SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

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

1.1 Product identifier

Product name: DEGADUR® 165

Chemical name: Solution of an acrylic polymer in an acrylic acid ester

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

Identified uses:
Typically used as a binder
Roller application or brushing
Hand-mixing with intimate contact and only PPE available
Wide dispersive indoor use resulting in inclusion into or onto a matrix
Wide dispersive outdoor use resulting in inclusion into or onto a matrix

Uses advised against: Applications where liquid monomer is intended to come into contact with skin or nails.

1.3 Details of the supplier of the safety data sheet

Company Name	:	Röhm GmbH Product Stewardship Deutsche-Telekom-Allee 9 64295 Darmstadt
Telephone	:	+49 6151 863 7542
E-mail	:	sds-info@roehm.com

1.4 Emergency telephone number:

24-Hour Health Emergency	:	+49 6241 402 5280 (24h)

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		
Acute toxicity (Oral)	Category 4	H302: Harmful if swallowed.
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.
Environmental Hazards		
Chronic hazards to the aquatic environment	Category 3	H412: Harmful to aquatic life with long lasting effects.

2.2 Label Elements

Signal Words: Danger

Hazard Statement(s):
H225: Highly flammable liquid and vapor.
H302: Harmful if swallowed.
H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H335: May cause respiratory irritation.
H412: Harmful to aquatic life with long lasting effects.

Precautionary Statements

Prevention:
P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233: Keep container tightly closed.
P240: Ground and bond container and receiving equipment.
P241: Use explosion-proof electrical, ventilating and lighting equipment.
P242: Use non-sparking tools.
P243: Take action to prevent static discharges.
P261: Avoid breathing dust/fume/gas/mist/vapors/spray.
P264: Wash face, hands and any exposed skin thoroughly after handling.
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.
P333+P313: If skin irritation or rash occurs: Get medical advice/attention.
P362+P364: Take off contaminated clothing and wash it before reuse.
P312: Call a POISON CENTER or doctor/ physician if you feel unwell.
P370 + P378: In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
P391: Collect spillage.

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

Hazardous ingredients which must be listed on the label:

methyl methacrylate
1,4-butanediol dimethacrylate
dibutyl maleate
N,N-bis-(2-hydroxypropyl)-p-toluidine
Dibutyl fumarate

2.3 Other hazards

Take precautionary measures against static discharges. 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.

PBT/vPvB data

PBT: no, vPvB: no

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

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	50 - <70%	80-62-6	201-297-1	01-2119452498-28;	Aquatic Toxicity (Acute): 1; Aquatic Toxicity (Chronic): 1	#
1,4-butanediol dimethacrylate	1 - <10%	2082-81-7	218-218-1	01-2119967415-30;	Aquatic Toxicity (Acute): 1; Aquatic Toxicity (Chronic): 1	
dibutyl maleate	1 - <10%	105-76-0	203-328-4	01-2119523581-45;	Aquatic Toxicity (Acute): 1; Aquatic Toxicity (Chronic): 1	
N,N-bis-(2-hydroxypropyl)	1 - <2,5%	38668-48-3	254-075-1	01-2119980937-	Aquatic Toxicity	

-p-toluidine				17;	(Acute): 1; Aquatic Toxicity (Chronic): 1	
(2-hydroxy-4-methoxyphenyl)phenyl-methanone	1 - <2,5%	131-57-7	205-031-5	01-2119976330-39;	Aquatic Toxicity (Acute): 1; Aquatic Toxicity (Chronic): 1	
Dibutyl fumarate	<0,25%	105-75-9	203-327-9	01-2119486395-26;	Aquatic Toxicity (Acute): 1; Aquatic Toxicity (Chronic): 1	

* 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; Skin Sens.: 1: H317; STOT SE: 3: H335; Supplemental label information: None known. Specific concentration limit: None known. Acute toxicity, oral: LD 50: > 5.000 mg/kg Acute toxicity, inhalation: LC 50: 29,8 mg/l Acute toxicity, dermal: LD 50: > 5.000 mg/kg	Note D
1,4-butanediol dimethacrylate	Classification: Skin Sens.: 1B: H317; Supplemental label information: None known. Specific concentration limit: None known. Acute toxicity, oral: LD 50: > 5.000 mg/kg Acute toxicity, inhalation: None known. Acute toxicity, dermal: LD 50: > 3.000 mg/kg	None.
dibutyl maleate	Classification: Skin Sens.: 1: H317; STOT RE: 2: H373; Aquatic Acute: 1: H400; Supplemental label information: None known. Specific concentration limit: None known. Acute toxicity, oral: LD 50: 3.730 mg/kg Acute toxicity, inhalation: None known.	None.

