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: DEGADUR® 117

UFI: CGP0-Q0AJ-X00P-6A7Y

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

Identified uses:
binder for floor-coating
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

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

2.2 Label Elements

Signal Words: Danger

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

Precautionary Statements
Prevention:
P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233: Keep container tightly closed.
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.
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.

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

Hazardous ingredients which must be listed on the label:

methyl methacrylate
triethyleneglycol dimethacrylate
methacryloyloxyethyl phosphate

2.3 Other hazards

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. Take precautionary measures against static discharges.

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

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	#
triethyleneglycol dimethacrylate	1 - <10%	109-16-0	203-652-6	01-2119969287-21;	Aquatic Toxicity (Acute): 1; Aquatic Toxicity	

					(Chronic): 1	
methacryloyloxyethyl phosphate	0,1 - <1%	52628-03-2	258-053-2	01-2119980575-25;	Aquatic Toxicity (Acute): 1; Aquatic Toxicity (Chronic): 1	
N-Methyl-N-Hydroxyethyl-p-Toluidin	0,1 - <1%	2842-44-6		01-2120827830-56;	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
triethyleneglycol 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: > 2.000 mg/kg	None.
methacryloyloxyethyl phosphate	Classification: Flam. Liq.: 2: H225; Skin Corr.: 1A: H314; Eye Dam.: 1: H318; Skin Sens.: 1B: H317 Supplemental label information: None known. Specific concentration limit: None known. Acute toxicity, oral: LD 50: > 2.000 mg/kg Acute toxicity, inhalation: None known.	None.

	Acute toxicity, dermal**:** None known.	
N-Methyl-N-Hydroxyethyl-p-Toluidin	Classification**:** Eye Irrit.**:** 2**:** H319**;** Skin Sens.**:** 1B**:** H317**;** Aquatic Chronic**:** 2**:** H411 Supplemental label information**:** None known. Specific concentration limit: None known. Acute toxicity, oral**:** LD 50**:** 2.000 mg/kg Acute toxicity, inhalation**:** None known. 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: 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: Move subject to fresh air and keep him calm. If feeling unwell seek medical advice.

Skin Contact: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. Wash contaminated clothing before reuse. Consult a doctor in the event of permanent skin irritation.

Eye contact: Rinse thoroughly with plenty of water, also under the eyelids. In case of complaints get medical advice.

Ingestion: Do not induce vomiting. Have the mouth rinsed with water. IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.

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: Causes skin and eye irritation. Excessive or prolonged exposure can cause the following: Headache. confusion

Hazards: May cause sensitization by skin contact.

4.3 Indication of immediate medical attention and special treatment needed

Treatment: No specific antidote known. Symptomatic treatment.

SECTION 5: Firefighting measures

General Fire Hazards:

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

5.1 Extinguishing media

Suitable extinguishing media:

Carbon dioxide , foam, sprinkler system with water, Dry chemical.

Unsuitable extinguishing media:

High volume water jet

5.2 Special hazards arising from the substance or mixture:

May be released in case of fire: carbon monoxide, carbon dioxide, organic products of decomposition. Closed container may rupture if strongly heated. Vapours may form explosive mixtures with air. Combustible air-vapour mixtures are heavier than the air and spread along the floor. Ignition from a considerable distance is possible.

5.3 Advice for firefighters

Special fire-fighting procedures:

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

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. Use breathing apparatus if exposed to vapours/dust/mist/aerosol. Keep away from open flames, hot surfaces and sources of ignition. Vapours can form explosive mixtures with air. Keep out unprotected persons. Avoid spark generation.

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

Contact avoidance measures: see section 8.

7.2 Conditions for safe storage, including any incompatibilities

Safe storage conditions: Keep away from open flames, hot surfaces and sources of ignition. Keep away from heat. Protect from the action of light. Protect from direct sunlight. Keep containers tightly closed in a cool, well-ventilated place. Fill the container by approximately 90 % only as oxygen (air) is required for stabilisation. With large storage containers make sure the oxygen (air) supply is sufficient to ensure stability. Keep locked up. Store at temperatures up to 25 °C.Keep away from direct sunlight.

