

Signal word	Danger
Hazardous component(s) to be indicated on label	methyl methacrylate , 2-ethylhexyl acrylate
H-statement(s)	H225: Highly flammable liquid and vapour. H315: Causes skin irritation. H317: May cause an allergic skin reaction. H335: May cause respiratory irritation.
P-statement(s)	P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P261: Avoid breathing dust/fume/gas/mist/vapours/spray. P264: Wash thoroughly after handling. P280: Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. P312: Call a POISON CENTER/doctor if you feel unwell. P333+P313: If skin irritation or rash occurs: Get medical advice/attention. P362+P364: Take off contaminated clothing and wash it before reuse.

2.3 Other hazards

No information available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

No information available

3.2 Mixtures

Hazardous ingredients

Ingredient	Numbers	Classification (EC) 1272/2008	Concentration
methyl methacrylate	CAS No.: 80-62-6 EC-No.: 201-297-1 Index-No.: 607-035-00-6 REACH No.: 01-2119452498-28-XXXX	Flam. Liq. 2; H225 STOT SE 3; H335 Skin Irrit. 2; H315 Skin Sens. 1; H317	25.0 - 30.0 % by weight
2-ethylhexyl acrylate	CAS No.: 103-11-7 EC-No.: 203-080-7 Index-No.: 607-107-00-7 REACH No.: 01-2119453158-37-XXXX	Skin Irrit. 2; H315 Skin Sens. 1; H317 STOT SE 3; H335 Aquatic Chronic 3; H412	15.0 - 20.0 % by weight
aliphatic urethanacrylate		Skin Irrit. 2; H315 Eye Irrit. 2; H319	5.0 - 10.0 % by weight
1,1'-(p-Tolylimino)dipropan-2-ol	CAS No.: 38668-48-3 EC-No.: 254-075-1 REACH No.: 01-2119980937-17-XXXX	Acute Tox. 2; H300 Eye Irrit. 2; H319 Aquatic Chronic 3; H412	0.1 - 1.0 % by weight

N,N-dimethyl-p-toluidine	CAS No.: 99-97-8 EC-No.: 202-805-4 Index-No.: 612-056-00-9 REACH No.: 01-2119937766-23-XXXX	Acute Tox. 3 ; H331 Acute Tox. 3 ; H311 Acute Tox. 3 ; H301 STOT RE 2 ; H373 Aquatic Chronic 3; H412	0.1 - 1.0 % by weight
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other substance information

Ingredient	Numbers	M- factor - SCL - ATE	Other
methyl methacrylate	CAS No.: 80-62-6 EC-No.: 201-297-1 Index-No.: 607-035-00-6 REACH No.: 01-2119452498-28-XXXX		
2-ethylhexyl acrylate	CAS No.: 103-11-7 EC-No.: 203-080-7 Index-No.: 607-107-00-7 REACH No.: 01-2119453158-37-XXXX		
aliphatic urethanacrylate			
1,1'-(p-Tolylimino)dipropan-2-ol	CAS No.: 38668-48-3 EC-No.: 254-075-1 REACH No.: 01-2119980937-17-XXXX		
N,N-dimethyl-p-toluidine	CAS No.: 99-97-8 EC-No.: 202-805-4 Index-No.: 612-056-00-9 REACH No.: 01-2119937766-23-XXXX	*	

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General advice	Move out of dangerous area. Take off all contaminated clothing immediately. Do not leave the victim unattended. Show this safety data sheet to the doctor in attendance.
If inhaled	Move to fresh air. If symptoms persist, call a physician. Show this safety data sheet to the doctor in attendance.
In case of skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation occurs, get medical advice/attention.
In case of eye contact	In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
If swallowed	Rinse mouth. Do NOT induce vomiting. Call a physician immediately.

6.4 Reference to other sections

Reference to other sections Disposal considerations See also section 13

6.5 Additional information

Other information Treat recovered material as described in the section "Disposal considerations".

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling Processing may lead to evolution of flammable volatiles. In case of insufficient ventilation, wear suitable respiratory equipment. Keep product and empty container away from heat and sources of ignition. Handle and open container with care. Avoid contact with skin and eyes.

Precautions Smoking, eating and drinking should be prohibited in the application area. For personal protection see section 8. Observe label precautions.

7.2 Conditions for safe storage, including any incompatibilities

Storage space and container requirements Store in accordance with the particular national regulations. Keep in a cool, well-ventilated place. Keep in properly labelled containers. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

TRGS 510 3

Advice on protection against fire and explosion Take precautionary measures against static discharge. Vapours may form explosive mixture with air. Use water spray to cool unopened containers.

