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Safety Data Sheet according to (EC) No 1907/2006 as amended

SDS No. : 450689
V005.0

LOCTITE 246

Revision: 07.11.2025
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

LOCTITE 246
UFI: 53E8-CX22-S20H-K1S5

This mixture contains nanoforms

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

Intended use:
Anaerobic Adhesive

1.3. Details of the supplier of the safety data sheet

Henkel Ireland
Operations and Research Limited
Tallaght Business Park, Whitestown
24 Dublin

Ireland

Phone: +353 (0353) 1 404 6444

SDSinfo.Adhesive@henkel.com
For Safety Data Sheet updates please visit our website www.mysds.henkel.com or www.henkel-adhesives.com.

1.4. Emergency telephone number

00353 14046280

National Poisons Information Centre: Members of Public: +353 (1) 809 2166. (8.00 a.m. to 10.00 p.m. 7 days a week)
Healthcare Professionals: +353 (1) 809 2566 (24-hour service)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (CLP):

Serious eye irritation	Category 2
H319 Causes serious eye irritation.	
Skin sensitizer	Category 1
H317 May cause an allergic skin reaction.	
Specific target organ toxicity - single exposure	Category 3
H335 May cause respiratory irritation.	
Target organ: respiratory tract irritation	

2.2. Label elements

Label elements (CLP):

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Hazard pictogram:



Contains	Hydroxypropyl methacrylate N,N-(m-phenylene)dimaleimide Cumene hydroperoxide maleic acid Acetic acid, 2-phenylhydrazide
Signal word:	Warning
Hazard statement:	H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H335 May cause respiratory irritation. H412 Harmful to aquatic life with long lasting effects.
Precautionary statement: Prevention	P280 Wear protective gloves. P261 Avoid breathing vapors. P273 Avoid release to the environment.
Precautionary statement: Response	P333+P313 If skin irritation or rash occurs: Get medical advice/attention. P337+P313 If eye irritation persists: Get medical advice/attention.

2.3. Other hazards

None if used properly.
This product contains a substance that is classified as Acute Toxicity Category 2, Inhalation, in powder form. Experimental data show that this substance, as an ingredient in this mixture, is not biologically available according to CLP Art. 12 b.

Following substances are present in a concentration ≥ the concentration limit for depiction in Section 3 and fulfill the criteria for PBT/vPvB, or were identified as endocrine disruptor (ED):

This mixture does not contain any substances in a concentration ≥ the concentration limit for depiction in Section 3 that are assessed to be a PBT, vPvB or ED.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

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Declaration of the ingredients according to CLP (EC) No 1272/2008:

Hazardous components CAS No. EC No REACH-Reg. No.	Concentration	Classification	Specific Conc. Limits, M-factors and ATEs	Add. Information
Hydroxypropyl methacrylate 27813-02-1 248-666-3 01-2119490226-37	5- < 10 %	Skin Sens. 1, H317 Eye Irrit. 2, H319		
N,N-(m-phenylene)dimaleimide 3006-93-7 221-112-8 01-2120756106-57	5- < 10 %	Acute Tox. 4, Oral, H302 Skin Sens. 1A, H317 Acute Tox. 2, Inhalation, H330 Aquatic Chronic 2, H411	oral:ATE = 500 mg/kg	
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9 231-545-4 01-2119379499-16	1- < 5 %	STOT RE 2, Inhalation, H373	dermal:ATE = > 5.000 mg/kg oral:ATE = > 5.000 mg/kg inhalation:ATE = > 5,01 mg/l;dust/mist	Nanoform
Cumene hydroperoxide 80-15-9 201-254-7 01-2119475796-19	1- < 3 %	STOT RE 2, H373 Skin Corr. 1B, H314 Acute Tox. 2, Inhalation, H330 Aquatic Chronic 2, H411 Acute Tox. 4, Oral, H302 Acute Tox. 4, Dermal, H312 Org. Perox. E, H242 STOT SE 3, H335	Eye Irrit. 2; H319; C 1 - < 3 % Skin Irrit. 2; H315; C 3 - < 10 % Eye Dam. 1; H318; C 3 - < 10 % STOT SE 3; H335; C >= 1 % Skin Corr. 1B; H314; C >= 10 % ===== dermal:ATE = 1.100 mg/kg	
N,N-Diethyl-p-toluidine 613-48-9 210-345-0	0,1- < 1 %	Acute Tox. 3, Oral, H301 Acute Tox. 3, Dermal, H311 Acute Tox. 3, Inhalation, H331 STOT RE 2, H373 Aquatic Chronic 3, H412 Skin Irrit. 2, H315	dermal:ATE = 300 mg/kg oral:ATE = 100 mg/kg inhalation:ATE = 3 mg/l;vapour	
maleic acid 110-16-7 203-742-5 01-2119488705-25	0,1- < 1 %	Acute Tox. 4, Oral, H302 Eye Irrit. 2, H319 STOT SE 3, H335 Skin Irrit. 2, H315 Skin Sens. 1, H317 Acute Tox. 4, Dermal, H312	Skin Sens. 1; H317; C >= 0,1 %	
Acetic acid, 2-phenylhydrazide 114-83-0 204-055-3 01-2120951382-56	0,025- < 0,25 %	Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Acute Tox. 4, Oral, H302 Skin Sens. 1, H317 Carc. 2, H351	M acute = 1 M chronic = 1	
N,N-dimethyl-o-toluidine 609-72-3 210-199-8	0,1- < 1 %	STOT RE 2, H373 Acute Tox. 3, Oral, H301 Acute Tox. 3, Dermal, H311 Acute Tox. 3, Inhalation, H331 Aquatic Chronic 3, H412	dermal:ATE = 300 mg/kg oral:ATE = 100 mg/kg inhalation:ATE = 0,5 mg/l;dust/mist	
methacrylic acid 79-41-4 201-204-4 01-2119463884-26	0,1- < 1 %	Acute Tox. 4, Oral, H302 Acute Tox. 3, Dermal, H311 Acute Tox. 4, Inhalation, H332 Skin Corr. 1A, H314 Eye Dam. 1, H318 STOT SE 3, H335	STOT SE 3; H335; C >= 1 % ===== dermal:ATE = 500 mg/kg inhalation:ATE = 3,19 mg/l;dust/mist	
1,4-Naphthalenedione 130-15-4 204-977-6	0,0025- < 0,025 % (25 ppm- < 250 ppm)	Acute Tox. 3, Oral, H301 Skin Corr. 1C, H314 Skin Sens. 1, H317 Eye Dam. 1, H318 Acute Tox. 1, Inhalation, H330 STOT SE 3, H335 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	M acute = 10 M chronic = 1	

