SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended by Commission Regulation (EU) 2020/878

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

1.1 Product identifier

Product name: ALPHAGUARD PUMA ASPHALT PRIMER 20 KG

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

Identified uses: Coatings

Uses advised against: Restricted to professional users.

1.3 Details of the supplier of the safety data sheet

Manufacturer/Importer/Supplier/Distributor Information

Alteco Technik GmbH
Raiffeisenstrasse 16
D-27239 Twistringen
Germany

Telephone: +49 424392950
Fax: +49 4243929589

Contact Person: MSDS_Alteco@tremcocpg.com

National Supplier

Tremco CPG UK Limited
Coupland Road
WN2 4HT Hindley Green, WIGAN
UK

Telephone: +44 1942251400
Fax: +44 1942251410

Contact Person:www.tremcocpg.eu, uk.info@tremcocpg.com

1.4 Emergency telephone number: 111 / 0300 020 0155

SECTION 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.
Serious eye irritation	Category 2	H319: Causes serious eye 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

Signal Words: Danger

Hazard Statement(s):

H225: Highly flammable liquid and vapor.
H315: Causes skin irritation.
H319: Causes serious eye 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.
P243: Take action to prevent static discharges.
P261: Avoid breathing dust/fume/gas/mist/vapors/spray.
P273: Avoid release to the environment.
P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

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.

Storage:

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

Hazardous ingredients which must be listed on the label:

methyl methacrylate
ethylene dimethacrylate
Diethanol-p-toluidin

2.3 Other hazards

PBT/vPvB data

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Endocrine disrupting properties-Toxicity

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Endocrine disrupting properties-Ecotoxicity

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical name	Concentration	CAS-No.	EC No.	REACH Registration No.	M-Factor:	Notes
methyl methacrylate	20 - <50%	80-62-6		01-2119452498-28-xxxx;	No data available.	#
2-(2-butoxyethoxy) ethyl methacrylate	25 - <50%	7328-22-5		01-2119979086-25-XXXX;	No data available.	
ethylene dimethacrylate	1 - <5%	97-90-5		01-2119965172-38-xxxx;	No data available.	
Diethanol-p-toluidin	1 - <3%		911-490-9	01-2119979579-10-XXXX;	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	Classification: Flam. Liq.: 2: H225; Skin Irrit.: 2: H315; STOT SE: 3: H335; Skin Sens.: 1: H317; Specific concentration limit: Specific target organ toxicity - single exposure Category 3, >= 10 %; Acute toxicity, oral: LD 50: 5.300 mg/kg Acute toxicity, inhalation: LC 50: 29,8 mg/l	Note D

	Acute toxicity, dermal: LD 50: > 5.000 mg/kg	
2-(2-butoxyethoxy)ethyl methacrylate	Classification: None known. Acute toxicity, oral: LD 50: 2.000 mg/kg Acute toxicity, dermal: LD 50: > 2.000 mg/kg	None.
ethylene dimethacrylate	Classification: Skin Sens.: 1: H317; STOT SE: 3: H335; Aquatic Chronic: 3: H412; Specific concentration limit: Specific target organ toxicity - single exposure Category 3, >= 10 %; Acute toxicity, oral: LD 50: 10.400 mg/kg Acute toxicity, inhalation: LC Lo: > 1 mg/l Acute toxicity, dermal: LD 50: > 2.000 mg/kg	Note D
Diethanol-p-toluidin	Classification: Acute Tox.: 4: H302; Skin Irrit.: 2: H315; Skin Sens.: 1: H317; Eye Dam.: 1: H318; Aquatic Chronic: 3: H412; Acute toxicity, oral: LD 50: 619 mg/kg Acute toxicity, dermal: LD 50: > 2.000 mg/kg	None.

CLP: Regulation No. 1272/2008.
The full text for all H-statements is displayed in section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information:

Move out of dangerous area. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Get medical attention if symptoms persist. Remove contaminated clothing and shoes.

