyl-methanone	0,1 - < 1 %	131-57-7 205-031-5 01-2119976330-39	No data available.	
N,N-bis-(2-hydroxypropyl)-p-toluidine	0,1 - < 1 %	38668-48-3 254-075-1 01-2119980937-17	No data available.	

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

This substance has workplace exposure limit(s).

This substance is listed as SVHC

Classification

Chemical name	Classification	Notes
Methyl methacrylate	Flam. Liq.: 2: H225; Skin Irrit.: 2: H315; Skin Sens.: 1: H317; STOT SE: 3: H335;	Note D
triethyleneglycol dimethacrylate	Skin Sens.: 1B: H317;	No data available.
(2-hydroxy-4-methoxyphenyl) phenyl-methanone	Aquatic Acute: 1: H400; Aquatic Chronic: 2: H411;	No data available.
N,N-bis-(2-hydroxypropyl)-p-toluidine	Acute Tox.: 2: H300; Eye Irrit.: 2: H319; Aquatic Chronic: 3: H412;	No data available.

CLP: Regulation No. 1272/2008.

The full text for all H-statements is displayed in section 16.

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4. First-aid measures

4.1. Description of first aid measures

General advice

Take off all contaminated clothing immediately. Medical treatment is necessary if symptoms occur which are obviously caused by skin or eye contact with the product or by inhalation of its vapours.

4.1 Description of first aid measures

Inhalation

Move subject to fresh air and keep him calm. See a physician.

Skin contact

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. Wash contaminated clothing before reuse. If skin irritation occurs consult a physician.

Eye contact

Keeping the eyelids apart flush thoroughly with water immediately. If irritation persists, contact a physician.

Ingestion

Do not induce vomiting. Consult a physician immediately. Never give anything by mouth to an unconscious person.

4.2. Most important symptoms and effects, both acute and delayed

Skin Sensitisation, Skin irritation, Excessive or prolonged exposure can cause the following: Headache, confusion

4.3. Indication of any immediate medical attention and special treatment needed

Hazards: No data available.

Treatment: Treat symptomatically.

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5. Fire-fighting measures

General Fire Hazards:

Vapours are heavier than air and can form an explosive mixture with air. Flammable liquid. Vapors can travel to a source of ignition and flash back. Explosive mixtures may occur at temperatures at or above the flashpoint. Remove sources of ignition. Also keep emptied containers away from sources of heat and ignition. Keep out unprotected persons. In case of fire, remove the endangered barrels and bring to a safe place, if this can be done safely. Containers exposed to heat (fire) may build up pressure. Cool by splashing with water. Prevent fire extinguishing water from contaminating surface water or the ground water system. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.1. Extinguishing media

Suitable extinguishing media: foam Dry chemical. Carbon dioxide

Unsuitable extinguishing media: High volume water jet

5.2. Special hazards arising from the substance or mixture

May be released in case of fire: carbon monoxide, carbon dioxide, organic products of decomposition. Closed container may rupture if strongly heated.

Vapours may form explosive mixtures with air. Combustible air-vapour mixtures are heavier than the air and spread along the floor. Ignition from a considerable distance is possible.

5.3. Advice for firefighters

Special firefighting procedures: Keep away from sources of ignition - No smoking. Vapors are heavier than air. Flammable liquid. Vapors can travel to a source of ignition and flash back. Explosive mixtures may occur at temperatures at or above the flashpoint.
Take action to prevent static discharges. In the event of fire, cool the endangered containers with water. Firefighting must be carried out from a safe distance.

Special protective equipment for fire-fighters: Wear self-contained breathing apparatus.

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6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Assure sufficient ventilation. Use personal protective clothing.
Keep away sources of ignition. Use breathing apparatus if exposed to vapours/dust/mist/aerosol.