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The product contains synthetic polymer microparticles above the concentration limit, but derogation §4 or §5 apply.
(4a) use at industrial sites

Generic Polymer Name	Concentration range
Polymers of vinyl chloride or of other halogenated olefins	0,1-10 %
Polymers of propylene or of other olefins	0,1-10 %

If no ATE values are displayed, please refer to LD/LC50 values in Section 11.
For full text of the H - statements and other abbreviations see section 16 "Other information".

Particle characteristics of nanoforms

	Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica	
Particle Size Distribution		
	D50	2,5 - 50 nm
Particle Shape	Form	spheres
Crystallinity	Crystallinity	amorphous
Surface Treatment/Coating	Surface Treatment/Coating	Yes
	Chemical surface functionalization	hydrophobic
Assessment Nanomaterial/Nanoformat	Assessment Based on	Supplier information

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
Move to fresh air. If symptoms persist, seek medical advice.

Skin contact:
Rinse with running water and soap.
Obtain medical attention if irritation persists.

Eye contact:
Rinse immediately with plenty of running water (for 10 minutes), seek medical attention from a specialist.

Ingestion:
Rinse mouth, drink 1-2 glasses of water, do not induce vomiting, consult a doctor.

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

SKIN: Rash, Urticaria.

RESPIRATORY: Irritation, coughing, shortness of breath, chest tightness.

EYE: Irritation, conjunctivitis.

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

See section: Description of first aid measures

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:
water, carbon dioxide, foam, powder

Extinguishing media which must not be used for safety reasons:
High pressure waterjet

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5.2. Special hazards arising from the substance or mixture
In the event of a fire, carbon monoxide (CO), carbon dioxide (CO2) and nitrogen oxides (NOx) can be released.

5.3. Advice for firefighters
Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

Additional information:
In case of fire, keep containers cool with water spray.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Avoid contact with skin and eyes.
Wear protective equipment.
Ensure adequate ventilation.
Keep away from sources of ignition.

6.2. Environmental precautions
Do not empty into drains / surface water / ground water.

6.3. Methods and material for containment and cleaning up
Dispose of contaminated material as waste according to Section 13.
For small spills wipe up with paper towel and place in container for disposal.
For large spills absorb onto inert absorbent material and place in sealed container for disposal.

6.4. Reference to other sections
See advice in section 8

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Avoid skin and eye contact.
See advice in section 8

Hygiene measures:
Wash hands before work breaks and after finishing work.
Do not eat, drink or smoke while working.
Good industrial hygiene practices should be observed.

7.2. Conditions for safe storage, including any incompatibilities
Store in a cool, dry place.
Refer to Technical Data Sheet.

7.3. Specific end use(s)
Anaerobic Adhesive

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits

Valid for
Ireland

Ingredient [Regulated substance]	ppm	mg/m^3	Value type	Short term exposure limit category / Remarks	Regulatory list
Ethene, homopolymer 9002-88-4 [Dusts non-specific]		10	Time Weighted Average (TWA):		IR_OEL
Ethene, homopolymer 9002-88-4 [Dusts non-specific]		4	Time Weighted Average (TWA):		IR_OEL
Methacrylic acid 79-41-4 [METHACRYLIC ACID]	20	70	Time Weighted Average (TWA):		IR_OEL
Methacrylic acid 79-41-4 [METHACRYLIC ACID]	40	140	Short Term Exposure Limit (STEL):	15 minutes	IR_OEL

Occupational Exposure Limits

Valid for
Great Britain

Ingredient [Regulated substance]	ppm	mg/m^3	Value type	Short term exposure limit category / Remarks	Regulatory list
methacrylic acid 79-41-4 [METHACRYLIC ACID]	20	72	Time Weighted Average (TWA):		EH40 WEL
methacrylic acid 79-41-4 [METHACRYLIC ACID]	40	143	Short Term Exposure Limit (STEL):	15 minutes	EH40 WEL

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Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	aqua (freshwater)		0,904 mg/l				
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	aqua (marine water)		0,0904 mg/l				
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	sewage treatment plant (STP)		10 mg/l				
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	aqua (intermittent releases)		0,972 mg/l				
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	sediment (freshwater)				4,13 mg/kg		
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	sediment (marine water)				0,413 mg/kg		
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	Soil				0,295 mg/kg		
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	Air						no hazard identified
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	Predator						no potential for bioaccumulation
1,1'-(1,3-Phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	aqua (freshwater)		0,01 mg/l				
1,1'-(1,3-Phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	aqua (marine water)		0,001 mg/l				
1,1'-(1,3-Phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	sewage treatment plant (STP)		0,051 mg/l				
1,1'-(1,3-Phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	sediment (freshwater)				0,346 mg/kg		
1,1'-(1,3-Phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	sediment (marine water)				0,035 mg/kg		
1,1'-(1,3-Phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	Soil				0,063 mg/kg		
1,1'-(1,3-Phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	oral				0,05 mg/kg		
1,1'-(1,3-Phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	Freshwater - intermittent		0,1 mg/l				
1,1'-(1,3-Phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	Marine water - intermittent		0,01 mg/l				
.alpha.,.alpha.-Dimethylbenzyl hydroperoxide 80-15-9	aqua (freshwater)		0,0031 mg/l				
.alpha.,.alpha.-Dimethylbenzyl hydroperoxide 80-15-9	aqua (intermittent releases)		0,031 mg/l				
.alpha.,.alpha.-Dimethylbenzyl hydroperoxide 80-15-9	aqua (marine water)		0,00031 mg/l				
.alpha.,.alpha.-Dimethylbenzyl hydroperoxide 80-15-9	sewage treatment plant (STP)		0,35 mg/l				
.alpha.,.alpha.-Dimethylbenzyl	sediment				0,023		