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, trained personnel should give oxygen. Get medical attention immediately. Place unconscious person on the side in the recovery position and ensure breathing can take place.

Skin Contact:

Immediately remove contaminated clothing and shoes and wash skin with soap and plenty of water. If skin irritation or rash occurs: Get medical advice/attention.

Eye contact:

Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention.

Ingestion:

If swallowed, rinse mouth with water (only if the person is conscious). Do not give victim anything to drink if he is unconscious. DO NOT induce vomiting. Get medical attention immediately.

Personal Protection for First-aid Responders:

No data available.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms: Causes skin irritation. May cause an allergic skin reaction. May cause respiratory irritation.

Hazards: No data available.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment: No data available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media: Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

5.2 Special hazards arising from the substance or mixture: Highly flammable liquid and vapor. Containers can burst violently when heated, due to excess pressure build-up. Vapors are flammable and heavier than air. Vapors may travel across the ground and reach remote ignition sources causing a flashback fire danger. Flammable or explosive mixtures with air may be formed. In case of fire, toxic gases may be formed. Carbon Monoxide. Carbon Dioxide. Organic compounds.

5.3 Advice for firefighters

Special fire-fighting procedures: Water spray should be used to cool containers. Evacuate area. Dike and collect extinguishing water. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for fire-fighters: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. See Section 8 of the SDS for Personal Protective Equipment.

6.1.1 For non-emergency personnel: In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. Eliminate all sources of ignition. Provide adequate ventilation. Avoid contact with eyes, skin, and clothing. Avoid breathing vapors.

6.1.2 For emergency responders:	See Section 8 of the SDS for Personal Protective Equipment.
6.2 Environmental Precautions:	Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water sources or sewer. Environmental manager must be informed of all major spillages.
6.3 Methods and material for containment and cleaning up:	Take precautionary measures against static discharges. Use explosion proof electric equipment. Dam and absorb spillages with sand, earth or other non-combustible material. Transfer to a container for disposal. Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
6.4 Reference to other sections:	For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Technical measures:	No data available.
Local/Total ventilation:	No data available.
Safe handling advice:	Wear appropriate personal protective equipment. Do not breathe vapor. Avoid contact with eyes, skin, and clothing. Provide adequate ventilation. Use only in well-ventilated areas. Vapors are flammable and heavier than air. Vapors may travel across the ground and reach remote ignition sources causing a flashback fire danger. Open drum carefully as content may be under pressure. Solvent vapors may form explosive mixtures with air. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges. Use non-sparking tools and explosion-proof equipment. Ground and bond container and receiving equipment. Do not eat, drink or smoke when using the product. Keep away from food, drink and animal feeding stuffs. Wash hands before breaks and immediately after handling the product. Take off contaminated clothing and wash it before reuse. Private clothes and working clothes should be kept separately.
Contact avoidance measures:	No data available.

7.2 Conditions for safe storage, including any incompatibilities

Safe storage conditions:	Never fill containers more than 80 % because aerial oxygen is necessary for stabilising. Store in closed original container at temperatures between 5°C and 30°C. Store in a cool and well-ventilated place. Store in a dry place. Keep away from

heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Protect from sunlight. Store away from: Oxidizing agents. Peroxides Polymerization initiators. Acids. Bases. Rust. Activated carbon.

Safe packaging materials: No data available.

7.3 Specific end use(s): No data available.

SECTION 8: Exposure controls/personal protection

8.1 Control Parameters

Occupational Exposure Limits

Chemical name	Type	Form of exposure	Exposure Limit Values		Source
methyl methacrylate	TWA		50 ppm	208 mg/m3	EH40 WEL (2007)
	STEL 15 minutes		100 ppm	416 mg/m3	EH40 WEL (01 2020)

Please refer to the latest edition of the appropriate source text and consult an industrial hygienist or similar professional, or local agencies, for further information.

Biological Limit Values

No biological exposure limits noted for the ingredient(s).