6.1.1 For non-emergency personnel: No data available.

6.1.2 For emergency responders: No data available.

6.2. Environmental precautions Prevent product from getting into drains/surface water/ groundwater.

6.3. Methods and material for containment and cleaning up

Larger quantities: Remove mechanically (by pumping). Use explosion-proof equipment! Smaller quantities and/or residues: Contain with absorbent material (e.g. sand, diatomaceous earth, acid absorbent, universal absorbent or sawdust). Dispose of in accordance with regulations.

6.4. Reference to other sections For personal protection see section 8. For disposal considerations see section 13.

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7. Handling and storage

7.1. Precautions for safe handling

Do not breathe vapors. Avoid contact with skin and eyes. Wash hands before breaks and immediately after handling the product. Safety shower and eye wash fountain should be available. Keep away from sources of ignition - No smoking.Vapors are heavier than air. Flammable liquid. Vapors can travel to a source of ignition and flash back. Explosive mixtures may occur at temperatures at or above the flashpoint.
Take action to prevent static discharges.In the event of fire, cool the endangered containers with water.Fire fighting must be carried out from a safe distance. When using do not eat, drink or smoke. Avoid inhalation, ingestion and contact with skin and eyes. Provide

sufficient ventilation and exhaust at the workplace. Provide good room ventilation even at ground level (vapours are heavier than air). Keep container tightly closed. Open drum carefully as content may be under pressure. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Wash thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Keep away from open flames, hot surfaces and sources of ignition. Keep away from heat. Protect from the action of light. Keep containers tightly closed in a cool, well-ventilated place. Fill the container by approximately 90 % only as oxygen (air) is required for stabilisation. With large storage containers make sure the oxygen (air) supply is sufficient to ensure stability. Keep locked up. Keep only in the original container at a temperature not exceeding 30 °C.

7.3. Specific end use(s)

No data available.

8. Exposure controls and personal protection

8.1. Control parameters

Occupational Exposure Limits

Chemical name	Type	Exposure Limit Values	Source
Methyl methacrylate	TWA	50 ppm 208 mg/m³	UK. EH40 Workplace Exposure Limits (WELs), as amended (12 2011)
	STEL	100 ppm 416 mg/m³	UK. EH40 Workplace Exposure Limits (WELs), as amended (12 2011)
	TWA	50 ppm	EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU, as amended (02 2017)
	STEL	100 ppm	EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU, as amended (02 2017)

DNEL-Values

Remarks: DNEL-Values

Critical component	Type	Route of exposure	Health Warning	Remarks
Methyl methacrylate	Workers	Dermal	13.67 mg/kg bw/day	Long-term - systemic effects
	Workers	Dermal	1.5 mg/cm²	Long-term - local effects
	Workers	Inhalation	208 mg/m³	Long-term - systemic effects
triethyleneglycol dimethacrylate	Workers	Inhalation	48.5 mg/m³	Long-term - systemic effects
	Workers	Dermal	13.9 mg/kg bodyweight/day	Long-term - systemic effects
N,N-bis-(2-hydroxypropyl)-p-toluidine	Workers	Inhalation	Systemic, long-term; 2 mg/m³	Repeated dose toxicity
	General population	Inhalation	Systemic, long-term; 0.4 mg/m³	Repeated dose toxicity

	General population	Oral	Systemic, long-term; 0.3 mg/kg bw/day	Repeated dose toxicity
	General population	Dermal	Systemic, long-term; 0.3 mg/kg bw/day	Repeated dose toxicity
	Workers	Dermal	Systemic, long-term; 0.6 mg/kg bw/day	Repeated dose toxicity
	General population	Eyes	Local effects;	Low hazard (no threshold derived).
	Workers	Eyes	Local effects;	Low hazard (no threshold derived).