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

Components	Type	Form of exposure	Exposure Limit Values		Source
methyl methacrylate	STEL 15 minutes		100 ppm		ELV (IE) (2018)
	TWA		50 ppm		ELV (IE) (2016)
	TWA		50 ppm		EU ELV (02 2017)
	STEL		100 ppm		EU ELV (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

Remarks: DNEL-Values

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

triethyleneglycol dimethacrylate	Workers	Inhalation	48,5 mg/m3	Long-term - systemic effects
	Workers	Dermal	13,9 mg/kg bodyweight/day	Long-term - systemic effects
methacryloyloxyethyl phosphate	Workers	Inhalation	7,04 mg/m3	Long-term - systemic effects
	Workers	Dermal	1 mg/kg bw/day	Long-term - systemic effects
	general populace	Inhalation	1,74 mg/m3	Long-term - systemic effects
	general populace	Dermal	0,5 mg/kg bw/day	Long-term - systemic effects

PNEC-Values

Remarks: 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	
triethyleneglycol dimethacrylate	Fresh water	0,016 mg/l	
	marine water	0,0016 mg/l	
	freshwater sediment	0,185 mg/kg (dry weight)	
	Marine sediments	0,0185 mg/kg (dry weight)	
	soil	0,027 mg/kg (dry weight)	
	sewage treatment plant (STP)	1,7 mg/l	

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

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection: tightly fitting goggles

Hand Protection: Material: butyl rubber gloves
Break-through time: 66 min
Glove thickness: 0,33 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:	Colorless
Odor:	ester-like
Odor Threshold:	< 1 ppm
Freezing point:	approx. -48 °C (1.013 hPa) Method: estimated (methyl methacrylate)
Boiling Point:	approx. 100 °C (1.013 hPa) Method: estimated (methyl methacrylate)
Flammability:	Highly flammable liquid and vapor.

Upper/lower limit on flammability or explosive limits

Explosive limit - upper:	Method: estimated approx. 12,5 %(V) (methyl methacrylate)
Explosive limit - lower:	Method: estimated 2,1 %(V) (methyl methacrylate)
Flash Point:	approx. 10 °C Method: estimated (methyl methacrylate)
Auto-ignition temperature:	approx. 430 °C Method: estimated (methyl methacrylate)
Decomposition Temperature:	No decomposition if used as directed.
pH:	7 Concentration: 1 %

Viscosity

Dynamic viscosity:	approx. 90 mPa.s (23 °C)
Kinematic viscosity:	approx. 90 mm2/s Method: calculated

Solubility(ies)

Solubility in Water:	approx. 20 g/l (20 °C)
Solubility (other):	soluble in ethyl acetate
Partition coefficient (n-octanol/water):	approx. 0,7 Method: estimated (methyl methacrylate)
Vapor pressure:	approx. 40 hPa (20 °C)
Relative density:	< 1 estimated
Density:	1 g/cm3 (23 °C)
Bulk density:	Not applicable
Relative vapor density:	> 1 (20 °C)

9.2 Other information

Self-ignition:	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. Vigorous polymerization is possible when heated /exposed to heat.
10.4	**Conditions to avoid:**	Ultraviolet light. Avoid high temperatures and sources of ignition. Keep away from direct sunlight. The product is normally supplied in a stabilized form. If the permissible storage period and/or storage temperature is exceeded, the product may polymerize with heat evolution.
10.5	**Incompatible Materials:**	Peroxides, amines, sulfur compounds, heavy metal ions, alkalis, reducing agents and oxidizing agents.
10.6	**Hazardous Decomposition Products:**	None when used as directed.

SECTION 11: Toxicological information

General information: 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: May cause temporary eye irritation.

Ingestion: If handled correctly, not a relevant route of exposure. Information on effects are given below.

Acute toxicity (list all possible routes of exposure)

Oral

Product:	ATEmix, > 5.000 mg/kg, Calculation method
Components:	
methyl methacrylate	LD 50, Rat, > 5.000 mg/kg, OECD 401
triethyleneglycol dimethacrylate	LD 50, Rat, > 5.000 mg/kg
methacryloyloxyethyl phosphate	LD 50, Rat, female, > 2.000 mg/kg, OECD Test Guideline 425
N-Methyl-N-Hydroxyethyl-p-Toluidin	LD 50, Rat, 2.000 mg/kg, OPPTS 870.1100

Dermal

Product:	ATEmix, > 5.000 mg/kg, Calculation method
Components:	
methyl methacrylate	LD 50, Rabbit, > 5.000 mg/kg
triethyleneglycol dimethacrylate	LD 50, Mouse, male, > 2.000 mg/kg, Not toxic after single exposure
methacryloyloxyethyl phosphate	Not toxic after single exposure, Not classified based on available information.
N-Methyl-N-Hydroxyethyl-p-Toluidin	LD 50, Rabbit, > 2.000 mg/kg low toxicity after single exposure