DNEL-Values

Remarks: DNEL-Values

Critical component	Type	Route of Exposure	Health Warnings	Remarks
methyl methacrylate	Workers	Inhalation	Local, long-term; 208 mg/m3	Repeated dose toxicity
	General population	Inhalation	Local, long-term; 104 mg/m3	Repeated dose toxicity
	Workers	Dermal	Local, long-term; 1,5 mg/cm2	Skin Sensitisation
	General population	Dermal	Local, long-term; 1,5 mg/cm2	Skin Sensitisation
	General population	Inhalation	Local, short-term; 208 mg/m3	Repeated dose toxicity
	Workers	Eyes	Local effect;	No hazard identified
	General population	Eyes	Local effect;	No hazard identified
	General population	Oral	Systemic, long-term; 8,2 mg/kg	Repeated dose toxicity
	Workers	Inhalation	Local, short-term; 416 mg/m3	Repeated dose toxicity
	Workers	Dermal	Systemic, long-term; 13,67 mg/kg	Repeated dose toxicity
	General population	Dermal	Systemic, long-term; 8,2 mg/kg	Repeated dose toxicity
	Workers	Inhalation	Systemic, long-term; 348,4 mg/m3	Repeated dose toxicity
	General population	Dermal	Local, short-term; 1,5 mg/cm2	Skin Sensitisation
	General population	Inhalation	Systemic, long-term; 74,3 mg/m3	Repeated dose toxicity

	Workers	Dermal	Local, short-term; 1,5 mg/cm2	Skin Sensitisation
2-(2-butoxyethoxy)ethyl methacrylate	General population	Oral	Systemic, long-term; 8,3 mg/kg	Effect on fertility
	Workers	Dermal	Systemic, long-term; 13,9 mg/kg	Effect on fertility
	Workers	Eyes	Local effect;	No hazard identified
ethylene dimethacrylate	Workers	Dermal	Systemic, long-term; 1,3 mg/kg	Repeated dose toxicity
	Workers	Inhalation	Systemic, long-term; 2,45 mg/m3	Repeated dose toxicity
	Workers	Eyes	Local effect;	No hazard identified
Diethanol-p-toluidin	General population	Eyes	Local effect;	Medium hazard (no threshold derived)
	Workers	Eyes	Local effect;	Medium hazard (no threshold derived)
	Workers	Inhalation	Systemic, long-term; 9,8 mg/m3	Repeated dose toxicity
	General population	Inhalation	Systemic, long-term; 2,9 mg/m3	Repeated dose toxicity
	Workers	Dermal	Systemic, long-term; 1,4 mg/kg	Repeated dose toxicity
	General population	Dermal	Systemic, long-term; 0,83 mg/kg	Repeated dose toxicity
	General population	Oral	Systemic, long-term; 0,83 mg/kg	Repeated dose toxicity

PNEC-Values

Remarks: PNEC-Values

Critical component	**Environmental compartment**	**PNEC-Values**	**Remarks**
methyl methacrylate	Aquatic (marine water)	0,094 mg/l	
	Sediment (marine water)	0,102 mg/kg	
	Sediment (freshwater)	10,2 mg/kg	
	Sewage treatment plant	10 mg/l	
	Soil	1,48 mg/kg	
	Aquatic (freshwater)	0,94 mg/l	
2-(2-butoxyethoxy)ethyl methacrylate	Aquatic (freshwater)	0,075 mg/l	
	Aquatic (marine water)	0,007 mg/l	
	Soil	0,341 mg/kg	
	Sewage treatment plant	4,8 mg/l	
	Sediment (marine water)	0,193 mg/kg	
	Sediment (freshwater)	1,93 mg/kg	
ethylene dimethacrylate	Aquatic (marine water)	0,007 mg/l	
	Aquatic (freshwater)	0,069 mg/l	
	Sewage treatment plant	57 mg/l	
	Sediment (marine water)	0,041 mg/kg	
	Soil	0,042 mg/kg	Soil
	Sediment (freshwater)	0,411 mg/kg	
Diethanol-p-toluidin	Soil	0,21 mg/kg	
	Sediment (freshwater)	1,2 mg/kg	
	Sediment (marine water)	0,12 mg/kg	
	Sewage treatment plant	10 mg/l	
	Aquatic (marine water)	0,005 mg/l	
	Aquatic (freshwater)	0,048 mg/l	

8.2 Exposure controls

Appropriate Engineering Controls: Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of vapors and mist. Adequate ventilation should be provided so that exposure limits are not exceeded. Mechanical ventilation or local exhaust ventilation may be required. Use explosion-proof ventilation equipment.