PNEC-Values

Remarks: PNEC-Values

Critical component	Environmental compartment	PNEC-Values	Remarks
Methyl methacrylate	Fresh water	0.94 mg/l	
	marine water	0.94 mg/l	
	soil	1.47 mg/kg dry weight	
	freshwater sediment	5.74 mg/kg dry weight	
	sewage treatment plant (STP)	10 mg/l	
triethyleneglycol dimethacrylate	Fresh water	0.016 mg/l	
	marine water	0.0016 mg/l	
	freshwater sediment	0.185 mg/kg (dry weight)	
	Marine sediments	0.0185 mg/kg (dry weight)	
	soil	0.027 mg/kg (dry weight)	
	sewage treatment plant (STP)	1.7 mg/l	
N,N-bis-(2-hydroxypropyl)-p-toluidine	Soil	0.005 mg/kg	
	marine water sediment	0.008 mg/kg	
	Sewage treatment plant	199.5 mg/l	
	marine water	0.002 mg/l	
	freshwater	0.017 mg/l	
	freshwater sediment	0.078 mg/kg	

Appropriate Engineering Controls: For monitoring procedures refer for instance to "Empfohlene Analysenverfahren für Arbeitsplatzmessungen", Schriftenreihe der Bundesanstalt für Arbeitsschutz and "NIOSH Manual of Analytical Methods", National Institute for Occupational Safety and Health

Individual protection measures, such as personal protective equipment

Eye/face protection: tightly fitting goggles

Hand Protection: Material: butyl rubber gloves
Break-through time: 60 min
Glove thickness: 0.3 mm
Guideline: EN 374
Additional Information: Gloves should be replaced regularly, especially after extended contact with the product., For each workplace a suitable glove type has to be selected.

Skin and Body Protection: On handling of larger quantities: face mask, chemical-resistant boots and apron

Respiratory Protection: Breathing apparatus in case of high concentrations short term: filter appliance, filter A

Hygiene measures:	Take off all contaminated clothing immediately. Store work clothing separately. Follow the usual good standards of occupational hygiene. Clean skin thoroughly after work; apply skin cream.
Environmental Controls:	No data available.

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9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state:	liquid
Form	liquid
Colour	bluish
Odour	ester-like
Odor Threshold:	No data available.
pH	No data available.
Freezing Temperature	No data available.
Boiling Temperature	ca.100 °C (1,013 hPa)
Flash point	10 °C (DIN 51755) (methyl methacrylate)
Evaporation Rate:	No data available.
Flammability (solid, gas):	No data available.
Lower explosion limit	2.1 %(V) (methyl methacrylate)
Upper explosion limit	12.5 %(V) (methyl methacrylate)
Vapor density (air=1):	ca. 1 (20 °C)
Density	ca. 1 g/cm³ (20 °C)
Relative density	No data available.
Solubility(ies)	
Solubility in water	ca. 16 g/l (20 °C)
Solubility (other)	soluble in ethyl acetate
Partition coefficient (n-octanol/water):	No data available.
Self Ignition Temperature:	No data available.
Decomposition Temperature:	No decomposition if used as directed.
Kinematic viscosity:	No data available.
Dynamic viscosity:	600 - 1,100 mPa·s (23 °C)

9.2. Other information

VOC Content: (calculated)	EC Directive 1999/13: 656.36 g/l ~65.64 % EC Directive 2004/42: 706.5 g/l ~70.65 % (calculated)
Explosive properties:	No data available.
Oxidizing properties:	No data available.
Minimum ignition temperature:	430 °C (DIN 51794) (methyl methacrylate)

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10. Stability and reactivity

10.1. Reactivity	No data available.
10.2. Chemical stability	No decomposition if used as directed.
10.3. Possibility of hazardous Reactions	Polymerization with heat evolution may occur in the presence of radical forming substances (e.g. peroxides), reducing substances, and/or heavy metal ions. Vigorous polymerization is possible when heated /exposed to heat.
10.4. Conditions to avoid	Avoid high temperatures and sources of ignition.

	Ultraviolet light. The product is normally supplied in a stabilized form. If the permissible storage period and/or storage temperature is exceeded, the product may polymerize with heat evolution.
10.5. Incompatible materials	Peroxides, amines, sulfur compounds, heavy metal ions, alkalis, reducing agents and oxidizing agents.
10.6. Hazardous decomposition Products	None when used as directed.