7.3 Specific end use(s)

No information available

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

methyl methacrylate

Ireland			
Long-term exposure value/ppm	Short-term exposure value/ppm	Remarks	Source
50	100	IOELV, Sens.	Code of Practice for the Safety Health and Welfare at Work (2011)

Great Britain				
Long-term exposure value/ ppm	Long-term exposure value/ mg/m ³	Short-term exposure value / ppm	Short-term exposure value / mg/m ³	Source
50	208	100	416	EH40/2005 Workplace exposure limits (2011)

Europe			
Long-term exposure value/ ppm	Short-term exposure value / ppm	Issuing date	Source
50	100	2009/161	DIRECTIVE 2009/161/EU

DNEL	Target group	Exposure route	Exposure frequency	Source
210 mg/m ³	Workers	Inhalation	Long term effects Local	Company data
210 mg/m ³	Workers	Inhalation	Long term effects systemic	Company data
1,5 mg/cm ²	Workers	Skin	Long term effects Local	Company data
13,67 mg/kg	Workers	Skin	Long term effects systemic	Company data
105 mg/m ³	Consumers	Inhalation	Long term effects Local	Company data
74,3 mg/m ³	Consumers	Inhalation	Long term effects, systemic	Company data
1,5 mg/cm ²	Consumers	Skin	Long term effects Local	Company data
8,2 mg/kg	Consumers	Skin	Long term effects systemic	Company data
1,5 mg/cm ²	Consumers	Skin	Short-term effects Local	Company data

PNEC	Exposure route	Source
0,94 mg/l	freshwater	Company data
0,094 mg/l	marine water	Company data
5,74 mg/kg	sediment	Company data
1,47 mg/kg	Soil	Company data

2-ethylhexyl acrylate

DNEL	Target group	Exposure route	Exposure frequency	Source
37,5 mg/m ³	Workers	Inhalation	Long term effects Local	Company data
0,242 mg/cm ²	Workers	Skin	Long term effects Local	Company data
0,242 mg/cm ²	Workers	Skin	Short-term effects Local	Company data
4,5 mg/m ³	Consumers	Inhalation	Long term effects Local	Company data

PNEC	Exposure route	Source
0,002752 mg/l	fresh water	Company data
0,000272 mg/l	seawater	Company data
2,3 mg/l	wastewater treatment plant	Company data
0,126 mg/kg	sediment Water	Company data
0,126 mg/kg	sediment seawater	Company data
1,0 mg/kg	Soil	Company data
0,0023 mg/kg	Intermittent release.	Company data

1,1'-(p-Tolylimino)dipropan-2-ol

DNEL	Target group	Exposure route	Exposure frequency	Source
2 mg/m ³	Workers	Inhalation	Long term effects	Company data
0,6 mg/kg	Workers	Skin	Long term effects	Company data

PNEC	Exposure route	Source
199,5 mg/l	Waste water treatment	Company data
0,0072 mg/kg	marine water	Company data
0,017 mg/l	freshwater	Company data

8.2 Exposure controls

Respiratory protection

In interiors and during exceeding of the air limit values carrying of protective masks is absolutely necessary. Vapour during processing may be irritating to the respiratory tract and to the eyes. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Remarks

Recommended Filter type: A1, A2 (in case of higher concentration)
Use the indicated respiratory protection if the occupational exposure limit is exceeded and/or in case of product release (dust).

Hand protection

Protective gloves complying with EN 374. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

Unsuitable material

woven fabric, Leather gloves

Suitable material

Nitriles

Material thickness

0,38 mm

Break through time

<25 min

Eye protection

Tightly fitting safety goggles

Skin and body protection

Wear suitable protective equipment. Long sleeved clothing

General protective and hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feedingstuffs. Wash hands before breaks and at the end of workday. Use protective skin cream before handling the product. Avoid contact with the skin and the eyes.