Individual protection measures, such as personal protective equipment

Eye/face protection: Wear safety glasses with side shields (or goggles). Provide easy access to water supply and eye wash facilities.

Hand Protection: Material: Butyl rubber.
Break-through time: > 60 min
Glove thickness: >= 0,7 mm
Additional Information: Chemical resistant gloves The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material. Wear suitable gloves tested to EN374. Gloves should be replaced regularly and if there is any sign of damage to the glove material.
Material: Polyvinyl alcohol (PVA).

Skin and Body Protection: Wear suitable protective clothing. Chemical resistant clothing Flame retardant antistatic protective clothing.

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment. It is recommended to use respiratory equipment with combination filter, type A2/P2. If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Self-contained breathing apparatus.

Hygiene measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned. Do not eat, drink or smoke when using the product. Take off contaminated clothing and wash it before reuse. Private clothes and working clothes should be kept separately.

Environmental Controls: Do not release into the environment. Do not discharge into drains, water courses or onto the ground.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state: liquid

Form:	liquid
Color:	Colorless
Odor:	like acrylic Strong pungent
Odor Threshold:	0,05 ppm
Freezing point:	-48 °C Methyl methacrylate
Boiling Point:	101 °C Methyl methacrylate
Flammability:	No data available.
Upper/lower limit on flammability or explosive limits	
Explosive limit - upper:	12,5 %(V) Methyl methacrylate
Explosive limit - lower:	2,1 %(V) Methyl methacrylate
Flash Point:	10 °C
Auto-ignition temperature:	No data available.
Decomposition Temperature:	No data available.
pH:	Not applicable
Viscosity	
Dynamic viscosity:	No data available.
Kinematic viscosity:	No data available.
Flow Time:	No data available.
Solubility(ies)	
Solubility in Water:	Insoluble in water
Solubility (other):	No data available.
Dissolution Rate:	No data available.
Partition coefficient (n-octanol/water):	1,38 Methyl methacrylate
Dispersion Stability:	No data available.
Vapor pressure:	37 hPa(20 °C) Methyl methacrylate
Relative density:	No data available.
Density:	0,99 - 1,1 g/cm3
Bulk density:	No data available.
Relative vapor density:	No data available.

9.2 Other information

VOC Content:	EC Directive 2004/42 < 500 g/l VOC: 2004/42/IIA/(j)(500)<500

SECTION 10: Stability and reactivity

10.1	**Reactivity:**	Material is stable under normal conditions.
10.2	**Chemical Stability:**	Highly flammable liquid and vapor. Flammable or explosive mixtures with air may be formed.
10.3	**Possibility of hazardous reactions:**	Polymerization occurs when exposed to white light, ultraviolet light or heat. Polymerization is a highly exothermic reaction and may generate sufficient heat to cause thermal decomposition and/or rupture containers.
10.4	**Conditions to avoid:**	Keep away from heat/sparks/open flames. - No smoking. Protect from sunlight.
10.5	**Incompatible Materials:**	Avoid radical-forming starting agents, peroxides and reactive metals. Amines. Heavy metals Oxidizing agents. Reducing agents. Acids. Bases.
10.6	**Hazardous Decomposition Products:**	Carbon Monoxide. Carbon Dioxide. Organic compounds.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Inhalation:	In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes.
Skin Contact:	Causes skin irritation.
Eye contact:	Causes serious eye irritation.
Ingestion:	Ingestion may cause irritation and malaise.