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11. Toxicological information

Information on likely routes of exposure

11.1. Information on toxicological effects

Inhalation:	Relevant route of exposure. Information on effects are given below.
Skin Contact:	Relevant route of exposure. Information on effects are given below.
Eye contact:	Relevant route of exposure. Information on effects are given below.
Ingestion:	If handled correctly, not a relevant route of exposure. Information on effects are given below.

Acute toxicity

Oral

Product:	ATEmix: > 5,000 mg/kg (Calculation method)
Components:	
Methyl methacrylate	LD 50 (Rat): > 5,000 mg/kg
triethyleneglycol dimethacrylate	LD 50 (Rat): > 5,000 mg/kg
(2-hydroxy-4-methoxyphenyl) phenyl-methanone	LD 50 (Rat): > 12,800 mg/kg
N,N-bis-(2-hydroxypropyl)-p-toluidine	LD 50 (Rat, male/female): 25 mg/kg

Dermal

Product:	ATEmix: > 5,000 mg/kg (Calculation method)
Components:	
Methyl methacrylate	LD 50 (Rabbit): > 5,000 mg/kg
triethyleneglycol dimethacrylate	LD 50 (Mouse, male): > 2,000 mg/kg
(2-hydroxy-4-methoxyphenyl) phenyl-methanone	LD 50 (Rabbit): > 16,000 mg/kg
N,N-bis-(2-hydroxypropyl)-p-toluidine	LD 50 (Rat, male/female): > 2,000 mg/kg

Inhalation

Product:	ATEmix: > 20 mg/l (Calculation method) Vapour
Components:	
Methyl methacrylate	LC 50 (Rat, 4 h)29.8 mg/l Vapour No data available. Dusts, mists and fumes
triethyleneglycol dimethacrylate	Not toxic after single exposure, Dusts, mists and fumes
(2-hydroxy-4-methoxyphenyl) phenyl-methanone	No labelling required
N,N-bis-(2-hydroxypropyl)-p-toluidine	The substance or mixture has no acute inhalation toxicity, dusts, mists and fumes The substance or mixture has no acute inhalation toxicity, Vapour

Repeated dose toxicity

Product:	No data available.

Components:	
Methyl methacrylate	NOAEL (Rat, Inhalation (Vapour)): 25 ppm NOAEL (Rat, Oral): 2000 ppm
triethyleneglycol dimethacrylate	NOAEL (Rat, Oral): 1,000 mg/kg
(2-hydroxy-4-methoxyphenyl) phenyl-methanone	No data available.
N,N-bis-(2-hydroxypropyl)-p-toluidine	No data available.

Skin Corrosion/Irritation:

Product:	Contact with skin may cause irritations.

Components:	
Methyl methacrylate	(Rabbit): Irritating.
triethyleneglycol dimethacrylate	FDA 1959 Draize, occlusive (Rabbit, 24 h): Not irritating
(2-hydroxy-4-methoxyphenyl) phenyl-methanone	OECD Guideline 404 (Rabbit): does not require labelling
N,N-bis-(2-hydroxypropyl)-p-toluidine	Not irritating

Serious Eye Damage/Eye Irritation:

Product:	Contact with the eyes may cause irritation.
Components:	
Methyl methacrylate	Not irritating
triethyleneglycol dimethacrylate	OECD Test Guideline 405 (Rabbit): Not irritating
(2-hydroxy-4-methoxyphenyl) phenyl-methanone	OECD Guideline 405 (Rabbit): Not irritating
N,N-bis-(2-hydroxypropyl)-p-toluidine	OECD Test Guideline 405 (Rabbit): Moderately irritating

Respiratory or Skin Sensitization:

Product:	No data available.
Components:	
Methyl methacrylate	Local Lymph Node Assay, OECD TG 429 (Mouse): May cause sensitization by skin contact.
triethyleneglycol dimethacrylate	Local Lymph Node Assay (Mouse): Skin sensitizer
(2-hydroxy-4-methoxyphenyl) phenyl-methanone	Maximization Test (GPMT) (Guinea Pig): Not a skin sensitizer.
N,N-bis-(2-hydroxypropyl)-p-toluidine	Not a skin sensitizer.