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hydroperoxide 80-15-9	(freshwater)				mg/kg		
.alpha.,.alpha.-Dimethylbenzyl hydroperoxide 80-15-9	sediment (marine water)				0,0023 mg/kg		
.alpha.,.alpha.-Dimethylbenzyl hydroperoxide 80-15-9	Soil				0,0029 mg/kg		
methacrylic acid 79-41-4	aqua (freshwater)		0,82 mg/l				
methacrylic acid 79-41-4	Freshwater - intermittent		0,45 mg/l				
methacrylic acid 79-41-4	aqua (marine water)		0,082 mg/l				
methacrylic acid 79-41-4	sewage treatment plant (STP)		100 mg/l				
methacrylic acid 79-41-4	sediment (freshwater)				3,09 mg/kg		
methacrylic acid 79-41-4	sediment (marine water)				0,309 mg/kg		
methacrylic acid 79-41-4	Soil				0,137 mg/kg		
methacrylic acid 79-41-4	Predator						no potential for bioaccumulation

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Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	Workers	dermal	Long term exposure - systemic effects		4,2 mg/kg	no hazard identified
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	Workers	Inhalation	Long term exposure - systemic effects		14,7 mg/m3	no hazard identified
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	General population	dermal	Long term exposure - systemic effects		2,5 mg/kg	no hazard identified
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	General population	Inhalation	Long term exposure - systemic effects		8,8 mg/m3	no hazard identified
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	General population	oral	Long term exposure - systemic effects		2,5 mg/kg	no hazard identified
1,1'-(1,3-Phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	Workers	inhalation	Long term exposure - systemic effects		0,176 mg/m3	
1,1'-(1,3-Phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	Workers	dermal	Long term exposure - systemic effects		0,05 mg/kg	
1,1'-(1,3-Phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	General population	dermal	Long term exposure - systemic effects		0,025 mg/kg	
1,1'-(1,3-Phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	General population	oral	Long term exposure - systemic effects		0,025 mg/kg	
1,1'-(1,3-Phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	General population	inhalation	Long term exposure - systemic effects		0,043 mg/m3	
1,1'-(1,3-Phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	Workers	inhalation	Acute/short term exposure - systemic effects			
1,1'-(1,3-Phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	Workers	dermal	Long term exposure - local effects			
1,1'-(1,3-Phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	Workers	dermal	Acute/short term exposure - local effects			
1,1'-(1,3-Phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	Workers	dermal	Long term exposure - local effects			
1,1'-(1,3-Phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	General population	dermal	Long term exposure - local effects			
1,1'-(1,3-Phenylene)bis-1H-pyrrole-2,5-dione 3006-93-7	General population	dermal	Acute/short term exposure - local effects			
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica 7631-86-9	Workers	inhalation	Long term exposure - systemic effects			
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica 7631-86-9	Workers	inhalation	Long term exposure - local effects			
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica 7631-86-9	Workers	inhalation	Acute/short term exposure - systemic effects			
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica 7631-86-9	Workers	inhalation	Acute/short term exposure - local effects			
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica 7631-86-9	Workers	dermal	Long term exposure - systemic effects			

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Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica 7631-86-9	Workers	dermal	Acute/short term exposure - systemic effects			
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica 7631-86-9	Workers	dermal	Long term exposure - local effects			
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica 7631-86-9	Workers	dermal	Acute/short term exposure - local effects			
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica 7631-86-9	General population	inhalation	Long term exposure - systemic effects			
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica 7631-86-9	General population	inhalation	Acute/short term exposure - systemic effects			
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica 7631-86-9	General population	inhalation	Long term exposure - local effects			
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica 7631-86-9	General population	inhalation	Acute/short term exposure - local effects			
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica 7631-86-9	General population	dermal	Long term exposure - systemic effects			
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica 7631-86-9	General population	dermal	Acute/short term exposure - systemic effects			
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica 7631-86-9	General population	dermal	Long term exposure - local effects			
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica 7631-86-9	General population	dermal	Acute/short term exposure - local effects			
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica 7631-86-9	General population	oral	Long term exposure - systemic effects			
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica 7631-86-9	General population	oral	Acute/short term exposure - systemic effects			
.alpha.,.alpha.-Dimethylbenzyl hydroperoxide 80-15-9	Workers	inhalation	Long term exposure - systemic effects		6 mg/m3	
Maleic acid 110-16-7	Workers	dermal	Acute/short term exposure - local effects			
Maleic acid 110-16-7	Workers	dermal	Long term exposure - local effects			
Maleic acid 110-16-7	Workers	dermal	Acute/short term exposure - systemic effects			
Maleic acid 110-16-7	Workers	dermal	Long term exposure - systemic effects			
Maleic acid 110-16-7	Workers	inhalation	Acute/short term exposure - local effects			
Maleic acid 110-16-7	Workers	inhalation	Long term exposure - systemic effects		0,987 mg/m3	

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Maleic acid 110-16-7	Workers	inhalation	Long term exposure - local effects			
methacrylic acid 79-41-4	Workers	Inhalation	Long term exposure - local effects		88 mg/m3	no potential for bioaccumulation
methacrylic acid 79-41-4	Workers	Inhalation	Long term exposure - systemic effects		29,6 mg/m3	no potential for bioaccumulation
methacrylic acid 79-41-4	Workers	dermal	Long term exposure - systemic effects		4,25 mg/kg	no potential for bioaccumulation
methacrylic acid 79-41-4	General population	Inhalation	Long term exposure - local effects		6,55 mg/m3	no potential for bioaccumulation
methacrylic acid 79-41-4	General population	Inhalation	Long term exposure - systemic effects		6,3 mg/m3	no potential for bioaccumulation
methacrylic acid 79-41-4	General population	dermal	Long term exposure - systemic effects		2,55 mg/kg	no potential for bioaccumulation

Biological Exposure Indices:
None

8.2. Exposure controls:

Engineering controls:
Ensure good ventilation/extraction.