Acute toxicity (list all possible routes of exposure)

Oral

Product: ATEmix, 6.018,47 mg/kg

Components:

methyl methacrylate	LD 50, Mouse, 5.300 mg/kg, 2 = reliable with restrictions, Other
	LD 50, Guinea pig, 5.900 mg/kg, 2 = reliable with restrictions, Other
	LD 50, Mouse, 5.200 mg/kg, 2 = reliable with restrictions, Other
	LD 50, Rabbit, 6.550 mg/kg, 2 = reliable with restrictions, Other
	LD 50, Rat, 9.400 mg/kg, 2 = reliable with restrictions, Weight of evidence.
2-(2-butoxyethoxy)ethyl methacrylate	LD 50, Rat, 2.000 mg/kg, 1 = reliable without restrictions
ethylene dimethacrylate	LD 50, Rat, 10.400 mg/kg, 4 = not assignable, Other
	LD 50, Rat, 3.300 mg/kg, 4 = not assignable, Other
	LD 50, Rat, 8.145 mg/kg, 2 = reliable with restrictions, Supporting study
	LD 50, Mouse, 8.600 mg/kg, 4 = not assignable, Other
	LD 50, Rat, 10.000 mg/kg, 4 = not assignable, Other
	LD 50, Mouse, 2.000 mg/kg, 4 = not assignable, Other
Diethanol-p-toluidin	LD 50, Rat, 619 mg/kg, 1 = reliable without restrictions, Key study

Dermal

Product: Not classified for acute toxicity based on available data.

Components:

methyl methacrylate	LD 50, Rabbit, > 5.000 mg/kg, 2 = reliable with restrictions

2-(2-butoxyethoxy)ethyl methacrylate	LD 50, Rat, > 2.000 mg/kg, 1 = reliable without restrictions, Read-across based on grouping of substances (category approach), Key study
ethylene dimethacrylate	LD 50, Rat, > 2.000 mg/kg, 1 = reliable without restrictions, according to specific guideline, Experimental result, Key study
Diethanol-p-toluidin	LD 50, Rat, > 2.000 mg/kg, 1 = reliable without restrictions, Experimental result, Key study

Inhalation

Product: Not classified for acute toxicity based on available data.

Components:

methyl methacrylate	LC 50, Rat, 4 h, 29,8 mg/l, Vapor, 2 = reliable with restrictions, Vapor, Key study
ethylene dimethacrylate	LC Lo, Rat, 6 h, > 1 mg/l, Vapor, No, 2 = reliable with restrictions, Vapor, Supporting study LC Lo, Rat, 6 h, 1 mg/l, Vapor, No, 2 = reliable with restrictions, Vapor

Repeated dose toxicity

Product: No data available.

Components:

methyl methacrylate	NOAEL Rat, Female, Male, Inhalation, 1.640 mg/m3, Inhalation Experimental result, Key study LOAEL Rat, female, Inhalation, 2 yr, 250 ppm(m), Inhalation Experimental result, Key study LOAEL Rat, Female, Male, Inhalation, 416 mg/m3, Inhalation Experimental result, Key study NOAEL Rat, Female, Male, Inhalation, 104 mg/m3, Inhalation

	Experimental result, Key study NOAEL Rat, Male, Inhalation, 2 yr, 1.000 ppm(m), Inhalation Experimental result, Key study
2-(2-butoxyethoxy)ethyl methacrylate	NOAEL Rat, Female, Male, Oral, 32 - 53 d, 1.000 mg/kg, Oral Read-across based on grouping of substances (category approach), Key study
ethylene dimethacrylate	NOAEL Mouse, Female, Male, Oral, 3.000 mg/kg, Oral Experimental result, Weight of evidence NOAEL Rat, Female, Male, Oral, 90 d, 1.000 - 1.500 mg/kg, Oral Experimental result, Weight of evidence NOAEL Rat, Female, Male, Oral, 300 mg/kg, Oral Experimental result, Key study NOAEL Rat, Female, Male, Oral, 100 mg/kg, Oral Experimental result, Key study NOAEL Mouse, Female, Male, Oral, 90 d, 8.000 mg/kg, Oral Experimental result, Weight of evidence
Diethanol-p-toluidin	NOAEL Rat, Female, Male, Oral, >= 28 d, 100 mg/kg, Oral Experimental result, Key study

Skin Corrosion/Irritation

Product:	Causes skin irritation.