Germ Cell Mutagenicity

In vitro

Product:	No data available.
Components:	
Methyl methacrylate	No data available.
triethyleneglycol dimethacrylate	Not classified
(2-hydroxy-4-methoxyphenyl) phenyl-methanone	Not classified
N,N-bis-(2-hydroxypropyl)-p-toluidine	(OECD TG 471) negative

In vivo

Product:	No data available.
Components:	
Methyl methacrylate	No data available.
triethyleneglycol dimethacrylate	Not classified
(2-hydroxy-4-methoxyphenyl)	

phenyl-methanone	Not classified
N,N-bis-(2-hydroxypropyl)-p-toluidine	Ames test: negative
Carcinogenicity	
Product:	Contains no ingredient listed as a carcinogen (>0.1%)
Components:	
Methyl methacrylate	Not classified
triethyleneglycol dimethacrylate	Not classified
(2-hydroxy-4-methoxyphenyl) phenyl-methanone	Not classified
N,N-bis-(2-hydroxypropyl)-p-toluidine	Not classified
Reproductive toxicity	
Product:	Contains no ingredient listed as toxic to reproduction (>0.1%)
Components:	
Methyl methacrylate	Not classified
triethyleneglycol dimethacrylate	Not classified
(2-hydroxy-4-methoxyphenyl) phenyl-methanone	Animal testing did not show any effects on fertility.
N,N-bis-(2-hydroxypropyl)-p-toluidine	Not classified
Specific Target Organ Toxicity - Single Exposure	
Product:	No data available.
Components:	
Methyl methacrylate	Category 3 with respiratory tract irritation.
triethyleneglycol dimethacrylate	Not classified
(2-hydroxy-4-methoxyphenyl) phenyl-methanone	Not classified based on available information.
N,N-bis-(2-hydroxypropyl)-p-toluidine	Not classified
Specific Target Organ Toxicity - Repeated Exposure	
Product:	No data available.
Components:	
Methyl methacrylate	Not classified
triethyleneglycol dimethacrylate	Not classified
(2-hydroxy-4-methoxyphenyl) phenyl-methanone	Not classified
N,N-bis-(2-hydroxypropyl)-p-toluidine	Not classified
Aspiration Hazard	
Product:	No aspiration toxicity classification
Components:	
Methyl methacrylate	Not classified
triethyleneglycol dimethacrylate	Not classified
(2-hydroxy-4-methoxyphenyl) phenyl-methanone	Not classified
N,N-bis-(2-hydroxypropyl)-p-toluidine	Not classified
Other adverse effects:	There are no toxicological data available for the product as such. Avoid contact with the skin and eyes and inhalation of the product vapours.

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12. Ecological information

12.1. Toxicity

Acute toxicity

Fish

Product:	No data available.