Respiratory protection:
Ensure adequate ventilation.
An approved mask or respirator fitted with an organic vapour cartridge should be worn if the product is used in a poorly ventilated area
Filter type: A (EN 14387)

Hand protection:
Chemical-resistant protective gloves (EN 374).
Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374):
nitrile rubber (NBR; >= 0.4 mm thickness)
Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374):
nitrile rubber (NBR; >= 0.4 mm thickness)
This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

Eye protection:
Safety glasses with sideshields or chemical safety goggles should be worn if there is a risk of splashing.
Protective eye equipment should conform to EN166.

Skin protection:
Wear suitable protective clothing.
Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

Advices to personal protection equipment:
The information provided on personal protective equipment is for guidance purposes only. A full risk assessment should be conducted prior to using this product to determine the appropriate personal protective equipment to suit local conditions.
Personal protective equipment should conform to the relevant EN standard.

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Delivery form	liquid
Colour	Blue
Odor	Mild
Physical state	liquid
Melting point	Not applicable, Product is a liquid
Solidification temperature	< -30 °C (< -22 °F)
Initial boiling point	> 150 °C (> 302 °F)
Flammability	The product is not flammable.
Explosive limits	Not applicable, The product is not flammable.
Flash point	> 93 °C (> 199.4 °F)
Auto-ignition temperature	Not applicable, The product is not flammable.
Decomposition temperature	Not applicable, Substance/mixture is not self-reactive, no organic peroxide and does not decompose under foreseen conditions of use
pH	Not applicable, Product is non-polar/aprotic.
Viscosity (kinematic) (40 °C (104 °F);)	> 20,5 mm2/s
Viscosity, dynamic (Brookfield; Instrument: RVF; 25 °C (77 °F); speed of rotation: 20 min-1; Spindle No: 3)	2.000 - 4.000 mPa.s LCT STM 10; Viscosity Brookfield
Solubility (qualitative) (20 °C (68 °F); Solvent: Water)	Slight
Partition coefficient: n-octanol/water	Not applicable Mixture
Vapour pressure (26,7 °C (80.1 °F))	< 5 mm hg
Vapour pressure (15,6 °C (60.1 °F))	< 5 mm hg
Vapour pressure (20 °C (68 °F))	< 0,30 mbar
Density (20 °C (68 °F))	1,10 g/cm3
Relative vapour density: (20 °C)	> 1
Particle size	Further particle properties for nanomaterials see section 3
Particle characteristics	Not applicable Product is a liquid

9.2. Other information

Other information not applicable for this product

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts with strong oxidants.
Acids.
Reducing agents.
Strong bases.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

See section reactivity

10.4. Conditions to avoid

Stable under normal conditions of storage and use.

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10.5. Incompatible materials
See section reactivity.

10.6. Hazardous decomposition products
carbon oxides.
Hydrocarbons
nitrogen oxides
Rapid polymerisation may generate excessive heat and pressure.

SECTION 11: Toxicological information

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

Acute oral toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Based on available data, the classification criteria are not met.

Hazardous substances CAS-No.	Value type	Value	Species	Method
Hydroxypropyl methacrylate 27813-02-1	LD50	> 2.000 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)
N,N-(m-phenylene)dimaleimide 3006-93-7	Acute toxicity estimate (ATE)	500 mg/kg		Expert judgement
N,N-(m-phenylene)dimaleimide 3006-93-7	LD50	> 300 - 2.000 mg/kg	rat	OECD Guideline 423 (Acute Oral toxicity)
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	LD50	> 5.000 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	Acute toxicity estimate (ATE)	> 5.000 mg/kg		Expert judgement
Cumene hydroperoxide 80-15-9	LD50	382 mg/kg	rat	other guideline:
N,N-Diethyl-p-toluidine 613-48-9	Acute toxicity estimate (ATE)	100 mg/kg		Expert judgement
maleic acid 110-16-7	LD50	708 mg/kg	rat	not specified
Acetic acid, 2-phenylhydrazide 114-83-0	LD50	310 mg/kg	rat	OECD Guideline 425 (Acute Oral Toxicity: Up-and-Down Procedure)
N,N-dimethyl-o-toluidine 609-72-3	Acute toxicity estimate (ATE)	100 mg/kg		Expert judgement
methacrylic acid 79-41-4	LD50	1.320 mg/kg	rat	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
1,4-Naphthalenedione 130-15-4	LD50	124 mg/kg	rat	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)

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Acute dermal toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Based on available data, the classification criteria are not met.

Hazardous substances CAS-No.	Value type	Value	Species	Method
Hydroxypropyl methacrylate 27813-02-1	LD50	> 5.000 mg/kg	rabbit	not specified
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	LD50	> 5.000 mg/kg	rabbit	not specified
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	Acute toxicity estimate (ATE)	> 5.000 mg/kg		Expert judgement
Cumene hydroperoxide 80-15-9	Acute toxicity estimate (ATE)	1.100 mg/kg		Expert judgement
N,N-Diethyl-p-toluidine 613-48-9	Acute toxicity estimate (ATE)	300 mg/kg		Expert judgement
maleic acid 110-16-7	LD50	1.560 mg/kg	rabbit	not specified
N,N-dimethyl-o-toluidine 609-72-3	Acute toxicity estimate (ATE)	300 mg/kg		Expert judgement
methacrylic acid 79-41-4	LD50	500 - 1.000 mg/kg	rabbit	Dermal Toxicity Screening
methacrylic acid 79-41-4	Acute toxicity estimate (ATE)	500 mg/kg		Expert judgement

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Acute inhalative toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Based on available data, the classification criteria are not met.