	Acute toxicity, dermal: LD 50: > 2.000 mg/kg	
N,N-bis-(2-hydroxypropyl)-p-toluidine	Classification: Acute Tox.: 2: H300; Eye Irrit.: 2: H319; Aquatic Chronic: 3: H412; Supplemental label information: None known. Specific concentration limit: None known. Acute toxicity, oral: LD 50: 25 mg/kg Acute toxicity, inhalation: None known. Acute toxicity, dermal: LD 50: > 2.000 mg/kg	None.
(2-hydroxy-4-methoxyphenyl)phenyl-methanone	Classification: Aquatic Acute: 1: H400; Aquatic Chronic: 2: H411; Supplemental label information: None known. Specific concentration limit: None known. Acute toxicity, oral: LD 50: > 12.800 mg/kg Acute toxicity, inhalation: None known. Acute toxicity, dermal: LD 50: > 16.000 mg/kg	None.
Dibutyl fumarate	Classification: Skin Sens.: 1: H317; STOT RE: 2: H373; Aquatic Acute: 1: H400; Aquatic Chronic: 1: H410; Supplemental label information: None known. Specific concentration limit: None known. Acute toxicity, oral: LD 50: 8.530 mg/kg Acute toxicity, inhalation: None known. Acute toxicity, dermal: LD 50: 15.600 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: 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.

Inhalation: IF INHALED: Remove person to fresh air and keep comfortable for breathing. If feeling unwell seek medical advice.

Skin Contact: IF ON SKIN: Gently wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs consult a physician.

Eye contact:	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation persists, contact a physician.
Ingestion:	IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth. Do not induce vomiting. Never give anything by mouth to an unconscious person.
Personal Protection for First-aid Responders:	First Aid responders should pay attention to self-protection and use the recommended protective clothing

4.2 Most important symptoms and effects, both acute and delayed

Symptoms:	Product has dermal defatting effect Excessive or prolonged exposure can cause the following: loss of coordination Nausea Headache. skin irritation possible Difficulty in breathing.
Hazards:	Harmful if swallowed.

4.3 Indication of immediate medical attention and special treatment needed

Treatment:	If ingested, irrigate the stomach. If the product has been swallowed or vomited danger of penetration into the lung (danger of aspiration).

SECTION 5: Firefighting measures

General Fire Hazards:	Vapours are heavier than air and can form an explosive mixture with air. 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.

5.1 Extinguishing media

Suitable extinguishing media:	foam , Carbon dioxide, sprinkler system with water, Dry chemical.
Unsuitable extinguishing media:	High volume water jet

5.2 Special hazards arising from the substance or mixture:	Products or compounds possibly released in case of fire: Carbon oxides organic products of decomposition

5.3 Advice for firefighters

Special fire-fighting procedures:	Keep away from heat/sparks/open flames/hot surfaces. No smoking. Take action to prevent static discharges. Use only spark-proof tools. In the event of fire, cool the endangered containers with water. When heated above the flash point and/or during spraying (atomizing), ignitible mixtures may form in air. Use explosion-proof equipment.
Special protective equipment for fire-fighters:	Wear self-contained breathing apparatus.

SECTION 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:	Remove sources of ignition. Stop leak if you can do so without risk. Assure sufficient ventilation.
6.1.2 For emergency responders:	Use water SPRAY only to cool containers! Do not put water on leaked material.
6.2 Environmental Precautions:	Prevent product from getting into drains/surface water/groundwater.
6.3 Methods and material for containment and cleaning up:	Remove sources of ignition. Assure sufficient ventilation. 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.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Technical measures:	Provide good ventilation or extraction.
Local/Total ventilation:	Provide a good standard of general or controlled ventilation (5 to 10 air changes per hour)
Safe handling advice:	Keep away from heat/sparks/open flames/hot surfaces. No smoking. Take action to prevent static discharges. Use only spark-proof tools. In the event of fire, cool the endangered containers with water. When heated above the flash point and/or during spraying (atomizing), ignitible mixtures may form in air. Use explosion-proof equipment.Avoid breathing dust/mist/vapors. Avoid contact with skin and eyes. Do not eat, drink or smoke during use.Keep container tightly closed. Provide good room ventilation even at ground level (vapours are heavier than air). 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. 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. Supervision in place to check that the risk management measures in place are being used correctly and operation conditions followed. Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used. Controll staff entry to working area. Training for staff on good practice. Recording of any 'near miss'

situations. Regular cleaning of equipment and work area. Provide a good standard of general or controlled ventilation (5 to 10 air changes per hour)

Contact avoidance measures: see section 8.

7.2 Conditions for safe storage, including any incompatibilities

Safe storage conditions: Keep containers tightly closed in a cool, well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep away from heat. Protect from direct sunlight. 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 only in the original container at a temperature not exceeding 25 °C.

Safe packaging materials: No data available.