Components:

methyl methacrylate	Not irritant, in vivo, Rabbit, 24 - 72 h, Experimental result, Weight of Evidence study irritating after 4/24h occluded exposure, in vivo, Rabbit, Experimental result, Weight of Evidence study

2-(2-butoxyethoxy)ethyl methacrylate	Not Classified, in vivo, Rabbit, 24 - 72 h, Experimental result, Key study
ethylene dimethacrylate	Not irritant, in vivo, Rabbit, 24 - 72 h, Experimental result, Weight of Evidence study
Diethanol-p-toluidin	Irritating, in vitro (validated and accepted), Human, 15 min, Experimental result, Key study

Serious Eye Damage/Eye Irritation

Product: Causes serious eye irritation.

Components:

methyl methacrylate	Not irritant, in vivo, Rabbit, 24 - 72 h, EU
2-(2-butoxyethoxy)ethyl methacrylate	Not irritant, in vivo, Rabbit, 72 hrs, EU
ethylene dimethacrylate	Not irritant, in vivo, Rabbit, 24 - 72 h, EU
Diethanol-p-toluidin	Category 1, in vivo, Rabbit, 24 - 72 hrs, OECD GHS

Respiratory or Skin Sensitization

Product: May cause an allergic skin reaction.

Components:

methyl methacrylate	Skin sensitization:, in vivo, Mouse, Sensitising

2-(2-butoxyethoxy)ethyl methacrylate	Skin sensitization:, in vivo, Guinea pig, Non sensitising
ethylene dimethacrylate	Skin sensitization:, in vivo, Mouse, Sensitising
Diethanol-p-toluidin	Skin sensitization:, in vivo, Mouse, Sensitising

Carcinogenicity

Product: No data available.

Germ Cell Mutagenicity

In vitro

Product: No data available.

In vivo

Product: No data available.

Reproductive toxicity

Product: No data available.

Specific Target Organ Toxicity - Single Exposure

Product: May cause respiratory irritation.

Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.

Aspiration Hazard

Product: No data available.

11.2 Information on other hazards

Other information

Product: No data available.

SECTION 12: Ecological information

12.1 Toxicity:

Acute hazards to the aquatic environment:

Fish

Product: No data available.

Components:

methyl methacrylate	LC 50, Oncorhynchus mykiss, 96 h, > 79 mg/lflow-through, Experimental result, Key study NOAEL, Oncorhynchus mykiss, 96 h, 40 mg/lflow-through, Experimental result, Key study LC 50, Oncorhynchus mykiss, 96 h, > 79 mg/lflow-through LC 50, Leuciscus idus, 48 h, 350 mg/lStatic LC 50, Lepomis macrochirus, 96 h, 191 mg/lstatic + flow-through
2-(2-butoxyethoxy)ethyl methacrylate	LC 50, Oncorhynchus mykiss, 96 h, 22,36 mg/lsemi-static, Experimental result, Key study LC 50, Oncorhynchus mykiss, 24 h, 36,54 mg/lsemi-static, Experimental result, Key study LC 50, Oncorhynchus mykiss, 48 h, 32,58 mg/lsemi-static, Experimental result, Key study LC 50, Oncorhynchus mykiss, 24 h, 36,54 mg/lsemi-static
ethylene dimethacrylate	LC 100, Danio rerio, 96 h, 25 mg/lStatic LC 50, Danio rerio, 96 h, 15,95 mg/lStatic LC 0, Danio rerio, 96 h, 6,25 mg/lStatic LC 50, Carassius auratus, 72 h, 30 mg/lStatic
Diethanol-p-toluidin	LC 50, Cyprinus carpio, 96 h, > 100 mg/lStatic, Experimental result, Key study LC 50, Cyprinus carpio, 96 h, > 100 mg/lStatic

Aquatic Invertebrates

Product: No data available.