Hazardous substances CAS-No.	Value type	Value	Test atmosphere	Exposure time	Species	Method
N,N-(m-phenylene)dimaleimide 3006-93-7	LC50	0,055 mg/l	dust	4 h	rat	OECD Guideline 403 (Acute Inhalation Toxicity)
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	LC50	> 5,01 mg/l	dust/mist	4 h	rat	OECD Guideline 436 (Acute Inhalation Toxicity: Acute Toxic Class (ATC) Method)
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	Acute toxicity estimate (ATE)	> 5,01 mg/l	dust/mist			Expert judgement
Cumene hydroperoxide 80-15-9	LC50	1,370 mg/l	vapour	4 h	rat	not specified
N,N-Diethyl-p-toluidine 613-48-9	Acute toxicity estimate (ATE)	3 mg/l	vapour			Expert judgement
N,N-dimethyl-o-toluidine 609-72-3	Acute toxicity estimate (ATE)	0,5 mg/l	dust/mist	4 h		Expert judgement
methacrylic acid 79-41-4	LC50	3,19 - 6,5 mg/l	dust/mist	4 h	rat	equivalent or similar to OECD Guideline 403 (Acute Inhalation Toxicity)
methacrylic acid 79-41-4	Acute toxicity estimate (ATE)	3,19 mg/l	dust/mist			Expert judgement
1,4-Naphthalenedione 130-15-4	LC50	0,046 mg/l	dust/mist	4 h	rat	OECD Guideline 403 (Acute Inhalation Toxicity)

Skin corrosion/irritation:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Based on available data, the classification criteria are not met.

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
Hydroxypropyl methacrylate 27813-02-1	not irritating	24 h	rabbit	Draize Test
N,N-(m-phenylene)dimaleimide 3006-93-7	not corrosive	60 min	Human, EpiDermTM SIT (EPI-200), Reconstructed Human Epidermis (RHE)	OECD Guideline 431 (In Vitro Skin Corrosion: Reconstructed Human Epidermis (RHE) Test Method)
N,N-(m-phenylene)dimaleimide 3006-93-7	not irritating	60 min	Human, EpiDermTM SIT (EPI-200), Reconstructed Human Epidermis (RHE)	OECD Guideline 439 (In Vitro Skin Irritation: Reconstructed Human Epidermis (RHE) Test Method)
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	not irritating		rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

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Cumene hydroperoxide 80-15-9	corrosive		rabbit	Draize Test
N,N-Diethyl-p-toluidine 613-48-9	irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
maleic acid 110-16-7	irritating	24 h	human	Patch Test
Acetic acid, 2-phenylhydrazide 114-83-0	not corrosive		Human, EpiSkinTM (SM), Reconstructed Human Epidermis (RHE)	OECD Guideline 431 (In Vitro Skin Corrosion: Reconstructed Human Epidermis (RHE) Test Method)
Acetic acid, 2-phenylhydrazide 114-83-0	not irritating		Human, EpiSkinTM (SM), Reconstructed Human Epidermis (RHE)	OECD Guideline 439 (In Vitro Skin Irritation: Reconstructed Human Epidermis (RHE) Test Method)
methacrylic acid 79-41-4	corrosive	3 min	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
1,4-Naphthalenedione 130-15-4	Category 1C (corrosive)		rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances **CAS-No.**	**Result**	**Exposure time**	**Species**	**Method**
Hydroxypropyl methacrylate 27813-02-1	Category 2B (mildly irritating to eyes)		rabbit	Draize Test
N,N-(m-phenylene)dimaleimide 3006-93-7	not irritating		Bovine, cornea, in vitro test	OECD Guideline 437 (BCOP)
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
maleic acid 110-16-7	highly irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Acetic acid, 2-phenylhydrazide 114-83-0	not irritating		Chicken, eye, isolated	OECD Guideline 438 (Isolated Chicken Eye Test Method)
methacrylic acid 79-41-4	corrosive		rabbit	Draize Test

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Respiratory or skin sensitization:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Test type	Species	Method
Hydroxypropyl methacrylate 27813-02-1	not sensitising	Mouse local lymphnode assay (LLNA)	mouse	equivalent or similar to OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Hydroxypropyl methacrylate 27813-02-1	sensitising	Guinea pig maximisation test	guinea pig	not specified
N,N-(m-phenylene)dimaleimide 3006-93-7	not sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	not sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
maleic acid 110-16-7	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
maleic acid 110-16-7	sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
Acetic acid, 2-phenylhydrazide 114-83-0	positive	Direct peptide reactivity assay (DPRA)	cysteine and lysine, in chemico test	OECD Guideline 442C (Direct Peptide Reactivity Assay (DPRA))
Acetic acid, 2-phenylhydrazide 114-83-0	positive	Activation of keratinocytes	human keratinocytes, in vitro test	OECD Guideline 442D (ARE-Nrf2 Luciferase Test Method)
Acetic acid, 2-phenylhydrazide 114-83-0	positive	activation of dendritic cells	human monocytes, in vitro test	OECD Guideline 442E (H-CLAT: Human Cell Line Activation Test)
methacrylic acid 79-41-4	not sensitising	Buehler test	guinea pig	equivalent or similar to OECD Guideline 406 (Skin Sensitisation)
1,4-Naphthalenedione 130-15-4	sensitising	not specified	guinea pig	not specified

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Germ cell mutagenicity:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Based on available data, the classification criteria are not met.