7.3 Specific end use(s): Applications; see Section 1.

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	STEL 15 minutes		100 ppm	Ireland. OELVs, Schedule 1 (Code of Practice for Chemical Agents Regulations), as amended (2018)
	TWA		50 ppm	Ireland. OELVs, Schedule 1 (Code of Practice for Chemical Agents Regulations), as amended (2016)
	TWA		50 ppm	EU. Indicative Occupational 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 Occupational Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU, as amended (02 2017)

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

Critical component	Type	Route of Exposure	Health Warnings	Remarks
methyl methacrylate	Workers	Inhalativ	208 mg/m3	Long-term - systemic effects
	Workers	Dermal	13,7 mg/kg/d	Long-term - systemic effects
	Workers	Inhalativ	416 mg/m3	Short-term exposure
	Workers	Dermal	1,500 µg/cm2	Short-term exposure

	Consumers	Inhalativ	74,3 mg/m3	Long-term - systemic effects
	Consumers	Dermal	8,2 mg/kg/d	Long-term - systemic effects
	Consumers	Oral	8,2 mg/kg/d	Long-term - systemic effects
	Consumers	Inhalativ	208 mg/m3	Short-term exposure

1,4-butanediol dimethacrylate	Workers	Inhalativ	14,5 mg/m3	Long-term - systemic effects
	Workers	Dermal	4,2 mg/kg bodyweight/day	Long-term - systemic effects

PNEC-Values

Critical component	Environmental compartment	PNEC-Values	Remarks
methyl methacrylate	Fresh water	0,94 mg/l	
	freshwater sediment	10,2 mg/kg dry weight	
	marine water	0,094 mg/l	
	marine water sediment	1,02 mg/kg dry weight	
	soil	1,48 mg/kg dry weight	
	sewage treatment plant (STP)	10 mg/l	
	Humans via the environment	8,2 mg/kg bw/day	

1,4-butanediol dimethacrylate	Fresh water	0,087 mg/l	
	marine water	0,0087 mg/l	
	sewage treatment plant (STP)	20 mg/l	
	soil	0,573 mg/kg	
	freshwater sediment	3,12 mg/kg	
	marine water sediment	0,312 mg/kg	

8.2 Exposure controls

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

Monitoring methods: Provide good ventilation or extraction.

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: 0,7 mm Guideline: EN 374 Additional Information: Gloves should be replaced regularly, especially after extended contact with the product., For each work-place 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 if the limit values like TLV are exceeded, when vapours or aerosols occur Respirator with filter for organic vapour 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:	Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state:	liquid
Form:	liquid
Color:	Blue
Odor:	ester-like
Odor Threshold:	< 1 ppm
Freezing point:	< 59 °F/15 °C (Paraffin Separation)
Boiling Point:	approx. 212 °F/100 °C (1.013 hPa)
Flammability:	Highly flammable liquid and vapor.

Upper/lower limit on flammability or explosive limits

Explosive limit - upper:	12,5 %(V) (methyl methacrylate)
Explosive limit - lower:	2,1 %(V) at 10,5°C (methyl methacrylate)
Flash Point:	50 °F/10 °C (DIN 51 755) (methyl methacrylate)
Auto-ignition temperature:	806 °F/430 °C (DIN 51794) (methyl methacrylate)
Decomposition Temperature:	No decomposition if used as directed.
pH:	7 1 % in water

Viscosity

Dynamic viscosity:	50 - 90 mPa.s (73 °F/23 °C, DIN 53018)
Kinematic viscosity:	50 - 90 mm2/s (73 °F/23 °C, calculated)
Flow Time:	not determined

Solubility(ies)

Solubility in Water:	approx. 20 g/l (68 °F/20 °C)
Solubility (other):	soluble in ethyl acetate
Dissolution Rate:	no specific test data available
Partition coefficient (n-octanol/water):	0,7 (literature) (methyl methacrylate)
Dispersion Stability:	Not applicable
Vapor pressure:	approx. 40 hPa (68 °F/20 °C)
Relative density:	< 1 estimated
Density:	1,00 g/cm3 (68 °F/20 °C)
Bulk density:	
Relative vapor density:	> 1 68 °F/20 °C

9.2 Other information

Autoignition Temperature:	not spontaneously flammable in air at ambient temperature (not pyrophoric)

SECTION 10: Stability and reactivity

10.1	**Reactivity:**	polymerisation
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.
10.4	**Conditions to avoid:**	Heat and ignition sources, aging, contamination, oxygen free atmosphere.
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.

SECTION 11: Toxicological information

General information: no specific test data available Properties of components in summary.

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

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.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation:	Headache. Dizziness.
Skin Contact:	Causes skin irritation. May cause allergic skin reaction.
Eye contact:	Contact with the eyes may cause irritation.
Ingestion:	If handled correctly, not a relevant route of exposure. Information on effects are given below.