Inhalation

Product:	ATEmix, > 50 mg/l, Calculation method, Vapour
Components:	
methyl methacrylate	LC 50, Rat, 4 h, 29,8 mg/l, Vapour Not toxic after single exposure, Dust and mist, Not applicable

triethyleneglycol dimethacrylate	Not toxic after single exposure, Vapour Not toxic after single exposure, Dust and mist, Not classified for acute toxicity based on available data.
methacryloyloxyethyl phosphate	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.
N-Methyl-N-Hydroxyethyl-p-Toluidin	Not toxic after single exposure, Not toxic after single exposure, Vapour, Dust and mist

Repeated dose toxicity

Product:	No toxicological tests have been conducted with the product itself.
Components:	
methyl methacrylate	NOAEL Rat, Inhalativ, 2 yr, 25 ppm , Findings: Damage to mucous membranes in the nose at 400 ppm NOAEL Rat, Oral, 2 yr, 2000 ppm , Findings: no toxic effects
triethyleneglycol dimethacrylate	NOAEL Rat, Oral, 1.000 mg/kg
methacryloyloxyethyl phosphate	NOAEL Rat, male and female, Oral, 100 mg/kg
N-Methyl-N-Hydroxyethyl-p-Toluidin	No data available.

Skin Corrosion/Irritation

Product:	May cause skin irritation.
Components:	
methyl methacrylate	Rabbit, 4 h, not irritating Irritating., Human, Based on experience in human subjects
triethyleneglycol dimethacrylate	Non-Irritating, FDA 1959 Draize, occlusive, Rabbit, 24 h
methacryloyloxyethyl phosphate	Corrosive, OECD Test Guideline 404, Rabbit, < 3 min, Corrosive
N-Methyl-N-Hydroxyethyl-p-Toluidin	Not irritant, In vitro, Rabbit, Not classified

Serious Eye Damage/Eye Irritation

Product:	Based on available data, the classification criteria are not met.
Components:	
methyl methacrylate	Non-Irritating, OECD 405, FDA 1959 Draize, Rabbit
triethyleneglycol dimethacrylate	Non-Irritating, OECD Test Guideline 405, Rabbit
methacryloyloxyethyl phosphate	Risk of serious damage to eyes.
N-Methyl-N-Hydroxyethyl-p-Toluidin	Irritating., OECD Test Guideline 437, Bovine, Irritating., Based on available data, the classification criteria are not met.

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
triethyleneglycol dimethacrylate	Local Lymph Node Assay (LLNA), OECD 429, Mouse, Skin sensitizer Not classified for respiratory sensitization

methacryloyloxyethyl phosphate	OECD Test Guideline 429, Mouse, Skin sensitizer Not classified for respiratory sensitization
N-Methyl-N-Hydroxyethyl-p-Toluidin	Skin sensitizer Not classified for respiratory sensitization

Carcinogenicity

Product:	Contains no ingredient listed as a carcinogen (>0.1%).
Components:	
methyl methacrylate	Not classifiedNon-carcinogenic in inhalation and feeding studies carried out on rats, mice and dogs.
triethyleneglycol dimethacrylate	Not classified
methacryloyloxyethyl phosphate	Not classified
N-Methyl-N-Hydroxyethyl-p-Toluidin	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
triethyleneglycol dimethacrylate	gene mutation, OECD 471: , negative gene mutation, OECD 476: , negative, , Chinese hamster lung fibroblasts (V79) Chromosomal aberration, OECD 473: , negative, CHO-cells
methacryloyloxyethyl phosphate	No data available.
N-Methyl-N-Hydroxyethyl-p-Toluidin	No data available.

In vivo

Product:	No toxicological tests have been conducted with the product itself.
Components:	
methyl methacrylate	gene mutation, Dominant lethal test, Inhalation, Mouse, negative
triethyleneglycol dimethacrylate	Based on available data, the classification criteria are not met.
methacryloyloxyethyl phosphate	No data available.
N-Methyl-N-Hydroxyethyl-p-Toluidin	No data available.