Hazardous substances CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
Hydroxypropyl methacrylate 27813-02-1	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Hydroxypropyl methacrylate 27813-02-1	positive	in vitro mammalian chromosome aberration test	with and without		Chromosome Aberration Test
Hydroxypropyl methacrylate 27813-02-1	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
N,N-(m-phenylene)dimaleimide 3006-93-7	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
N,N-(m-phenylene)dimaleimide 3006-93-7	negative	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
N,N-(m-phenylene)dimaleimide 3006-93-7	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	negative	bacterial reverse mutation assay (e.g Ames test)			OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	negative	in vitro mammalian chromosome aberration test			OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	negative	mammalian cell gene mutation assay			OECD Guideline 490 (In Vitro Mammalian Cell Gene Mutation Tests Using the Thymidine Kinase Gene)
Cumene hydroperoxide 80-15-9	positive	bacterial reverse mutation assay (e.g Ames test)	without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
maleic acid 110-16-7	negative	bacterial reverse mutation assay (e.g Ames test)	no data		Ames Test
maleic acid 110-16-7	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Acetic acid, 2-phenylhydrazide 114-83-0	positive	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Acetic acid, 2-phenylhydrazide 114-83-0	negative	in vitro mammalian cell micronucleus test	with and without		OECD Guideline 487 (In vitro Mammalian Cell Micronucleus Test)
methacrylic acid 79-41-4	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		equivalent or similar to OECD Guideline 471 (Bacterial Reverse Mutation Assay)

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Carcinogenicity

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Based on available data, the classification criteria are not met.

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Sex	Method
Hydroxypropyl methacrylate 27813-02-1	not carcinogenic	inhalation	2 y 6 h/d, 5 d/w	rat	male	equivalent or similar OECD Guideline 451 (Carcinogenicity Studies)
maleic acid 110-16-7	not carcinogenic	oral: feed	2 y daily	rat	male/female	OECD Guideline 451 (Carcinogenicity Studies)
Acetic acid, 2-phenylhydrazide 114-83-0	carcinogenic	oral: drinking water	continuous	mouse	male/female	not specified
methacrylic acid 79-41-4	not carcinogenic	inhalation	2 y	mouse	male/female	OECD Guideline 451 (Carcinogenicity Studies)

Reproductive toxicity:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Based on available data, the classification criteria are not met.

Hazardous substances CAS-No.	Result / Value	Test type	Route of application	Species	Method
Hydroxypropyl methacrylate 27813-02-1	NOAEL P 300 mg/kg NOAEL F1 1.000 mg/kg	screening	oral: gavage	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
Hydroxypropyl methacrylate 27813-02-1	NOAEL P 400 mg/kg NOAEL F1 400 mg/kg	two-generation study	oral: gavage	rat	OECD Guideline 416 (Two-Generation Reproduction Toxicity Study)
N,N-(m-phenylene)dimaleimide 3006-93-7	NOAEL P 240 mg/kg NOAEL F1 240 mg/kg	screening	oral: gavage	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
maleic acid 110-16-7	NOAEL F1 150 mg/kg NOAEL F2 55 mg/kg	Two generation study	oral: gavage	rat	OECD Guideline 416 (Two-Generation Reproduction Toxicity Study)
methacrylic acid 79-41-4	NOAEL P 50 mg/kg NOAEL F1 400 mg/kg NOAEL F2 400 mg/kg	Two generation study	oral: gavage	rat	OECD Guideline 416 (Two-Generation Reproduction Toxicity Study)

STOT-single exposure:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Assessment	Route of exposure	Target Organs	Remarks
methacrylic acid 79-41-4	May cause respiratory irritation.			

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STOT-repeated exposure:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Based on available data, the classification criteria are not met.

Hazardous substances CAS-No.	Result / Value	Route of application	Exposure time / Frequency of treatment	Species	Method
Hydroxypropyl methacrylate 27813-02-1	NOAEL 300 mg/kg	oral: gavage	49 d daily	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
Hydroxypropyl methacrylate 27813-02-1	NOAEL 0,352 mg/l	inhalation	90 d 6 h/d, 5 d/w	rat	OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day)
N,N-(m-phenylene)dimaleimide 3006-93-7	NOAEL 15 mg/kg	oral: gavage	42-52 d daily	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	NOAEL 491,5 mg/kg	oral: feed	6 months daily	rat	not specified
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	NOAEL 0,01 mg/kg	inhalation: dust	12 months 6 h/d, 5 d/wk	rat	not specified
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	NOAEL 0,01 mg/kg	inhalation: dust	12 months 6 h/d, 5 d/wk	monkey	not specified
Cumene hydroperoxide 80-15-9		inhalation: aerosol	6 h/d 5 d/w	rat	not specified
maleic acid 110-16-7	NOAEL >= 40 mg/kg	oral: feed	90 d daily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
methacrylic acid 79-41-4		inhalation	90 d 6 h/d, 5 d/w	rat	OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day)

Aspiration hazard:

No data available.

11.2 Information on other hazards

not applicable

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SECTION 12: Ecological information

General ecological information:

Do not empty into drains / surface water / ground water.

12.1. Toxicity

Toxicity (Fish):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Hydroxypropyl methacrylate 27813-02-1	LC50	493 mg/l	48 h	Leuciscus idus melanotus	DIN 38412-15
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	LC50	> 10.000 mg/l	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute Toxicity Test)
Cumene hydroperoxide 80-15-9	LC50	3,9 mg/l	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
N,N-Diethyl-p-toluidine 613-48-9	LC50	78,62 mg/l	96 h	Danio rerio	OECD Guideline 203 (Fish, Acute Toxicity Test)
maleic acid 110-16-7	LC50	> 245 mg/l	48 h	Leuciscus idus	DIN 38412-15
N,N-dimethyl-o-toluidine 609-72-3	LC50	46 mg/l	96 h	Pimephales promelas	OECD Guideline 203 (Fish, Acute Toxicity Test)
methacrylic acid 79-41-4	LC50	85 mg/l	96 h	Salmo gairdneri (new name: Oncorhynchus mykiss)	EPA OTS 797.1400 (Fish Acute Toxicity Test)
methacrylic acid 79-41-4	NOEC	10 mg/l	35 d	Danio rerio	OECD Guideline 210 (fish early lite stage toxicity test)
1,4-Naphthalenedione 130-15-4	LC50	0,045 mg/l	96 h	Oryzias latipes	OECD Guideline 203 (Fish, Acute Toxicity Test)