Information on likely routes of exposure

Acute toxicity (list all possible routes of exposure)

Oral

Product:	Acute toxicity estimate: 1.316 mg/kg (Calculation method)
Components:	
methyl methacrylate	LD 50 (Rat): > 5.000 mg/kg
1,4-butanediol dimethacrylate	LD 50 (Rat): > 5.000 mg/kg Own test result.
dibutyl maleate	LD 50 (Rat): 3.730 mg/kg
N,N-bis-(2-hydroxypropyl)-p-toluidine	LD 50 (Rat): 25 mg/kg
(2-hydroxy-4-methoxyphenyl)phenyl-methanone	LD 50 (Rat): > 12.800 mg/kg
Dibutyl fumarate	LD 50 (Rat): 8.530 mg/kg

Dermal

Product:	Not classified for acute toxicity based on available data.
Components:	
methyl methacrylate	LD 50 (Rabbit): > 5.000 mg/kg
1,4-butanediol dimethacrylate	LD 50 (Rabbit): > 3.000 mg/kg
dibutyl maleate	LD 50 (Rat): > 2.000 mg/kg
N,N-bis-(2-hydroxypropyl)-p-toluidine	LD 50 (Rat): > 2.000 mg/kg
(2-hydroxy-4-methoxyphenyl)phenyl-methanone	LD 50 (Rabbit): > 16.000 mg/kg
Dibutyl fumarate	LD 50 (Rabbit): 15.600 mg/kg

Inhalation

Product:	Not classified for acute toxicity based on available data.
Components:	
methyl methacrylate	LC 50 (Rat, 4 h): 29,8 mg/l low toxicity after single exposure; Vapour Not toxic after single exposure; Dust and mist, Not applicable
1,4-butanediol dimethacrylate	Not toxic after single exposure; No labelling required, Vapour Not toxic after single exposure; No labelling required, Dust and mist

dibutyl maleate	Not toxic after single exposure; No labelling required, Vapour Not toxic after single exposure; No labelling required, Dust and mist
N,N-bis-(2-hydroxypropyl)-p-toluidine	Not toxic after single exposure; The substance or mixture has no acute inhalation toxicity, Dust and mist Not toxic after single exposure; The substance or mixture has no acute inhalation toxicity, Vapour
(2-hydroxy-4-methoxyphenyl)phenyl-methanone	Not toxic after single exposure; Vapour, Not classified based on available information. Not toxic after single exposure; Dust and mist, Not classified based on available information.
Dibutyl fumarate	Not toxic after single exposure; Based on available data, the classification criteria are not met., Vapour, Dust and mist

Repeated dose toxicity

Product: No data available.

Components:

methyl methacrylate	NOAEL (Rat, Inhalativ, 2 years): 25 ppm Findings: Damage to mucous membranes in the nose at 400 ppm NOAEL (Rat, Oral, 2 years): 2000 ppm Findings: no toxic effects
1,4-butanediol dimethacrylate	NOAEL (Rat, Oral): 300 mg/kg
dibutyl maleate	No data available.
N,N-bis-(2-hydroxypropyl)-p-toluidine	No data available.
(2-hydroxy-4-methoxyphenyl)phenyl-methanone	No data available.
Dibutyl fumarate	No data available.

Skin Corrosion/Irritation

Product: May cause skin irritation.

Components:

methyl methacrylate	(Rabbit): non-irritant , 4 h (Human): Irritating.
1,4-butanediol dimethacrylate	FDA 1959 Draize, occlusive (Rabbit): Not irritating , 24 h
dibutyl maleate	OECD Guide-line 404 (Rabbit): slightly skin irritation
N,N-bis-(2-hydroxypropyl)-p-toluidine	OECD 404 (Rabbit): Not irritating
(2-hydroxy-4-methoxyphenyl)phenyl-methanone	OECD Guide-line 404 (Rabbit):
Dibutyl fumarate	OECD 404 Not irritating

Serious Eye Damage/Eye Irritation

Product: , according to EU-GHS (1272/2008), classification not relevant.

Components:

methyl methacrylate	Not irritating OECD 405, FDA 1959 Draize , Rabbit:
1,4-butanediol dimethacrylate	Not irritating OECD Test Guideline 405 , Rabbit: Own test result.
dibutyl maleate	Not Classified Rabbit:
N,N-bis-(2-hydroxypropyl)-p-toluidine	Moderately irritating OECD Test Guideline 405 , Rabbit:
(2-hydroxy-4-methoxyphenyl)phenyl-methanone	Not irritating OECD Guide-line 405 , Rabbit:
Dibutyl fumarate	Not irritating in vivo ,

Respiratory or Skin Sensitization

Product: May cause an allergic skin reaction.

