

SAFETY DATA SHEET



DELO®-ML DB135

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

1.1 Product identifier

Product name : DELO®-ML DB135

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

Identified uses

Use of the substance/mixture: Adhesive.
Process categories [PROC]:
PROC01: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
PROC02: Use in closed, continuous process with occasional controlled exposure.
PROC03: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition.
PROC04: Chemical production where opportunity for exposure arises.
PROC05: Mixing or blending in batch processes.
PROC09: Transfer of substance or mixture into small containers (dedicated filling line, including weighing).
PROC10: Roller application or brushing.
Environmental release categories [ERC]:
ERC02: Formulation into mixture.
ERC05: Use at industrial site leading to inclusion into/onto article.
Product categories [PC]:
PC01: Adhesives, sealants.
Sector of uses [SU]:
SU03: Industrial uses.
SU10: Formulation [mixing] of preparations and/or re-packaging (excluding alloys).
SU16: Manufacture of computer, electronic and optical products, electrical equipment.
SU17: General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment.
SU22: Professional uses.
*: Mixture.

Use of the substance/mixture : Industrial/Professional use

1.3 Details of the supplier of the safety data sheet

Supplier's details : **DELO** Industrie Klebstoffe GmbH & Co. KGaA
DELO-Allee 1
86949 Windach
Germany
Telephone no.: +49 8193 9900-0

Information contact : sds@DELO.de
Department Chemistry - Compliance

1.4 Emergency telephone number

General

In case of emergency : National advisory body/Poison Centre
Telephone number : Giftinformationszentrum Nord: +49 (0) 551 19240
Hours of operation : 24-hour telephone and/or website

Transport

Telephone number : GlobalChem24: +44 (0) 1235 239 670
Hours of operation : 24-hour telephone and/or website

DELO®-ML DB135

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

Information limitations : In case of emergency [Transport]

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

☑ Skin Irrit. 2, H315
Eye Irrit. 2, H319
Skin Sens. 1, H317
STOT SE 3, H335
Aquatic Chronic 3, H412

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : ☑ Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.
May cause respiratory irritation.
Harmful to aquatic life with long lasting effects.

Precautionary statements

General : ☑ Read carefully and follow instructions. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : ☑ Wear protective gloves: 1 - 4 hours (breakthrough time): Recommended: Viton® fluor rubber / Short term exposure < 15 min Nitrile gloves.. Wear eye or face protection. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Avoid breathing vapour. Wash thoroughly after handling.

Response : ☑ **INHALED:** Call a POISON CENTER or doctor if you feel unwell. Take off contaminated clothing and wash it before reuse. **IF ON SKIN:** Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention. **IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.

Storage : ☑ Store locked up. Store in a well-ventilated place. Keep container tightly closed.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazardous ingredients : ☑ hydroxyethyl methacrylate
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate
7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diyl bismethacrylate
acrylic acid
maleic acid
tert-butyl perbenzoate
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

DELO®-ML DB135

SECTION 2: Hazards identification

2'-phenylacetohydrazide
2-hydroxyethyl acrylate

Supplemental label elements : Not applicable.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

2.3 Other hazards

Other hazards which do not result in classification : None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Type
urethane acrylate oligomer 2-hydroxyethyl methacrylate	- REACH #: 01-2119490169-29 EC: 212-782-2 CAS: 868-77-9 Index: 607-124-00-X	25 - 75 10 - 25	Eye Irrit. 2, H319 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317	[1] [1]
exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate	REACH #: 01-2119886505-27 EC: 231-403-1 CAS: 7534-94-3 Index: 607-134-00-4	10 - 25	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335	[1]
7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxo-5,12-diazahexadecane-1,16-diyl bismethacrylate	REACH #: 01-2120751202-68 EC: 276-957-5 CAS: 72869-86-4	10 - 25	Skin Sens. 1B, H317 Aquatic Chronic 3, H412	[1]
acrylic acid	REACH #: 01-2119452449-31 EC: 201-177-9 CAS: 79-10-7 Index: 607-061-00-8	2.5 - 10	Flam. Liq. 3, H226 Met. Corr. 1, H290 Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Corr. 1A, H314 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Acute 1, H400 (M=1)	[1] [2]
maleic acid	EC: 203-742-5 CAS: 110-16-7 Index: 607-095-00-3	< 2.5	Met. Corr. 1, H290 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT SE 3, H335 Aquatic Chronic 2, H411	[1]
tert-butyl perbenzoate	REACH #: 01-2119513317-46 EC: 210-382-2 CAS: 614-45-9	< 2.5	Org. Perox. C, H242 Acute Tox. 4, H302 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317	[1]