Toxicity (aquatic invertebrates):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Hydroxypropyl methacrylate 27813-02-1	EC50	> 143 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
N,N-(m-phenylene)dimaleimide 3006-93-7	EC50	31,6 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	EC50	> 1.000 mg/l	24 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Cumene hydroperoxide 80-15-9	EC50	18,84 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
N,N-Diethyl-p-toluidine 613-48-9	EC50	10,34 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
maleic acid 110-16-7	EC50	42,81 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Acetic acid, 2-phenylhydrazide 114-83-0	EC50	1,1 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
methacrylic acid 79-41-4	EC50	> 130 mg/l	48 h	Daphnia magna	EPA OTS 797.1300 (Aquatic Invertebrate Acute Toxicity Test, Freshwater Daphnids)
1,4-Naphthalenedione	EC50	0,026 mg/l	48 h	Daphnia magna	OECD Guideline 202

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130-15-4					(Daphnia sp. Acute Immobilisation Test)

Chronic toxicity (aquatic invertebrates):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

Hazardous substances **CAS-No.**	**Value type**	**Value**	**Exposure time**	**Species**	**Method**
Hydroxypropyl methacrylate 27813-02-1	NOEC	45,2 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	NOEC	132,7 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
maleic acid 110-16-7	NOEC	10 mg/l	21 d	Daphnia magna	other guideline:
methacrylic acid 79-41-4	NOEC	53 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)

Toxicity (Algae):

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The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Hydroxypropyl methacrylate 27813-02-1	EC50	> 97,2 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Hydroxypropyl methacrylate 27813-02-1	NOEC	> 97,2 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
N,N-(m-phenylene)dimaleimide 3006-93-7	ErC50	67,898 mg/l	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
N,N-(m-phenylene)dimaleimide 3006-93-7	EC10	0,308 mg/l	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	EC50	> 173,1 mg/l	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	NOEC	173,1 mg/l	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
Cumene hydroperoxide 80-15-9	EC50	3,1 mg/l	72 h	Desmodesmus subspicatus (reported as Scenedesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Cumene hydroperoxide 80-15-9	NOEC	1 mg/l	72 h	Desmodesmus subspicatus (reported as Scenedesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
N,N-Diethyl-p-toluidine 613-48-9	EC50	23,69 mg/l	72 h	Raphidocelis subcapitata (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
maleic acid 110-16-7	EC50	74,35 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
maleic acid 110-16-7	EC10	11,8 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Acetic acid, 2-phenylhydrazide 114-83-0	EC50	0,258 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Acetic acid, 2-phenylhydrazide 114-83-0	NOEC	0,012 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
methacrylic acid 79-41-4	NOEC	8,2 mg/l	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
methacrylic acid 79-41-4	EC50	45 mg/l	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
1,4-Naphthalenedione 130-15-4	NOEC	0,07 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
1,4-Naphthalenedione 130-15-4	EC50	0,42 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)

Toxicity (microorganisms):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Hydroxypropyl methacrylate 27813-02-1	EC10	1.140 mg/l	16 h		not specified
Silica, surface treated with Hexamethyldisilazane - Nano 7631-86-9	EC50	> 2.500 mg/l	3 h	activated sludge of a predominantly domestic sewage	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Cumene hydroperoxide 80-15-9	EC10	70 mg/l	30 min	not specified	not specified
maleic acid 110-16-7	EC10	44,6 mg/l	18 h	Pseudomonas putida	DIN 38412, part 8 (Pseudomonas Zellvermehrungshemm-Test)
methacrylic acid 79-41-4	EC10	100 mg/l	17 h	Pseudomonas putida	DIN 38412, part 8 (Pseudomonas

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					Zellvermehrungshemm-Test)
1,4-Naphthalenedione 130-15-4	EC50	5,94 mg/l	3 h	activated sludge of a predominantly domestic sewage	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)

12.2. Persistence and degradability

The table below presents the data of the classified substances present in the mixture.

Hazardous substances **CAS-No.**	**Result**	**Test type**	**Degradability**	**Exposure time**	**Method**
Hydroxypropyl methacrylate 27813-02-1	readily biodegradable	aerobic	94,2 %	28 d	OECD Guideline 301 E (Ready biodegradability: Modified OECD Screening Test)
N,N-(m-phenylene)dimaleimide 3006-93-7	not readily biodegradable.	aerobic	0 %	28 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Cumene hydroperoxide 80-15-9	not readily biodegradable.	aerobic	3 %	28 d	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
N,N-Diethyl-p-toluidine 613-48-9	not readily biodegradable.	not specified	1 %	28 day	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))
maleic acid 110-16-7	readily biodegradable	aerobic	97,08 %	28 d	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
Acetic acid, 2-phenylhydrazide 114-83-0	not readily biodegradable.	aerobic	39 %	28 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
N,N-dimethyl-o-toluidine 609-72-3	not readily biodegradable.	aerobic	1 %	14 d	other guideline:
methacrylic acid 79-41-4	readily biodegradable	aerobic	86 %	28 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
methacrylic acid 79-41-4	inherently biodegradable	aerobic	100 %	14 d	OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test)
1,4-Naphthalenedione 130-15-4	not readily biodegradable.	aerobic	0 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)

12.3. Bioaccumulative potential

The table below presents the data of the classified substances present in the mixture.