Components:

methyl methacrylate	Local Lymph Node Assay (LLNA), LLNA (OECD 429) (Mouse): May cause sensitization by skin contact. Cases of sensitisation also observed in humans. Not classified for respiratory sensitization
1,4-butanediol dimethacrylate	Local Lymph Node Assay (LLNA), OECD Test Guideline 429 (Mouse): Sensitising Own test result.
dibutyl maleate	, OECD Test Guideline 406 (Guinea Pig)May cause sensitization by skin contact. Not classified for respiratory sensitization
N,N-bis-(2-hydroxypropyl)-p-toluidine	in vivo, OECD 406 (Guinea Pig): Not a skin sensitizer. Not classified for respiratory sensitization
(2-hydroxy-4-methoxyphenyl)phenyl-methanone	Maximization Test (GPMT) (Guinea Pig): Not a skin sensitizer.
Dibutyl fumarate	in vivo, OECD 406 (Guinea Pig): Sensitising Not classified for respiratory sensitization

Carcinogenicity

Product:	Contains no ingredient listed as a carcinogen (>0.1%).
Components:	
methyl methacrylate	Not classified Non-carcinogenic in inhalation and feeding studies carried out on rats, mice and dogs.
1,4-butanediol dimethacrylate	Not classified
dibutyl maleate	Not classified
N,N-bis-(2-hydroxypropyl)-p-toluidine	Not classified
(2-hydroxy-4-methoxyphenyl)phenyl-methanone	Not classified
Dibutyl fumarate	Not classified

Germ Cell Mutagenicity

Contains no ingredient listed as a mutagen (>0.1%).

In vitro

Product:	No toxicological tests have been conducted with the product itself.;
Components:	
methyl methacrylate	gene mutation (OECD 471): negative gene mutation (OECD 476): negative , Chinese hamster lung fibroblasts (V79) Micronucleus test (OECD 487): negative , human lymphocytes
1,4-butanediol dimethacrylate	gene mutation (OECD TG 471): negative
dibutyl maleate	Ames test (OECD TG 471): negative In vitro mammalian cell gene mutation test (OECD TG 473): positive Genetic mutation in mammal cells (OECD TG 476): negative
N,N-bis-(2-hydroxypropyl)-p-toluidine	Bacterial reverse mutation assay (OECD TG 471): negative
(2-hydroxy-4-methoxyphenyl)phenyl-methanone	Not classified
Dibutyl fumarate	Chromosomal aberration (OECD 473): negative

In vivo

Product:	No toxicological tests have been conducted with the product itself.
Components:	
methyl methacrylate	gene mutation (Dominant lethal test) Inhalativ (Mouse): negative
1,4-butanediol dimethacrylate	Chromosomal aberration (OECD TG 474) Oral (Mouse): negative

dibutyl maleate	In vivo micronucleus test (Mouse): negative
N,N-bis-(2-hydroxypropyl)-p-toluidine	Ames test: negative
(2-hydroxy-4-methoxyphenyl)phenyl-methanone	Not classified
Dibutyl fumarate	No data available.

Reproductive toxicity

Product:	Contains no ingredient listed as toxic to reproduction (>0.1%).
Components:	
methyl methacrylate	Not classified No indications of toxic effects were observed in reproduction studies in animals. OECD 414 OECD 416 Oral
1,4-butanediol dimethacrylate	Not classified
dibutyl maleate	Not classified
N,N-bis-(2-hydroxypropyl)-p-toluidine	Not classified
(2-hydroxy-4-methoxyphenyl)phenyl-methanone	Animal testing did not show any effects on fertility.
Dibutyl fumarate	Not classified No indications of toxic effects were observed in reproduction studies in animals. OECD 414

Specific Target Organ Toxicity - Single Exposure

Product:	Respiratory TractSpecific target organ toxicity – single exposure Category 3 (UN-GHS)
Components:	
methyl methacrylate	Inhalation - vapor: Category 3 with respiratory tract irritation.
1,4-butanediol dimethacrylate	Not classified
dibutyl maleate	Not classified
N,N-bis-(2-hydroxypropyl)-p-toluidine	Not classified
(2-hydroxy-4-methoxyphenyl)phenyl-methanone	Not classified based on available information.
Dibutyl fumarate	Not classified

Specific Target Organ Toxicity - Repeated Exposure

Product:	No toxicological tests have been conducted with the product itself.
Components:	
methyl methacrylate	Not classified
1,4-butanediol dimethacrylate	Not classified no evidence for hazardous properties
dibutyl maleate	Oral: Kidney - Category 2
N,N-bis-(2-hydroxypropyl)-p-toluidine	Not classified
(2-hydroxy-4-methoxyphenyl)phenyl-methanone	Not classified
Dibutyl fumarate	Oral: Kidney - Category 2

Aspiration Hazard

Product:	Not applicable
Components:	
methyl methacrylate	Not classified
1,4-butanediol dimethacrylate	Not classified
dibutyl maleate	Not classified

N,N-bis-(2-hydroxypropyl)-p-toluidine	Not classified
(2-hydroxy-4-methoxyphenyl)phenyl-methanone	Not classified
Dibutyl fumarate	Not classified

11.2 Information on other hazards

Endocrine disrupting properties

Product: 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.;

Components:

methyl methacrylate	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.;
1,4-butanediol dimethacrylate	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.;
dibutyl maleate	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.;
N,N-bis-(2-hydroxypropyl)-p-toluidine	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.;
(2-hydroxy-4-methoxyphenyl)phenyl-methanone	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.;
Dibutyl fumarate	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.;

Other information

Product: There are no toxicological data available for the product as such. Avoid contact with the skin and eyes and inhalation of the product vapours.;

SECTION 12: Ecological information

12.1 Toxicity:

Acute hazards to the aquatic environment:

Fish

Product: No data available.