DELO®-ML DB135

SECTION 3: Composition/information on ingredients

phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	REACH #: 01-2119489401-38 EC: 423-340-5 CAS: 162881-26-7 Index: 015-189-00-5	< 1	Aquatic Acute 1, H400 (M=1) Aquatic Chronic 3, H412 Skin Sens. 1A, H317 Aquatic Chronic 4, H413	[1]
2'-phenylacetohydrazide	EC: 204-055-3 CAS: 114-83-0	< 1	Acute Tox. 3, H301 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT SE 3, H335	[1]
2-hydroxyethyl acrylate	REACH #: 01-2119459345-34 EC: 212-454-9 CAS: 818-61-1	< 1	Acute Tox. 4, H302 Acute Tox. 3, H311 Skin Corr. 1B, H314 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 3, H412 See Section 16 for the full text of the H statements declared above.	[1]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern
- [6] Additional disclosure due to company policy

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

DELO®-ML DB135

SECTION 4: First aid measures

- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- Ingestion** : No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

DELO®-ML DB135

SECTION 5: Firefighting measures

Hazardous combustion products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides

5.3 Advice for firefighters

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

: Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

6.3 Methods and material for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

6.4 Reference to other sections

: See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

DELO®-ML DB135

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Storage temperature: Observe technical data sheet/instructions for use.

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

- Recommendations** : Not available.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
acrylic acid	EH40/2005 WELs (United Kingdom (UK), 1/2020). STEL: 59 mg/m ³ 1 minutes. STEL: 20 ppm 1 minutes. TWA: 29 mg/m ³ 8 hours. TWA: 10 ppm 8 hours.

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DELO®-ML DB135

SECTION 8: Exposure controls/personal protection

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects	
2-hydroxyethyl methacrylate	DNEL	Long term Oral	0.83 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	0.83 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	1.3 mg/kg bw/day	Workers	Systemic	
	DNEL	Long term Inhalation	2.9 mg/m ³	General population	Systemic	
	DNEL	Long term Inhalation	4.9 mg/m ³	Workers	Systemic	
monoalkyl or monoaryl or monoalkyaryl esters of methacrylic acid	DNEL	Long term Dermal	0.625 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	1.04 mg/kg bw/day	Workers	Systemic	
acrylic acid	DNEL	Short term Inhalation	3.6 mg/m ³	General population	Local	
	DNEL	Long term Inhalation	3.6 mg/m ³	General population	Local	
maleic acid	DNEL	Short term Inhalation	3 mg/m ³	Workers	Local	
	DNEL	Long term Inhalation	3 mg/m ³	Workers	Local	
	DNEL	Short term Inhalation	3 mg/m ³	Workers	Systemic	
	DNEL	Long term Inhalation	3 mg/m ³	Workers	Systemic	
tert-butyl perbenzoate	DNEL	Long term Oral	0.625 mg/kg bw/day	General population [Human via the environment]	Systemic	
	DNEL	Long term Dermal	6.25 mg/kg bw/day	Workers	Systemic	
	DNEL	Long term Dermal	3.125 mg/kg bw/day	General population [Human via the environment]	Systemic	
	DNEL	Long term Inhalation	4 mg/m ³	Workers	Systemic	
	DNEL	Long term Inhalation	1 mg/m ³	General population [Human via the environment]	Systemic	
	DNEL	Long term Inhalation	4 mg/m ³	Workers	Systemic	
	DNEL	Long term Dermal	6.25 mg/kg bw/day	Workers	Systemic	
	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	DNEL	Short term Oral	1.67 ng/kg bw/day	General population	Systemic
		DNEL	Long term Oral	1.5 mg/kg bw/day	General population	Systemic
		DNEL	Long term Dermal	1.5 mg/kg bw/day	General population	Systemic
DNEL		Short term Dermal	1.67 mg/kg bw/day	General population	Systemic	
DNEL		Short term Inhalation	1.93 mg/m ³	General population	Systemic	
DNEL		Long term Inhalation	1.93 mg/m ³	General	Systemic	