Components:	
Methyl methacrylate	LC 50 (Oncorhynchus mykiss (rainbow trout), 96 h): > 79 mg/l (OECD Test Guideline 203) NOEC (Danio rerio (zebra fish), 32 d): 9.4 mg/l (OECD Test Guideline 210) literature
triethyleneglycol dimethacrylate	LC 50 (Danio rerio (zebra fish), 96 h): 16.4 mg/l (OECD TG 203)
(2-hydroxy-4-methoxyphenyl) phenyl-methanone	LC 50 (Leuciscus idus (Golden orfe), 96 h): 100 - 220 mg/l (DIN 38412 Teil 15) The reported toxic effects relate to the nominal concentration.
N,N-bis-(2-hydroxypropyl)-p-toluidine	LC 50 (Danio rerio (zebra fish), 96 h): 17 mg/l
Aquatic Invertebrates	
Product:	No data available.
Components:	
Methyl methacrylate	EC 50 (Daphnia magna (Water flea), 48 h): 69 mg/l (OECD Test Guideline 202) NOEC (Daphnia magna (Water flea), 21 d): 37 mg/l (OECD Test Guideline 202)
triethyleneglycol dimethacrylate	No data available.
(2-hydroxy-4-methoxyphenyl) phenyl-methanone	EC50 (Daphnia magna (Water flea), 24 h): 12.9 mg/l (Directive 84/449/EEC, C.2) The product has low solubility in the test medium. An aqueous dispersion was tested. The reported toxic effects relate to the nominal concentration.
N,N-bis-(2-hydroxypropyl)-p-toluidine	EC 50 (Daphnia magna (Water flea), 48 h): 28.8 mg/l (OECD TG 202)
Toxicity to Aquatic Plants	
Product:	No data available.
Components:	
Methyl methacrylate	EC 50 (Selenastrum capricornutum (green algae), 72 h): > 100 mg/l (OECD Test Guideline 201)
triethyleneglycol dimethacrylate	EC 50 (Pseudokirchneriella subcapitata (green algae), 72 h): > 100 mg/l (OECD TG 201)
(2-hydroxy-4-methoxyphenyl) phenyl-methanone	EC 50 (Desmodesmus subspicatus (green algae), 72 h): 1.4 mg/l. The product has low solubility in the test medium. An aqueous dispersion was tested. The reported toxic effects relate to the nominal concentration. EC 50 (Pseudokirch-neriella subcapitata (green algae), 72 h): 0.41 mg/l (OECD TG 201)
N,N-bis-(2-hydroxypropyl)-p-toluidine	EC 50 (Desmodesmus subspicatus (green algae), 72 h): 245 mg/l (OECD TG 201)
Toxicity to microorganisms	
Product:	No data available.
Components:	
Methyl methacrylate	No data available.
triethyleneglycol dimethacrylate	No data available.
(2-hydroxy-4-methoxyphenyl) phenyl-methanone	EC 50 (Activated sludge, 3 h): > 100 mg/l (Directive

	87/302/EEC, part C, p. 118)
N,N-bis-(2-hydroxypropyl)-p-toluidine	EC10 (30 min): > 1,995 mg/l (OECD Test Guideline 209)

Chronic Toxicity

Fish

Product:	No data available.
Components:	
Methyl methacrylate	No data available.
triethyleneglycol dimethacrylate	No data available.
(2-hydroxy-4-methoxyphenyl) phenyl-methanone	No data available.
N,N-bis-(2-hydroxypropyl)-p-toluidine	No data available.

Aquatic Invertebrates

Product:	No data available.
Components:	
Methyl methacrylate	No data available.
triethyleneglycol dimethacrylate	NOEC (Daphnia magna (Water flea), 21 d): 32 mg/l (OECD Test Guideline 211)
(2-hydroxy-4-methoxyphenyl) phenyl-methanone	No data available.
N,N-bis-(2-hydroxypropyl)-p-toluidine	No data available.

Toxicity to Aquatic Plants

Product:	No data available.
Components:	
Methyl methacrylate	NOEC (Selenastrum capricornutum (green algae), 72 h): > 100 mg/l (OECD Test Guideline 201)
triethyleneglycol dimethacrylate	NOEC (Pseudokirchneriella subcapitata (green algae), 72 h): 18.6 mg/l (OECD TG 201)
(2-hydroxy-4-methoxyphenyl) phenyl-methanone	NOEC (Pseudokirchneriella subcapitata (green algae), 72 h): 0.08 mg/l (OECD TG 201)
N,N-bis-(2-hydroxypropyl)-p-toluidine	No data available.

12.2 Persistence and Degradability

Biodegradation

Product:	The product is biodegradable. (monomer constituent)

BOD/COD Ratio

Product	No data available.
Components:	
Methyl methacrylate	No data available.
triethyleneglycol dimethacrylate	No data available.
(2-hydroxy-4-methoxyphenyl) phenyl-methanone	No data available.
N,N-bis-(2-hydroxypropyl)-p-toluidine	No data available.