Components:

methyl methacrylate	EC 50, Daphnia magna, 48 h, 69 mg/lflow-through, experimental result Experimental result, Key study NOAEL, Daphnia magna, 48 h, 48 mg/lflow-through, experimental result Experimental result, Key study EC 100, Daphnia magna, 24 h, 1.042 mg/lStatic, Experimental result, Other EC 50, Daphnia magna, 24 h, 1.760 mg/lStatic, Experimental result, Other EC 100, Daphnia magna, 24 h, 2.500 mg/lStatic, Experimental result, Other
2-(2-butoxyethoxy)ethyl methacrylate	EC 50, Daphnia magna, 48 h, 94,7 mg/lStatic, experimental result Experimental result, Key study EC 50, Daphnia magna, 48 h, 94,7 mg/lStatic, Experimental result, Key study EC 100, Daphnia magna, 48 h, >= 128 mg/lStatic, Experimental result, Key study
ethylene dimethacrylate	EC 100, Daphnia magna, 48 h, 100 mg/lStatic, Experimental result, Key study EC 50, Daphnia magna, 48 h, 44,9 mg/lStatic, Experimental result, Key study
Diethanol-p-toluidin	EC 50, Daphnia magna, 48 h, 48 mg/lStatic, experimental result Experimental result, Key study EC 50, Daphnia magna, 48 h, 48 mg/lStatic, Experimental result, Key study

Toxicity to Aquatic Plants

Product: No data available.

Toxicity to microorganisms

Product: No data available.

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Components:

methyl methacrylate	NOAEL, Danio rerio, 9,4 mg/l, flow-through, experimental result Experimental result, Key study LC 50, Danio rerio, 33,7 mg/l, flow-through, experimental result Experimental result, Key study LOAEL, Danio rerio, 18,8 mg/l, flow-through, experimental result Experimental result, Key study NOEL, Danio rerio, 9,4 mg/l, flow-through, experimental result LC 10, Danio rerio, 16,9 mg/l, flow-through, experimental result

Aquatic Invertebrates

Product: No data available.

Components:

methyl methacrylate	EC 50, Daphnia magna, 49 mg/l, flow-through, experimental result Experimental result, Key study LC 50, Ceriodaphnia dubia, > 44 mg/l, experimental result Experimental result, Other
2-(2-butoxyethoxy)ethyl	EC 50, Daphnia magna, 22,1 mg/l, semi-static, experimental result

methacrylate	Experimental result, Key study EC 50, Daphnia magna, 15,3 mg/l, semi-static, experimental result Experimental result, Key study EC 10, Daphnia magna, 9,97 mg/l, semi-static, experimental result Experimental result, Key study EC 50, Daphnia magna, 14,1 mg/l, semi-static, experimental result Experimental result, Key study EC 50, Daphnia magna, > 5,05 mg/l, semi-static, experimental result Experimental result, Key study
ethylene dimethacrylate	EC 10, Daphnia magna, 7,22 mg/l, semi-static, experimental result Experimental result, Key study EC 50, Daphnia magna, > 5,05 mg/l, semi-static, experimental result Experimental result, Key study

Toxicity to microorganisms

Product: No data available.