DELO®-ML DB135

SECTION 8: Exposure controls/personal protection

2-hydroxyethyl acrylate	DNEL	Inhalation Long term Dermal	3 mg/kg bw/day	population Workers	Systemic
	DNEL	Short term Dermal	3.33 mg/ kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	7.84 mg/m ³	Workers	Systemic
	DNEL	Long term Inhalation	7.84 mg/m ³	Workers	Systemic
	DNEL	Long term Inhalation	1.2 mg/m ³	General population	Local
	DNEL	Long term Inhalation	2.4 mg/m ³	Workers	Local

PNECs

Product/ingredient name	Compartment Detail	Value	Method Detail
tert-butyl perbenzoate	Fresh water	0.008 mg/l	-
	Fresh water sediment	0.22 mg/kg dwt	-
	Marine water	0.0008 mg/l	-
	Marine water sediment	0.022 mg/kg dwt	-
	Sewage Treatment Plant	0.6 mg/l	-
	Soil	0.0393 mg/kg dwt	-

8.2 Exposure controls

Appropriate engineering controls : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. 1 - 4 hours (breakthrough time): Recommended: Viton® fluor rubber / Short term exposure < 15 min Nitrile gloves.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

DELO®-ML DB135

SECTION 8: Exposure controls/personal protection

- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended: organic vapour filter (Type A)
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

- Physical state** : Liquid.
- Colour** : Yellowish.
- Odour** : Not available.
- Initial boiling point and boiling range** : >141°C
- Flash point** : losed cup: 101°C
- Upper/lower flammability or explosive limits** : Not available.
- Vapour pressure** : <0.41 kPa [room temperature]
- Vapour density** : Not available.
- Relative density** : Not available.
- Solubility(ies)** : Not available.
- Partition coefficient: n-octanol/ water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : refer to technical data sheet
- Explosive properties** : Not available.
- Oxidising properties** : Not available.

9.2 Other information

SECTION 10: Stability and reactivity

- 10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- 10.2 Chemical stability** : The product is stable.
- 10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- 10.4 Conditions to avoid** : May polymerise on exposure to light.
- 10.5 Incompatible materials** : No specific data.

DELO[®]-ML DB135

SECTION 10: Stability and reactivity

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
2-hydroxyethyl methacrylate acrylic acid	LD50 Oral	Rat	5050 mg/kg	-
	LD50 Dermal	Rabbit	640 mg/kg	-
	LD50 Oral	Rat	1337 mg/kg	-
tert-butyl perbenzoate	LD50 Oral	Rat	1012 mg/kg	-
	LD50 Dermal	Rabbit	298 mg/kg	-
2-hydroxyethyl acrylate	LD50 Oral	Rat	548 mg/kg	-

Conclusion/Summary : Not available.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
acrylic acid	Eyes - Severe irritant	Rabbit	-	24 hours 250 ug	-
	Eyes - Severe irritant	Rabbit	-	1 mg	-
	Skin - Severe irritant	Rabbit	-	24 hours 5 mg	-
maleic acid	Skin - Severe irritant	Rabbit	-	500 mg	-
	Eyes - Severe irritant	Rabbit	-	2 minutes 1 %	-
tert-butyl perbenzoate	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Eyes - Mild irritant	Rabbit	-	1 minutes 100 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	4 hours 0.1 MI	-
2-hydroxyethyl acrylate	Skin - Moderate irritant	Rabbit	-	120 hours 0.1 MI I	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 20 mg	-
	Eyes - Severe irritant	Rabbit	-	1 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 10 mg	-
	Skin - Moderate irritant	Rabbit	-	500 mg	-

Conclusion/Summary : Not available.