Components:

methyl methacrylate	LC 50 (96 h): > 100 mg/l Expert judgement
1,4-butanediol dimethacrylate	LC 50 (Leuciscus idus melanotus, 48 h): 32,5 mg/l The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy). Own test result.

dibutyl maleate	LC 50 (Oncorhynchus mykiss (rainbow trout), 96 h): 0,6 mg/l
N,N-bis-(2-hydroxypropyl)-p-toluidine	LC 50 (Danio rerio (zebra fish), 96 h): 17 mg/l
(2-hydroxy-4-methoxyphenyl)phenyl-methanone	LC 50 (Leuciscus idus (Golden orfe), 96 h): 100 - 220 mg/l The reported toxic effects relate to the nominal concentration. LC 50 (Medaka, high-eyes (Oryzias latipes), 96 h): 3,8 mg/l
Dibutyl fumarate	LC 50 (Carp (Cyprinus carpio), 96 h): 0,1 mg/l NOEC (Carp (Cyprinus carpio), 35 d): 0,0074 mg/l

Aquatic Invertebrates

Product:	No data available.
Components:	
methyl methacrylate	EC 50 (Daphnia magna (Water flea), 48 h): 69 mg/l
1,4-butanediol dimethacrylate	No data available.
dibutyl maleate	EC 50 (Daphnia magna (Water flea), 48 h): 21 mg/l
N,N-bis-(2-hydroxypropyl)-p-toluidine	EC 50 (Daphnia magna (Water flea), 48 h): 28,8 mg/l
(2-hydroxy-4-methoxyphenyl)phenyl-methanone	EC50 (Daphnia magna (Water flea), 24 h): 12,9 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 (Daphnia magna (Water flea), 48 h): 1,87 mg/l
Dibutyl fumarate	EC 50 (Water Flea, 48 h): 0,1 mg/l NOEC (Water Flea, 21 h): 0,013 mg/l

Toxicity to Aquatic Plants

Product:	No data available.
Components:	
methyl methacrylate	EC 50 (Selenastrum capricornutum (green algae), 72 h): > 100 mg/l (OECD 201)
1,4-butanediol dimethacrylate	EC 50 (Desmodesmus subspicatus (green algae), 72 h): 9,79 mg/l (OECD 201) Own study
dibutyl maleate	EC 50 (Desmodesmus subspicatus (green algae), 72 h): 6,2 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)
(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 (Pseudokirchneriella subcapitata (green algae), 72 h): 0,67 mg/l (OECD TG 201)
Dibutyl fumarate	EC 50 (Algae (Pseudokirchneriella subcapitata), 72 h): > 5 mg/l (OECD 201)

Toxicity to microorganisms

Product:	No data available.
Components:	
methyl methacrylate	EC3 (Pseudomonas putida, 16 h): 100 mg/l (cell proliferation inhibition test, Bringmann-Kühn)
1,4-butanediol dimethacrylate	NOEC (local activated sludge): 20 mg/l
dibutyl maleate	EC 50 (Activated sludge, 3 h): 488,6 mg/l (OECD Test Guideline 209)

N,N-bis-(2-hydroxypropyl)-p-toluidine	EC10 (30 min): > 1.995 mg/l (OECD Test Guideline 209)
(2-hydroxy-4-methoxyphenyl)phenyl-methanone	EC 50 (Activated sludge, 3 h): > 100 mg/l (Directive 87/302/EEC, part C, p. 118)
Dibutyl fumarate	No data available.

Chronic hazards to the aquatic environment:

Fish

Product:	No data available.
Components:	
methyl methacrylate	NOEC (Danio rerio (zebra fish)): 9,4 mg/l (OECD 210)
1,4-butanediol dimethacrylate	No data available.
dibutyl maleate	No data available.
N,N-bis-(2-hydroxypropyl)-p-toluidine	No data available.
(2-hydroxy-4-methoxyphenyl)phenyl-methanone	No data available.
Dibutyl fumarate	NOEC (Cyprinus carpio (Carp), 35 d): 0,013 mg/l (OECD 210)

Aquatic Invertebrates

Product:	No data available.
Components:	
methyl methacrylate	NOEC (Daphnia magna (Water flea), 21 d): 37 mg/l (OECD 202 part 2)
1,4-butanediol dimethacrylate	EC 10 (Daphnia magna, 21 d): 7,51 mg/l (OECD TG 211)
dibutyl maleate	No data available.
N,N-bis-(2-hydroxypropyl)-p-toluidine	No data available.
(2-hydroxy-4-methoxyphenyl)phenyl-methanone	No data available.
Dibutyl fumarate	NOEC (21 d): 0,013 mg/l