Reproductive toxicity

Product:	Contains no ingredient listed as toxic to reproduction (>0.1%).
Components:	

methyl methacrylate	Not classifiedNo indications of toxic effects were observed in reproduction studies in animals. OECD 414 OECD 416
triethyleneglycol dimethacrylate	Not classified
methacryloyloxyethyl phosphate	Not classified
N-Methyl-N-Hydroxyethyl-p-Toluidin	Not classified

Specific Target Organ Toxicity - Single Exposure

Product:	May cause respiratory irritation.
Components:	
methyl methacrylate	Inhalation - vapor, Category 3 with respiratory tract irritation.
triethyleneglycol dimethacrylate	Not classified
methacryloyloxyethyl phosphate	Not classified
N-Methyl-N-Hydroxyethyl-p-Toluidin	Inhalation - vapor, Not classified

Specific Target Organ Toxicity - Repeated Exposure

Product:	Based on available data, the classification criteria are not met.
Components:	
methyl methacrylate	Not classified
triethyleneglycol dimethacrylate	Not classified
methacryloyloxyethyl phosphate	Not classified
N-Methyl-N-Hydroxyethyl-p-Toluidin	Not classified

Aspiration Hazard

Product:	No aspiration toxicity classification
Components:	
methyl methacrylate	Not classified
triethyleneglycol dimethacrylate	Not classified
methacryloyloxyethyl phosphate	Not classified
N-Methyl-N-Hydroxyethyl-p-Toluidin	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.;
triethyleneglycol 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.;
methacryloyloxyethyl phosphate	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-Methyl-N-Hydroxyethyl-p-Toluidin	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:	Symptoms of poisoning may occur many hours after contact. 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:

Toxicity to Aquatic Plants

Product:	No data available.
Components:	
methyl methacrylate	EC 50, Selenastrum capricornutum (green algae), 72 h, > 100 mg/l, OECD 201 NOEC, Selenastrum capricornutum (green algae), 72 h, > 110 mg/l, OECD 201
triethyleneglycol dimethacrylate	EC 50, Pseudokirchneriella subcapitata (green algae), 72 h, > 100 mg/l, OECD TG 201 NOEC, Pseudokirchneriella subcapitata (green algae), 72 h, 18,6 mg/l, OECD TG 201
methacryloyloxyethyl phosphate	EC 50, Pseudokirchneriella subcapitata (green algae), 72 h, > 120 mg/l, OECD Test Guideline 201 NOEC, Pseudokirchneriella subcapitata (green algae), 72 h, 30 mg/l, OECD Test Guideline 201
N-Methyl-N-Hydroxyethyl-p-Toluidin	NOEC, Alga, 72 h, 10 mg/l

Toxicity to microorganisms

Product:	No data available.

Components:

methyl methacrylate	EC3, Pseudomonas putida, 16 h, 100 mg/l, cell proliferation inhibition test, Bringmann-Kühn
triethyleneglycol dimethacrylate	No data available.
methacryloyloxyethyl phosphate	No data available.
N-Methyl-N-Hydroxyethyl-p-Toluidin	No data available.

Acute hazards to the aquatic environment:

Fish

Product:	No data available.
Components:	
methyl methacrylate	LC 50, 96 h, > 100 mg/lOECD 203, Expert judgement
triethyleneglycol dimethacrylate	LC 50, Danio rerio (zebra fish), 96 h, 16,4 mg/lOECD TG 203
methacryloyloxyethyl phosphate	LC 50, Oncorhynchus mykiss (rainbow trout), 96 h, > 112 mg/lOECD Test Guideline 203
N-Methyl-N-Hydroxyethyl-p-Toluidin	No data available.

Aquatic Invertebrates

Product:	No data available.
Components:	
methyl methacrylate	EC 50, Daphnia magna (Water flea), 48 h, 69 mg/lOECD 202
triethyleneglycol dimethacrylate	No data available.
methacryloyloxyethyl phosphate	EC 50, Daphnia magna (Water flea), 48 h, 68 mg/lOECD Test Guideline 202 NOEC, Daphnia magna (Water flea), 48 h, 50 mg/lOECD Test Guideline 202
N-Methyl-N-Hydroxyethyl-p-Toluidin	EC 50, Water Flea, 48 h, 7,03 mg/l NOEC, Water Flea, 48 h, 4,6 mg/l

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
triethyleneglycol dimethacrylate	No data available.
methacryloyloxyethyl phosphate	No data available.
N-Methyl-N-Hydroxyethyl-p-Toluidin	No data available.

Aquatic Invertebrates

Product:	No data available.
Components:	
methyl methacrylate	NOEC, Daphnia magna (Water flea), 21 d, 37 mg/l, OECD 202 part 2
triethyleneglycol dimethacrylate	NOEC, Daphnia magna (Water flea), 21 d, 32 mg/l, OECD Test Guideline 211
methacryloyloxyethyl	No data available.

phosphate	
N-Methyl-N-Hydroxyethyl-p-Toluidin	No data available.