Sensitisation

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

DELO®-ML DB135

SECTION 11: Toxicological information

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
monoalkyl or monoaryl or monoalkaryyl esters of methacrylic acid	Category 3	-	Respiratory tract irritation
acrylic acid	Category 3	-	Respiratory tract irritation
maleic acid	Category 3	-	Respiratory tract irritation
2'-phenylacetohydrazide	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes of exposure : Not available.

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
Inhalation : May cause respiratory irritation.
Skin contact : Causes skin irritation. May cause an allergic skin reaction.
Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- Ingestion** : No specific data.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

Conclusion/Summary : Not available.

DELO®-ML DB135

SECTION 11: Toxicological information

General	: Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.
Fertility effects	: No known significant effects or critical hazards.

Other information : Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
2-hydroxyethyl methacrylate	Acute LC50 227000 µg/l Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
acrylic acid	Chronic NOEC 3.8 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	21 days
maleic acid	Acute EC50 316200 µg/l Fresh water	Daphnia - Daphnia magna - Larvae	48 hours
2-hydroxyethyl acrylate	Acute LC50 5000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute LC50 4800 µg/l Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Conclusion/Summary : Not available.

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
2-hydroxyethyl methacrylate	0.42	-	low
monoalkyl or monoaryl or monoalkyaryl esters of methacrylic acid	5.09	-	high
7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxo-5,12-diazahexadecane-1,16-diyl bismethacrylate	3	-	low
acrylic acid	0.38	3.162	low
maleic acid	-1.3	-	low
tert-butyl perbenzoate	3	-	low
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	5.77	<5	low
2-hydroxyethyl acrylate	-0.17	-	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Not available.

DELO®-ML DB135

SECTION 12: Ecological information

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : Yes.

European waste catalogue (EWC)

Waste code	Waste designation
08 04 09*	waste adhesives and sealants containing organic solvents or other hazardous substances

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-	-
14.3 Transport hazard class(es)	-	-	-	-
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.

DELO®-ML DB135

SECTION 14: Transport information

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to IMO instruments : Not available.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Other EU regulations

Prior Informed Consent (PIC) (649/2012/EU)

Ingredient name	Annex	Status
Not listed.		

Seveso Directive

This product is not controlled under the Seveso Directive.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

15.2 Chemical safety assessment : Chemical Safety Assessments for all substances in this product are either Complete or Not applicable.

DELO®-ML DB135

SECTION 16: Other information

✔ Indicates information that has changed from previously issued version.

Abbreviations and acronyms

: ATE = Acute Toxicity Estimate
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
 DMEL = Derived Minimal Effect Level
 DNEL = Derived No Effect Level
 EUH statement = CLP-specific Hazard statement
 PBT = Persistent, Bioaccumulative and Toxic
 PNEC = Predicted No Effect Concentration
 RRN = REACH Registration Number
 vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
✔ Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT SE 3, H335 Aquatic Chronic 3, H412	Calculation method Calculation method Calculation method Calculation method Calculation method

Full text of abbreviated H statements

H226	Flammable liquid and vapour.
H242	Heating may cause a fire.
H290	May be corrosive to metals.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

Full text of classifications [CLP/GHS]

✔ Acute Tox. 3	ACUTE TOXICITY - Category 3
Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Aquatic Chronic 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
Aquatic Chronic 3	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
Aquatic Chronic 4	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 4
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3
Met. Corr. 1	CORROSIVE TO METALS - Category 1
Org. Perox. C	ORGANIC PEROXIDES - Type C
Skin Corr. 1A	SKIN CORROSION/IRRITATION - Category 1A
Skin Corr. 1B	SKIN CORROSION/IRRITATION - Category 1B
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITISATION - Category 1
Skin Sens. 1A	SKIN SENSITISATION - Category 1A
Skin Sens. 1B	SKIN SENSITISATION - Category 1B
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

DELO®-ML DB135

SECTION 16: Other information

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Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.