Hazardous substances **CAS-No.**	**Bioconcentration factor (BCF)**	**Exposure time**	**Temperature**	**Species**	**Method**
Cumene hydroperoxide 80-15-9	9,1			calculation	OECD Guideline 305 (Bioconcentration: Flow-through Fish Test)

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12.4. Mobility in soil

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	LogPow	Temperature	Method
Hydroxypropyl methacrylate 27813-02-1	0,97	20 °C	not specified
N,N-(m-phenylene)dimaleimide 3006-93-7	0,67	24 °C	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
Cumene hydroperoxide 80-15-9	1,6	25 °C	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
N,N-Diethyl-p-toluidine 613-48-9	3,7		QSAR (Quantitative Structure Activity Relationship)
maleic acid 110-16-7	-1,3	20 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
Acetic acid, 2-phenylhydrazide 114-83-0	0,74		QSAR (Quantitative Structure Activity Relationship)
methacrylic acid 79-41-4	0,93	22 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
1,4-Naphthalenedione 130-15-4	1,71		not specified

12.5. Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or vPvB.

12.6. Endocrine disrupting properties

not applicable

12.7. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product disposal:
Do not empty into drains / surface water / ground water.
Dispose of in accordance with local and national regulations.

Do not spill substance/product and prevent environmental releases.
Do not rinse packaging before disposal.

Disposal of uncleaned packages:
After use, tubes, cartons and bottles containing residual product should be disposed of as chemically contaminated waste in an authorised legal land fill site or incinerated.

Waste code

08 04 09* waste adhesives and sealants containing organic solvents and other dangerous substances
The valid EWC waste code numbers are source-related. The manufacturer is therefore unable to specify EWC waste codes for the articles or products used in the various sectors. The EWC codes listed are intended as a recommendation for users. We will be happy to advise you.

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SECTION 14: Transport information

14.1. UN number or ID number

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
IATA	Not dangerous goods

14.2. UN proper shipping name

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
IATA	Not dangerous goods

14.3. Transport hazard class(es)

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
IATA	Not dangerous goods

14.4. Packing group

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
IATA	Not dangerous goods

14.5. Environmental hazards

ADR	not applicable
RID	not applicable
ADN	not applicable
IMDG	not applicable
IATA	not applicable

14.6. Special precautions for user

ADR	not applicable
RID	not applicable
ADN	not applicable
IMDG	not applicable
IATA	not applicable

14.7. Maritime transport in bulk according to IMO instruments

not applicable

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SECTION 15: Regulatory information

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

Ozone Depleting Substance (ODS) (Regulation (EC) No 2024/590):	Not applicable
Prior Informed Consent (PIC) (Regulation (EU) No 649/2012):	Not applicable
Persistent organic pollutants (Regulation (EU) 2019/1021):	Not applicable

The synthetic polymer microparticles supplied is subject to conditions laid down by entry 78 of Annex XVII to Regulation (EC) No 1907/2006 of the European Parliament and of the Council

VOC content (2010/75/EC)	< 3 %

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

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SECTION 16: Other information

The labelling of the product is indicated in Section 2. The full text of all abbreviations indicated by codes in this safety data sheet are as follows:

H242 Heating may cause a fire.
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.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H330 Fatal if inhaled.
H331 Toxic if inhaled.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
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.

Abbreviations and acronyms:

ADG(-Code): Australian Dangerous Goods (Code)
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR : European Agreement concerning the International Carriage of Dangerous Goods by Road
ASTM: American Society for Testing and Materials
ATE: acute toxicity estimate
AS: Australian Standard
AwSV: Ordinance on Installations for the Handling of Substances Hazardous to Water
CAS: Chemical Abstract Service
CLP: Regulation (EC) No 1272/2008
CMR: cancerogenic, mutagenic or reprotoxic
DIN: German Institute for Standardization
ECx: Effective concentration (x% effective level)
ECHA: European Chemicals Agency
EC-Nummer: Substance number in the EU-inventories EINECS/ELINCS
ECTLV: European community threshold limit value
ED:Substance identified as having endocrine disrupting properties
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
EN : European Standard
ENCS: Japanese chemical inventory
EPA: US Environmental Protection Agency
EU: European Union
EU EXPLD1: Substance listed in Annex I, Reg (EC) No. 2019/1148
EU EXPLD2: Substance listed in Annex II, Reg (EC) No. 2019/1148
EWC: European Waste Catalogue
GHS: Globally Harmonised System for Classification and Labelling of Chemicals
GLP: Good Laboratory Practice
HSNO: Hazardous Substances and New Organisms
IARC: International Agency for Research of Cancer
IATA: International Air Transport Association
IBC-Code: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IC50: half maximal inhibitory concentration
ICAO: International Civil Aviation Organization
IMDG-Code: International Maritime Code for Dangerous Goods
IMO: International Maritime Organization
ISO: International Standardization Organisation
LC50: Median lethal concentration
LD50: Median lethal dose

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MARPOL: International Convention for the Prevention of Marine Pollution from Ships
n.o.s.: not otherwise specified
NO(A)EC: No (adverse) effect concentration
NO(A)EL: No (adverse) effect level
NZS: New Zealand Standard
OECD: Organisation for Economic Co-operation and Development
OEL: Occupational Exposure Limit
OPPT: US EPA Office of Pollution Prevention and Toxics
OPPTS: US EPA Office of Prevention, Pesticides and Toxic Substances
PBT: Persistent, bioaccumulative, toxic
(Q)SAR: (Quantitative) structure–activity relationship
REACH: Regulation (EC) No. 1907/2006
RID: Regulations concerning the International Transport of Dangerous Goods by Rail
SADT: Self Accelerating Decomposition Temperature
SDS: Safety Data Sheet
STOT: Specific Target Organ Toxicity
STOT SE: Specific Target Organ Toxicity - single exposure
STOT RE: Specific Target Organ Toxicity - repeated exposure
SUSMP: Standard for the Uniform Scheduling of Medicines and Poisons
SVHC: Substance of very high concern (REACH Candidate List)
TRGS: German Technical Rules for hazardous substances
UN: United Nations
VOC: Volatile Organic Compound
814.018 VOC Reg CH: Swiss Ordinance 814.018 on the Incentive Tax on Volatile Organic Compounds
vPvB: Very persistent, very bioaccumulative
VwVwS: Administrative Regulation on Substances Hazardous to Waters
WGK: Water hazard class

Further information:

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