12.2 Persistence and Degradability

Biodegradation

Product:	(monomer constituent) (analogy), The product is biodegradable.
Components:	
methyl methacrylate	94 %, 14 d, OECD 301 C, easily biodegradable
triethyleneglycol dimethacrylate	85 %, 28 d, Readily biodegradable
methacryloyloxyethyl phosphate	No data available.
N-Methyl-N-Hydroxyethyl-p-Toluidin	22,7 %, 28 d, Not readily degradable.

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).
triethyleneglycol dimethacrylate	Accumulation in organisms is not expected due to the coefficient of distribution of n-octanol in water (log Pow).
methacryloyloxyethyl phosphate	No data available.
N-Methyl-N-Hydroxyethyl-p-Toluidin	No data available.

Partition Coefficient n-octanol / water (log Kow)

Product:	approx., 0,7, estimated, (methyl methacrylate)
Components:	
methyl methacrylate	1,38, 20 °C, Measured
triethyleneglycol dimethacrylate	2,3, 20 °C, OECD Test Guideline 117
methacryloyloxyethyl phosphate	1 - < 2,72, 30 °C
N-Methyl-N-Hydroxyethyl-p-Toluidin	2,2, 25 °C, OECD 117

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.
triethyleneglycol dimethacrylate	No data available.
methacryloyloxyethyl phosphate	No data available.

N-Methyl-N-Hydroxyethyl-p-Toluidin	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.
Components:	
methyl methacrylate	Non-classified vPvB substance, Non-classified PBT substance
triethyleneglycol dimethacrylate	Non-classified vPvB substance, Non-classified PBT substance
methacryloyloxyethyl phosphate	Non-classified vPvB substance, Non-classified PBT substance
N-Methyl-N-Hydroxyethyl-p-Toluidin	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.
triethyleneglycol 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.
methacryloyloxyethyl phosphate	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-Methyl-N-Hydroxyethyl-p-Toluidin	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: Industrial waste 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
Tunnel restriction code	:	(D/E)
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 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

Regulation 1005/2009/EC on substances that deplete the ozone layer, Annex I, Controlled Substances: 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.

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.

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breast feeding.: 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.		

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%

EU. Restricted Explosives Precursors: Annex I, Regulation 2019/1148/EU on Explosives Precursors (EUEXPL1D): None present or none present in regulated quantities.

EU. Reportable (Annex II) Explosives Precursors, Regulation 2019/1148/EU on Explosives Precursors (EUEXPL2D): None present or none present in regulated quantities.

EU. Reportable (Annex II) Explosives Precursors, Regulation 2019/1148/EU on Explosives Precursors (EUEXPL2L): None present or none present in regulated quantities.

Inventory Status:

Registration, Evaluation and Authorisation of Chemicals (REACH):	preregistered, registered or exempted
TSCA list:	On or in compliance with the inventory
Canada DSL Inventory List:	Not on Inventory.
Canada NDSL Inventory:	On or in compliance with the inventory
Australia AICS:	Not on Inventory.
Japan (ENCS) List:	Not on Inventory.
New Zealand Inventory of Chemicals:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	HSR002662, Surface Coatings and Colorants (Flammable) Group Standard 2006

International regulations

Montreal protocol
Not applicable

Stockholm convention
Not applicable

Rotterdam convention
Not applicable

Kyoto protocol
Not applicable

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

SECTION 16: Other information

Date of first report version: 09.01.2023

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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, Schedules 1 & 2, Code of Practice for Chemical Agents, Carcinogens, Mutagens and Reprotoxic Substances, 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:

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	Classification procedure
Flammable liquids, Category 2	On basis of test data
Skin irritation., Category 2	Calculation method
Skin sensitizer, Category 1	On basis of test data
Specific Target Organ Toxicity - Single Exposure, Category 3	Calculation method

Wording of the statements in section 2 and 3

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 and all further technical advice is based on our present knowledge and experience. However, it implies no liability or other legal responsibility on our part, including with regard to existing third party intellectual property rights, especially patent rights. In particular, no warranty, whether express or implied, or guarantee of product properties in the legal sense is intended or implied. We reserve the right to make any changes according to technological progress or further developments. The customer is not released from the obligation to conduct careful inspection and testing of incoming goods. Performance of the product described herein should be verified by testing, which should be carried out only by qualified experts in the sole responsibility of a customer. Reference to trade names used by other companies is neither a recommendation, nor does it imply that similar products could not be used.