Toxicity to Aquatic Plants

Product:	No data available.
Components:	
methyl methacrylate	NOEC (Selenastrum capricornutum (green algae), 72 h): > 110 mg/l (OECD 201)
1,4-butanediol dimethacrylate	No data available.
dibutyl maleate	No data available.
N,N-bis-(2-hydroxypropyl)-p-toluidine	No data available.
(2-hydroxy-4-methoxyphenyl)phenyl-methanone	NOEC (Pseudokirchneriella subcapitata (green algae), 72 h): 0,18 mg/l (OECD TG 201)
Dibutyl fumarate	No data available.

Toxicity to microorganisms

Product:	No data available.
Components:	
methyl methacrylate	EC3 (Pseudomonas putida, 16 h): 100 mg/l (cell proliferation inhibition test, Bringmann-Kühn)

1,4-butanediol dimethacrylate	NOEC (local activated sludge): 20 mg/l
dibutyl maleate	EC 50 (Activated sludge, 3 h): 488,6 mg/l (OECD Test Guideline 209)
N,N-bis-(2-hydroxypropyl)-p-toluidine	EC10 (30 min): > 1.995 mg/l (OECD Test Guideline 209)
(2-hydroxy-4-methoxyphenyl)phenyl-methanone	EC 50 (Activated sludge, 3 h): > 100 mg/l (Directive 87/302/EEC, part C, p. 118)
Dibutyl fumarate	No data available.

12.2 Persistence and Degradability

Biodegradation

Product:	(monomer constituent), The product is biodegradable.
Components:	
methyl methacrylate	94 % (14 d, OECD 301 C), easily biodegradable
1,4-butanediol dimethacrylate	84 % (28 d, OECD 310) Own study, Readily biodegradable
dibutyl maleate	No data available.
N,N-bis-(2-hydroxypropyl)-p-toluidine	39 % (28 d, OECD TG 301 B), Inherently biodegradable
(2-hydroxy-4-methoxyphenyl)phenyl-methanone	60 - 70 % (28 d, OECD TG 301 F / ISO 9408), aerobic, Not readily degradable.
Dibutyl fumarate	86 % (28 d), Readily biodegradable

BOD/COD Ratio

Product:	No data available.
Components:	
methyl methacrylate	No data available.
1,4-butanediol dimethacrylate	No data available.
dibutyl maleate	No data available.
N,N-bis-(2-hydroxypropyl)-p-toluidine	No data available.
(2-hydroxy-4-methoxyphenyl)phenyl-methanone	No data available.
Dibutyl fumarate	No data available.

12.3 Bioaccumulative potential

Bioconcentration Factor (BCF)

Product:	no evidence for hazardous properties
Components:	
methyl methacrylate	Accumulation in organisms is not expected due to the coefficient of distribution of n-octanol in water (log Pow).
1,4-butanediol dimethacrylate	Significant accumulation in organisms is not expected due to the coefficient of distribution of n-octanol in water (log Pow).
dibutyl maleate	Bioconcentration Factor (BCF): 81,34
N,N-bis-(2-hydroxypropyl)-p-toluidine	No data available.

(2-hydroxy-4-methoxyphenyl)phenyl-methanone	Cyprinus carpio (Carp), Bioconcentration Factor (BCF): 33 - 156 Accumulation in aquatic organisms is expected. Accumulation in terrestrial organisms is expected.
Dibutyl fumarate	No data available.

Partition Coefficient n-octanol / water (log Kow)

Product:	Log Kow: 0,7 (literature) (methyl methacrylate)
Components:	
methyl methacrylate	Log Kow: 1,38 20 °C (Measured)
1,4-butanediol dimethacrylate	Log Kow: 3,1 (OECD Test Guideline 117) Own study
dibutyl maleate	No data available.
N,N-bis-(2-hydroxypropyl)-p-toluidine	Log Kow: 2,1 (OECD Test Guideline 107)
(2-hydroxy-4-methoxyphenyl)phenyl-methanone	Log Kow: 3,52 25 °C
Dibutyl fumarate	Log Kow: 4,62 35 °C

12.4 Mobility in soil:

Product	no specific test data available
Components:	
methyl methacrylate	Binding to the solid soil phase, sediment or clarification sludge is not expected. The substance evaporates gradually into the atmosphere from the surface of the water. If the substance does get into the environment, it tends to remain in the compartment it was discharged into.
1,4-butanediol dimethacrylate	No data available.
dibutyl maleate	No data available.
N,N-bis-(2-hydroxypropyl)-p-toluidine	No data available.
(2-hydroxy-4-methoxyphenyl)phenyl-methanone	No data available.
Dibutyl fumarate	No data available.