12.2 Persistence and Degradability

Biodegradation

Product:	No data available.
Components:	
methyl methacrylate	94 %, 14 d, Detected in water. Experimental result, Key study 44 %, 33 d, Detected in water. Experimental result, Other 95 %, 20 h, Detected in water. Experimental result, Other < 24 %, Detected in water. Not specified, Other 51 %, 15 d, Detected in water. Experimental result, Weight of evidence
2-(2-butoxyethoxy)ethyl methacrylate	65 %, 16 d, Detected in water. Experimental result, Key study 91 %, 28 d, Detected in water. Experimental result, Key study
ethylene dimethacrylate	63,3 %, 15 d, Detected in water. Experimental result, Supporting study 69 %, 28 d, Detected in water. Experimental result, Key study 71,6 %, 28 d, Detected in water. Experimental result, Supporting study 71,2 %, 28 d, Detected in water. Experimental result, Key study 45 %, 10 d, Detected in water. Experimental result, Key study
Diethanol-p-toluidin	1,5 %, 29 d, Detected in water. Experimental result, Key study

12.3 Bioaccumulative potential

Bioconcentration Factor (BCF)

Product:	No data available.
Components:	
methyl methacrylate	2 - 6,59, Aquatic sediment estimated by calculation
ethylene dimethacrylate	21,9, Aquatic sediment Estimated by calculation, Supporting study

Partition Coefficient n-octanol / water (log Kow)

Product: 1,38, 20 °C, Methyl methacrylate

12.4 Mobility in soil:

Product No data available.

12.5 Results of PBT and vPvB assessment:

Product This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects:

Other hazards
Product: No data available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

General information: This material and/or its container must be disposed of as hazardous waste. Dispose of waste and residues in accordance with local authority requirements.

Disposal methods: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Contaminated Packaging: Since emptied containers retain product residue, follow label warnings even after container is emptied. Do not puncture or incinerate even when empty. Dispose of this material and its container to hazardous or special waste collection point.

European Waste Codes
Unused product: 08 01 11*: waste paint and varnish containing organic solvents or other hazardous substances
Contaminated Packaging: 15 01 10*: packaging containing residues of or contaminated by hazardous substances

SECTION 14: Transport information

ADR

14.1 UN number or ID number: UN 1866
14.2 UN Proper Shipping Name: RESIN SOLUTION
14.3 Transport Hazard Class(es)
Class: 3
Label(s): 3
Classification Code: F1
Hazard No. (ADR): 33

Tunnel restriction code:	(D/E)
14.4 Packing Group:	II
Limited quantity	005 L
Excepted quantity	E2
14.5 Environmental Hazards	
Environmentally Hazardous:	No
14.6 Special precautions for user:	None.

IMDG

14.1 UN number or ID number:	UN 1866
14.2 UN Proper Shipping Name:	RESIN SOLUTION
14.3 Transport Hazard Class(es)	
Class:	3
Label(s):	3
EmS No.:	F-E, S-E
14.4 Packing Group:	II
Limited quantity	005 L
Excepted quantity	E2
14.5 Environmental Hazards	
Marine Pollutant:	No
14.6 Special precautions for user:	None.

IATA

14.1 UN number or ID number:	UN 1866
14.2 UN Proper Shipping Name:	RESIN SOLUTION
14.3 Transport Hazard Class(es)	
Class:	3
Label(s):	3
14.4 Packing Group:	II
Passenger and cargo aircraft :	353
Limited quantity	None.
Excepted quantity	E2
14.5 Environmental Hazards	
Environmentally Hazardous:	No
14.6 Special precautions for user:	None.
Passenger and cargo aircraft:	Allowed. 353
Cargo aircraft only :	Allowed. 364

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

EU Regulations

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

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

SECTION 16: Other information

Abbreviations and acronyms:

EH40 WEL: UK. EH40 Workplace Exposure Limits (WELs), as amended
EH40 WEL / STEL: Short Term Exposure Limit (STEL):
EH40 WEL / TWA: Time Weighted Average (TWA):

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; EIGA - European Industrial Gases Association; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Notes:

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
Serious eye irritation, Category 2	On basis of test data
Skin sensitizer, Category 1	On basis of test data
Specific Target Organ Toxicity - Single Exposure, Category 3	Calculation method

Wording of the statements in section 2 and 3

H225	Highly flammable liquid and vapor.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H412	Harmful to aquatic life with long lasting effects.

Training information: No data available.

Disclaimer: This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.