Engineering measures

Ensure adequate ventilation, especially in confined areas. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information of basic physical and chemical properties

Physical state

liquid

Colour	milky
Odour	typic for acrylates
Melting point [°C] / Freezing point [°C]	not determined
Boiling point [°C]	> 100 °C
Explosion limits [Vol-%]	The product itself has not been tested. methyl methacrylate
Lower limit	1,7 vol. %
Upper limit	12,5 vol. %
Lower limit	2-ethylhexyl acrylate
Upper limit	0,9 vol. %
Flash point [°C]	10 °C
Ignition temperature [°C]	280 °C
Water solubility [g/l]	
Remarks	insoluble
Partition coefficient n-octanol /water (log P O/W)	not determined
Vapour pressure [kPa]	not determined
Density [g/cm ³]	0,96 g/cm ³
Temperature [°C]	20 °C
Vapour density	not determined

9.2 Other information

9.2.2 Other safety-related parameters

Evaporation rate [kg/(s m ²)]	not determined
Explosive properties	In use, may form flammable/explosive vapour-air mixture.
Form	Liquid
Flow time [s]	34 sec
Temperature [°C]	20 °C
Measuring method	DIN cup 6 mm

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Reactivity No decomposition if stored and applied as directed.

10.2 Chemical stability

Chemical stability The product is stable under the usual processing conditions

10.3 Possibility of hazardous reactions

Hazardous reactions The product is normally supplied in a stabilized form. If the permissible storage period and/or storage temperature is noticeably exceeded, the product may polymerize with heat evolution. Risk of receptacle bursting.

10.4 Conditions to avoid

Conditions to avoid Extremes of temperature and direct sunlight.

10.5 Incompatible materials

Materials to avoid

Reacts violently with peroxides. Reducing agents, Strong bases, Amines, Oxidizing agents

10.6 Hazardous decomposition products

No information available

SECTION 11: TOXICOLOGICAL INFORMATION

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

Oral toxicity [mg/kg]
Hazardous ingredients

methyl methacrylate				
Value	Test criterion	Test species	Measuring method	Source
>5001 mg/kg	LD50	rat	OECD Test Guideline 401	Company data

2-ethylhexyl acrylate				
Value	Test criterion	Test species	Source	
4435 mg/kg	LD50	rat	Company data	

aliphatic urethanacrylate				
Value	Test criterion	Test species	Source	
>2001 mg/kg	LD50	rat	Company data	

1,1'-(p-Tolylimino)dipropan-2-ol				
Value	Test criterion	Test species	Measuring method	Source
26 mg/kg	LD50	rat	OECD Test Guideline 423	Company data

N,N-dimethyl-p-toluidine				
Value	Test criterion	Test species	Source	
139 mg/kg	LD50	rat	Company data	

Dermal toxicity [mg/kg]
Hazardous ingredients

methyl methacrylate				
Value	Test criterion	Test species	Source	
>5001 mg/kg	LD50	rabbit	Company data	

2-ethylhexyl acrylate				
Value	Test criterion	Test species	Source	
7522 mg/kg	LD50	rabbit	Company data	

1,1'-(p-Tolylimino)dipropan-2-ol				
Value	Test criterion	Test species	Source	
2001 mg/kg	LD50	rat	Company data	

N,N-dimethyl-p-toluidine			
Value	Test criterion	Test species	Source
>2001 mg/kg	LD50	rabbit	Company data

Inhalative toxicity [mg/l]
Hazardous ingredients

2-ethylhexyl acrylate			
Value	Test species	Exposure duration [h]	Source
1,19 mg/l	rat	8 hours	Company data

N,N-dimethyl-p-toluidine			
Value	Test criterion	Test species	Source
1,4 mg/l	LD50	rat	Company data

LC50 Inhalation 4h for vapours [mg/l]
Hazardous ingredients

methyl methacrylate			
Value	Test criterion	Test species	Source
29,8 mg/l	LC50	rat	Company data

LC50 Inhalation 4h for dusts and sprays [mg/l]
Hazardous ingredients

N,N-dimethyl-p-toluidine			
Value	Test criterion	Test species	Source
0,8 mg/l	LC50	rat	Company data

Irritant effect on skin
Hazardous ingredients

methyl methacrylate		
Value	Test species	Source
irritating	rabbit	Company data

2-ethylhexyl acrylate			
Value	Test species	Exposure duration [h]	Source
Skin irritation	rabbit	4 h	Company data

aliphatic urethanacrylate	
Value	Source
May cause skin irritation.	Company data

1,1'-(p-Tolylimino)dipropan-2-ol	
Value	Source
No skin irritation	Company data

N,N-dimethyl-p-toluidine	
Value	Source
Skin irritation	Company data

Irritant effect on eyes
Hazardous ingredients

methyl methacrylate		
Value	Test species	Source
Irritant	rabbit	Company data

2-ethylhexyl acrylate			
Value	Measuring method	Test species	Source
slightly irritating	OECD Test Guideline 405	rabbit	Company data

aliphatic urethanacrylate	
Value	Source
Causes serious eye irritation.	Company data