12.3 Bioaccumulative potential

Product:	Accumulation in organisms is not expected due to the coefficient of distribution of n-octanol in water (log Pow).
12.4 Mobility in soil:	No data available.
12.5 Results of PBT and vPvB assessment:	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccu-

	mulative (vPvB) at levels of 0.1% or higher.
Methyl methacrylate	Non-classified vPvB substance Non- classified PBT substance
triethyleneglycol dimethacrylate	Non-classified vPvB substance Non- classified PBT substance
(2-hydroxy-4-methoxyphenyl) phenyl-methanone	Non-classified vPvB substance Non- classified PBT substance
N,N-bis-(2-hydroxypropyl)-p-toluidine	Non-classified vPvB substance Non- classified PBT substance

12.6. Other adverse effects

General Information	Prevent substance from entering soil, natural bodies of water and sewer systems.

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13. Disposal considerations

13.1. Waste treatment methods

General information:	No data available.
Disposal methods:	Waste is hazardous. It must be disposed of in accordance with the regulations after consultation of the competent local authorities and the disposal company in a suitable and licensed facility.
Contaminated Packaging:	Contaminated packaging should ideally be emptied; it can then be recycled after having been decontaminated. Packaging that cannot be cleaned should be disposed of professionally. Uncontaminated packaging may be taken for recycling.

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14. Transport information

14.1. UN number

ADR	UN 1866
RID	UN 1866
IMDG	UN 1866
IATA	UN 1866

14.2 UN proper shipping name

ADR	RESIN SOLUTION, STABILIZED
RID	RESIN SOLUTION, STABILIZED
IMDG	RESIN SOLUTION, STABILIZED
IATA	Resin solution, STABILIZED

14.3 Transport hazard class(es)

ADR	3
RID	3
IMDG	3
IATA	3

14.4 Packing group

ADR

Packing group	II
Classification Code	F1
Hazard Identification Number	33
Labels	3
Remarks	Special provision 640D, observe §35 GGVSEB

RID

Packing group	II

Classification Code	F1
Hazard Identification Number	33
Labels	3
Remarks	Special provision 640D
IMDG	
Packing group	II
Labels	3
EmS Code	F-E, S-E
IATA (Cargo aircraft only)	
Packing instruction (cargo aircraft)	364
Packing instruction (LQ)	Y341
Packing group	II
Labels	3
IATA (Passenger and cargo aircraft)	
Packing instruction (passenger aircraft)	353
Packing instruction (LQ)	Y341
Packing group	II
Labels	3

14.5. Environmental hazards

ADR	
Environmentally hazardous	No
RID	
Environmentally hazardous	No
IMDG	
Marine pollutant	No

14.6. Special precautions for user The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classify-cations may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable for product as supplied.

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15. Regulatory information

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

EU Regulations

Regulation (EC) No. 2037/2000 Substances that deplete the ozone layer: none

EU. REACH Annex XIV, Substances Subject to Authorization: none

Regulation (EC) No. 850/2004 on persistent organic pollutants: none

Regulation (EC) No. 649/2012 Import and export of dangerous chemicals: none

EU. REACH Candidate List of Substances of Very High Concern for Authorization (SVHC): none

Regulation (EC) No. 1907/2006 Annex XVII Substances subject to restriction on marketing and use:

Chemical name	CAS-No.	Concentration
Methyl methacrylate	80-62-6	40 - 70%

Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens and mutagens at work.: none

EU. Directive 2012/18/EU (SEVESO III) on major accident hazards involving dangerous

substances, Annex I:

Classification	Lower-tier Requirements	Upper-tier Requirements
P5c. Flammable liquids	5,000 t	50,000 t
ATTENTION: Classification into hazard category P5c is a minimum classification. Only the operator may estimate if the product is covered by hazard category P5a or P5c. For P5a and P5b different qualifying quantities are valid.		