12.5 Results of PBT and vPvB assessment:

Product	PBT: no vPvB: no 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.
Components:	
methyl methacrylate	Non-classified vPvB substance Non-classified PBT substance
1,4-butanediol dimethacrylate	Non-classified vPvB substance Non-classified PBT substance
dibutyl maleate	Non-classified vPvB substance Non-classified PBT substance
N,N-bis-(2-hydroxypropyl)-p-toluidine	Non-classified vPvB substance Non-classified PBT substance
(2-hydroxy-4-methoxyphenyl)phenyl-methanone	Non-classified vPvB substance Non-classified PBT substance
Dibutyl fumarate	Non-classified vPvB substance Non-classified PBT substance

12.6 Endocrine disrupting properties:

Product:	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.
Components:	
methyl methacrylate	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.
1,4-butanediol dimethacrylate	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.
dibutyl maleate	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.
N,N-bis-(2-hydroxypropyl)-p-toluidine	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.
(2-hydroxy-4-methoxyphenyl)phenyl-methanone	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.
Dibutyl fumarate	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.

12.7 Other adverse effects:

Other hazards

Product:	Prevent substance from entering soil, natural bodies of water and sewer systems.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

General information:	This material and/or its container must be disposed of as hazardous waste.
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 packages must be emptied as good as possible. They may then be recycled after proper cleaning. Packages that cannot be cleaned must be disposed of in the same way as the substance. Uncontaminated packaging may be taken for recycling.

SECTION 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
Remarks	:	FOR USA ONLY: When shipping in, by or via USA note of the Reportable Quantity-Regulation!

IATA (Cargo aircraft only)

Packing instruction (cargo aircraft)	:	364
Packing instruction (LQ)	:	Y341
Packing group	:	II
Labels	:	3
Remarks	:	FOR USA ONLY: When shipping in, by or via USA note of the Reportable Quantity-Regulation!

IATA (Passenger and cargo aircraft)

Packing instruction (passenger aircraft)	:	353
Packing instruction (LQ)	:	Y341
Packing group	:	II
Labels	:	3
Remarks	:	FOR USA ONLY: When shipping in, by or via USA note of the Reportable Quantity-Regulation!

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 classifications 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 and the IBC Code

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

Regulation 1005/2009/EC on substances that deplete the ozone layer, Annex I, Controlled Substances: None present or none present in regulated quantities.

EU. REACH Annex XIV, Substances Subject to Authorization: None present or none present in regulated quantities.

EU. Regulation 2019/1021/EU on persistent organic pollutants (POPs) (recast), as amended: None present or none present in regulated quantities.

EU. Directive 2010/75/EU on Industrial Emissions (IPPC), Annex II, L 334/17: None present or none present in regulated quantities.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended: None present or none present in regulated quantities.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended: None present or none present in regulated quantities.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended: None present or none present in regulated quantities.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended: None present or none present in regulated quantities.

EU. REACH Candidate List of Substances of Very High Concern for Authorization (SVHC): None present or none present in regulated quantities.

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

Chemical name	CAS-No.
methyl methacrylate	80-62-6

Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens and mutagens at work.: None present or none present in regulated quantities.

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.		
E2. Hazardous to the aquatic environment	200 t	500 t

EU. Regulation No. 166/2006 PRTR (Pollutant Release and Transfer Registry), Annex II: Pollutants:
None present or none present in regulated quantities.

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	50 - <70%
1,4-butanediol dimethacrylate	2082-81-7	1,0 - <10%

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

International regulations

Montreal protocol
Not applicable

Ozone Depletion Potential:

Paraffin waxes	No data available.	No data available.

Stockholm convention
Not applicable

Paraffin waxes	No data available.	Not applicable

Rotterdam convention
Not applicable

Paraffin waxes	No data available.

Kyoto protocol
Not applicable

Paraffin waxes	Not applicable

SECTION 16: Other information

Abbreviations and acronyms:

ECTLV:	EU. Indicative Occupational Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU, as amended

IR_OEL:	Ireland. OELVs, Schedule 1 (Code of Practice for Chemical Agents Regulations), as amended
ECTLV / STEL:	Short Term Exposure Limit (STEL):
ECTLV / TWA:	Time Weighted Average (TWA):
IR_OEL / STEL:	Short Term Exposure Limit (STEL):
IR_OEL / 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:

methyl methacrylate	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	Bridging principles

Acute toxicity, Category 4 Oral	Calculation method
Skin irritation, Category 2	Calculation method
Skin sensitizer, Category 1	Calculation method
Specific Target Organ Toxicity - Single Exposure, Category 3	Calculation method
Chronic hazards to the aquatic environment, Category 3	Calculation method

Wording of the statements in section 2 and 3

H225	Highly flammable liquid and vapor.
H300	Fatal if swallowed.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure by ingestion.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
H225	Highly flammable liquid and vapor.
H300	Fatal if swallowed.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory 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.
H411	Toxic to aquatic life with long lasting effects.
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.

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.