1,1'-(p-Tolylimino)dipropan-2-ol	
Value	Source
Irritant	Company data

N,N-dimethyl-p-toluidine	
Value	Source
Eye irritation	Company data

Sensitization
Hazardous ingredients

methyl methacrylate		
Value	Test species	Source
Skin sensitization	mouse	Company data

2-ethylhexyl acrylate	
Value	Source
Skin sensitization	Company data

1,1'-(p-Tolylimino)dipropan-2-ol	
Value	Source
No sensitization responses were observed.	Company data

N,N-dimethyl-p-toluidine	
Value	Source
No sensitization responses were observed.	Company data

Mutagenicity
Hazardous ingredients

methyl methacrylate	
Value	Source
not mutagenic	Company data

2-ethylhexyl acrylate	
Value	Source
No known effect.	Company data

1,1`-(p-Tolylimino)dipropan-2-ol	
Value	Source
negative	Company data

Carcinogenic effects
Hazardous ingredients

methyl methacrylate		
Value	Test species	Source
not a carcinogen	rat, mouse	Company data

2-ethylhexyl acrylate	
Value	Source
No known effect.	Company data

Reproduction toxicity
Hazardous ingredients

methyl methacrylate	
Value	Source
not toxic to reproduction	Company data

2-ethylhexyl acrylate	
Value	Source
No known effect.	Company data

Specific target organ toxicity (single exposure) [mg/kg]
Hazardous ingredients

methyl methacrylate	
Value	Source
Causes respiratory tract irritation.	Company data

2-ethylhexyl acrylate	
Value	Source
Causes respiratory tract irritation.	Company data

Specific target organ toxicity (repeated exposure) [mg/kg]
Hazardous ingredients

methyl methacrylate	
Value	Source
No known effect.	Company data

2-ethylhexyl acrylate	
Value	Source
No known effect.	Company data

ATE (mix)

oral [mg/kg]	3192,10
dermal [mg/kg]	150000,00
inhalativ gas [ppmV]	850000,00

inhalative vapor [mg/l]	3400,00
inhalative dust [mg/l]	400,00

11.2 Information about other hazards

Experience in practice

Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Irritating to eyes, respiratory system and skin. Irritating to mucous membranes

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish [mg/l]
Hazardous ingredients

methyl methacrylate					
Value	Test criterion	Test species	Measuring method	Exposure duration [h]	Source
191 mg/l	LC50	Oncorhynchus mykiss (rainbow trout)	OECD Test Guideline 203	96 h	Company data

2-ethylhexyl acrylate					
Value	Test criterion	Test species	Measuring method	Exposure duration [h]	Source
1,81 mg/l	LC50	Oncorhynchus mykiss (rainbow trout)	OECD Test Guideline 203	96 h	Company data

1,1'-(p-Tolylimino)dipropan-2-ol					
Value	Test criterion	Test species	Exposure duration [h]	Source	
17 mg/l	LC50	Brachydanio rerio (zebra fish)	96 h	Company data	

N,N-dimethyl-p-toluidine					
Value	Test criterion			Source	
52 mg/l	LC50			Company data	

Toxicity to daphnia [mg/l]
Hazardous ingredients

methyl methacrylate					
Value	Test criterion	Test species	Exposure duration [h]	Measuring method	Source
69 mg/l	EC50	Daphnia magna (Water flea)	48 h	OECD Test Guideline 202	Company data

2-ethylhexyl acrylate					
Value	Test criterion	Test species	Exposure duration [h]	Measuring method	Source
1,3 mg/l	EC50	Daphnia magna (Water flea)	48 h	OECD Test Guideline 202	Company data

aliphatic urethanacrylate			
Value	Test criterion	Test species	Source
>100 mg/l	LC50	Daphnia magna (Water flea)	Company data

1,1'-(p-Tolylimino)dipropan-2-ol				
Value	Test criterion	Test species	Exposure duration [h]	Source
28,8 mg/l	EC50	Daphnia magna (Water flea)	18 h	Company data

Toxicity to algae [mg/l]
Hazardous ingredients

methyl methacrylate					
Value	Test criterion	Test species	Exposure duration [h]	Measuring method	Source
>110 mg/l	EC50	Selenastrum capricornutum (green algae)	72 h	OECD Test Guideline 201	Company data

2-ethylhexyl acrylate					
Value	Test criterion	Test species	Exposure duration [h]	Measuring method	Source
1,71 mg/l	ErC50	Desmodesmus subspicatus	72 h	OECD Test Guideline 201	Company data