EU. Regulation No. 166/2006 PRTR (Pollutant Release and Transfer Registry), Annex II:
Pollutants: none
Directive 98/24/EC on the protection of workers from the risks related to chemical agents at work:

Chemical name	CAS-No.	Concentration
Methyl methacrylate	80-62-6	40 - 70%

National Regulations Please note Directive 92/85/EEC (Pregnant Workers Directive) and amendments. Please note Directive 94/33/EC (Protection of Young Workers at the Workplace Directive) and amendments.

15.2 Chemical safety assessment No Chemical Safety Assessment has been carried out.

International regulations
Inventory Status:

Registration, Evaluation and Authorisation of Chemicals (REACH): preregistered, registered or exempted
US TSCA Inventory: On or in compliance with the inventory
Canada DSL Inventory List: On or in compliance with the inventory
Canada NDSL Inventory: On or in compliance with the inventory
Australia AICS: On or in compliance with the inventory
Japan (ENCS) List: On or in compliance with the inventory
Korea Existing Chemicals Inv. (KECI): On or in compliance with the inventory
Philippines PICCS: On or in compliance with the inventory
China Inv. Existing Chemical Substances: On or in compliance with the inventory
Montreal protocol Not applicable
Stockholm convention Not applicable
Rotterdam convention Not applicable
Kyoto protocol Not applicable

16. Other information

Abbreviations and acronyms:

ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; AGW - Occupational exposure limit; ASTM - American Society for Testing and Materials; AwSV - Ordinance on facilities for handling substances that are hazardous to water; BSB - Biochemical oxygen demand; c.c. - closed cup; CAS - Chemical Abstract Services; CESIO - European Committee of Organic Surfactants and their Intermediates; CSB - Chemical oxygen demand; DMEL - Derived minimum effect level; DNEL - Derived no effect level; EbC50 - median concentration in terms of reduction of growth; EC -Effective concentration; EINECS - European Inventory of Existing Commercial Chemical Substances; EN - European norm; ErC50 - median concentration in terms of reduction of growth rate; GGVSEB - German ordinance for road, rail and inland waterway transportation of dangerous goods; GGVSee - German ordinance for sea transportation of dangerous goods; GLP - Good Laboratory Practice; GMO - Genetic Modified Organism; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IMDG - International Maritime Dangerous Goods; ISO - International Organization For Standardization; LD/LC - lethal dosis/concentration; LOAEL - Lowest observed adverse effect level; LOEL - Lowest observed effect level; M-Factor - multiplying factor; NOAEL - No observed adverse effect level; NOEC - no observed effect concentration; NOEL - no observed effect level; o.c. - open cup; OECD - Organisation for Economic Cooperation and Development; OEL - Occupational Exposure Limit; PBT - Persistent, bioaccumulative, toxic; PNEC - Predicted no effect concentration; REACH - REACH registration; RID - Convention concerning International Carriage by Rail; SVHC - Substances of Very High Concern; TA - Technical Instructions; TRGS - Technical Rules for Hazardous Substances; vPvB - very persistent, very bioaccumulative; WGK - Water Hazard Class

Note D	Certain substances which are susceptible to spontaneous polymerisation or decomposition are generally placed on the market in a stabilised form. It is in this form that they are listed in Part 3. However, such substances are sometimes placed on the market in a non-stabilised form. In this case, the supplier must state on the label the name of the substance followed by the words 'non-stabilised'.

Key literature references and sources for data: No data available

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]

Classification according to Regulation (EC) No 1272/2008 as amended.	**Classification procedure**
Flammable liquids, Category 2	On basis of test data
Skin irritation, Category 2	Calculation method
Skin sensitizer, Category 1	On basis of test data
Specific Target Organ Toxicity - Single Exposure, Category 3	Calculation method

Wording of the H-statements in section 2 and 3

H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapor
H300 Fatal if swallowed
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H402 Harmful to aquatic life.
H412 Harmful to aquatic life with long lasting effects.

Training information: No data available

Other information: The product is normally supplied in a stabilized form. If the permissible storage period and/or storage temperature is exceeded, the product may polymerize with heat evolution.

Revision Information This version replaces all previous versions.

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