1,1'-(p-Tolylimino)dipropan-2-ol				
Value	Test criterion	Test species	Exposure duration [h]	Source
245 mg/l	EC50	Desmodesmus subspicatus	27 h	Company data

NOEC (fish) [mg/l]
Hazardous ingredients

methyl methacrylate			
Value	Test species	Measuring method	Source
9,4 mg/l	Brachydanio rerio (zebra fish)	OECD Test Guideline 210	Company data

NOEC (daphnia) [mg/l]
Hazardous ingredients

methyl methacrylate			
Value	Test species	Measuring method	Source
37 mg/l	Daphnia magna (Water flea)	OECD Test Guideline 202	Company data

NOEC (algae) [mg/l]
Hazardous ingredients

2-ethylhexyl acrylate			
Value	Test species	Measuring method	Source
0,45 mg/l	Desmodesmus subspicatus	OECD Test Guideline 201	Company data

12.5 Results of PBT and vPvB assessment

No information available

12.6 Endocrine disrupting properties

No information available

12.7 Other adverse effects

No information available

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Disposal considerations	According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. The following Waste Codes are only suggestions:
Waste Code	08 01 11* waste paint and varnish containing organic solvents or other dangerous substances
Uncleaned empty packaging	The return of packaging materials is regulated by the Interseroh system.

SECTION 14: TRANSPORT INFORMATION

14.1 UN number

Land transport ADR/RID	Marine transport IMDG	Air transport ICAO/IATA
1263	1263	1263




14.2 UN proper shipping name

Land transport ADR/RID	Marine transport IMDG	Air transport ICAO/IATA
PAINT	PAINT	PAINT

14.3 Transport hazard class(es)

Land transport ADR/RID	Marine transport IMDG	Air transport ICAO/IATA
3	3	3

14.4 Packing group

	Land transport ADR/RID	Marine transport IMDG	Air transport ICAO/IATA
Packaging group	III	III	III
Labels	3 	3 	3 
Risk No.	30		
Category	3		
Factor	1		
Classification Code	F1		

SP 640	640E		
Tunnel restriction code	D/E		
EmS		F-E; S-E	
Stowage category		A	
UN proper shipping name	UN 1263 PAINT	UN 1263 PAINT	UN 1263 Paint

14.5 Environmental hazards

No information available

14.6 Special precautions for user

No information available

14.7 Maritime transport in bulk according to IMO instruments

Transport in bulk according to Annex II of MARPOL and the IBC Code Not relevant

SECTION 15: REGULATORY INFORMATION

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

Additional regulations Additionally, observe any national regulations!

Classification in compliance with the Industrial Safety Regulation highly flammable

GISCODE RMA10

15.2 Chemical safety assessment

No information available

SECTION 16: OTHER INFORMATION

Modifications since last version Modifications of the previous version are denoted with an asterisk (*).

Relevant H-phrases
 H225: Highly flammable liquid and vapour.
 H300: Fatal if swallowed.
 H301: Toxic if swallowed.
 H311: Toxic in contact with skin.
 H315: Causes skin irritation.
 H317: May cause an allergic skin reaction.
 H319: Causes serious eye irritation.
 H331: Toxic if inhaled.
 H335: May cause respiratory irritation.
 H373: May cause damage to organs through prolonged or repeated exposure .
 H412: Harmful to aquatic life with long lasting effects.

Wording of the hazard classes
 Flam. Liq.: Flammable liquid
 STOT SE: Specific target organ toxicity - single exposure

Skin Irrit.: Skin irritation
Skin Sens.: Skin sensitization
Aquatic Chronic: Hazardous to the aquatic environment
Eye Irrit.: Serious eye irritation
Acute Tox.: Acute toxicity
STOT RE: Specific target organ toxicity - repeated exposure

Classification for mixtures and used evaluation method according to regulation (EC) 1272/2008 [CLP]

Classification	Evaluation
Flam. Liq. 2; H225	Calculated
Skin Irrit. 2; H315	Calculated
Skin Sens. 1; H317	Calculated
STOT SE 3; H335	Calculated

Department issuing safety data sheet

Environmental Department

Recommended restrictions

Reserved for industrial and professional use.

This information is provided in accordance with the current status of our knowledge and experience. The Safety Data Sheet describes products with a view to relevant safety requirements. This information does not constitute a warranty of properties, features or qualities.

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Recommendations for use should be verified as to the suitability and compliance with actual requirements, specifications, installation techniques and any applicable laws and regulations.