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 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 11.01.2024 / 0006
 Replacing version dated / version: 02.03.2021 / 0005
 Valid from: 11.01.2024
 PDF print date: 12.01.2024
 ET/PU-9220 - 2K MMA ADHESIVE OFF-WHITE Component B

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

1.1 Product identifier

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

Relevant identified uses of the substance or mixture:

Adhesive
 UFI: 7DV0-Q0H2-R004-U6SH

Uses advised against:

No information available at present.

1.3 Details of the supplier of the safety data sheet

ETALON is a brand of Alexport Company.
 Industrial Area Sindos, P.C. 570 22, Thessaloniki, Greece
 Tel: +30 2310 501814, info@alexport.gr
 www.alexport.gr, www.etalon-refinish.com

1.4 Emergency telephone number

Emergency information services / official advisory body:

Telephone number of the company in case of emergencies:

112 or call your local doctor/poison center

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) 1272/2008 (CLP)

Hazard class	Hazard category	Hazard statement
Flam. Liq.	2	H225-Highly flammable liquid and vapour.
STOT SE	3	H335-May cause respiratory irritation.
Skin Irrit.	2	H315-Causes skin irritation.
Eye Dam.	1	H318-Causes serious eye damage.
Skin Sens.	1	H317-May cause an allergic skin reaction.
Aquatic Chronic	3	H412-Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labeling according to Regulation (EC) 1272/2008 (CLP)

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Danger

H225-Highly flammable liquid and vapour. H335-May cause respiratory irritation. H315-Causes skin irritation. H318-Causes serious eye damage. H317-May cause an allergic skin reaction. H412-Harmful to aquatic life with long lasting effects.

P210-Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P261-Avoid breathing vapours or spray. P273-Avoid release to the environment. P280-Wear protective gloves / eye protection / face protection. P305+P351+P338-IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310-Immediately call a POISON CENTER / doctor.

Methacrylic acid
Methyl methacrylate
Maleic acid
Rosin
Tosyl chloride
2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, reaction products with phosphorus oxide

2.3 Other hazards

The mixture does not contain any vPvB substance (vPvB = very persistent, very bioaccumulative) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).
The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).
The mixture does not contain any substance with endocrine disrupting properties (< 0,1 %).

SECTION 3: Composition/information on ingredients

3.1 Substances

n.a.

3.2 Mixtures

Methyl methacrylate	Substance for which an EU exposure limit value applies.
Registration number (REACH)	01-2119452498-28-XXXX
Index	607-035-00-6
EINECS, ELINCS, NLP, REACH-IT List-No.	201-297-1
CAS	80-62-6
content %	60-70
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Skin Sens. 1, H317 STOT SE 3, H335

Methacrylic acid	
Registration number (REACH)	01-2119463884-26-XXXX
Index	607-088-00-5
EINECS, ELINCS, NLP, REACH-IT List-No.	201-204-4
CAS	79-41-4

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content %	<5
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Acute Tox. 4, H312 Acute Tox. 4, H302 Skin Corr. 1A, H314 Eye Dam. 1, H318
Specific Concentration Limits and ATE	STOT SE 3, H335: ≥ 1 % ATE (oral): 1320 mg/kg ATE (dermal): 1100 mg/kg

Maleic acid	
Registration number (REACH)	01-2119488705-25-XXXX
Index	607-095-00-3
EINECS, ELINCS, NLP, REACH-IT List-No.	203-742-5
CAS	110-16-7
content %	<3
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT SE 3, H335
Specific Concentration Limits and ATE	Skin Sens. 1, H317: $\geq 0,1$ % ATE (oral): 1030 mg/kg

2,6-di-tert-butyl-p-cresol	
Registration number (REACH)	01-2119555270-46-XXXX
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	204-881-4
CAS	128-37-0
content %	<1,3
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)

Rosin	
Registration number (REACH)	01-2119480418-32-XXXX
Index	650-015-00-7
EINECS, ELINCS, NLP, REACH-IT List-No.	232-475-7
CAS	8050-09-7
content %	<1
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Skin Sens. 1, H317

.alpha.,.alpha.-dimethylbenzyl hydroperoxide	
Registration number (REACH)	01-2119475796-19-XXXX
Index	617-002-00-8
EINECS, ELINCS, NLP, REACH-IT List-No.	201-254-7
CAS	80-15-9
content %	<1
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Org. Perox. Type E, H242 Acute Tox. 3, H331 Acute Tox. 4, H312 Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT RE 2, H373 Aquatic Chronic 2, H411

Specific Concentration Limits and ATE	Skin Corr. 1B, H314: ≥ 10 % Skin Irrit. 2, H315: ≥ 3 % Eye Dam. 1, H318: ≥ 3 % Eye Irrit. 2, H319: ≥ 1 % STOT SE 3, H335: ≥ 1 % ATE (oral): 382 mg/kg ATE (dermal): 1200 mg/kg ATE (as inhalation, Dusts or mist): 0,5 mg/l/4h ATE (as inhalation, Vapours): 3 mg/l/4h
Tosyl chloride	
Registration number (REACH)	01-2119971273-36-XXXX
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	202-684-8
CAS	98-59-9
content %	<1
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Met. Corr. 1, H290 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1A, H317
2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, reaction products with phosphorus oxide	
Registration number (REACH)	01-2120140608-57-XXXX
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	810-703-1
CAS	1187441-10-6
content %	<1
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Met. Corr. 1, H290 Skin Corr. 1A, H314 Eye Dam. 1, H318 Skin Sens. 1B, H317
Ethylenebis(oxyethylene) bis[3-(5-tert-butyl-4-hydroxy-m-tolyl)propionate]	
Registration number (REACH)	---
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	253-039-2
CAS	36443-68-2
content %	<0,1
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Aquatic Chronic 1, H410 (M=10)

For the text of the H-phrases and classification codes (GHS/CLP), see Section 16.

The substances named in this section are given with their actual, appropriate classification!

For substances that are listed in appendix VI, table 3.1 of the regulation (EC) no. 1272/2008 (CLP regulation) this means that all notes that may be given here for the named classification have been taken into account.

The addition of the highest concentrations listed here can result in a classification. Only when this classification is listed in Section 2 does it apply. In all other cases the total concentration is below the classification.

SECTION 4: First aid measures

4.1 Description of first aid measures

First-aiders should ensure they are protected!

Never pour anything into the mouth of an unconscious person!

Inhalation

Remove person from danger area.

Supply person with fresh air and consult doctor according to symptoms.

Skin contact

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Remove polluted, soaked clothing immediately, wash thoroughly with plenty of water and soap, in case of irritation of the skin (flare), consult a doctor.

Eye contact

Remove contact lenses.

Wash thoroughly for several minutes using copious water - call doctor immediately, have Data Sheet available.

Protect uninjured eye.

Follow-up examination by an ophthalmologist.

Ingestion

Rinse the mouth thoroughly with water.

Do not induce vomiting - give copious water to drink. Consult doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

If applicable delayed symptoms and effects can be found in section 11 and the absorption route in section 4.1.

In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours.

eyes, reddened

watering eyes

irritation of the eyes

reddening of the skin

Dermatitis (skin inflammation)

Allergic reaction

Irritation of the respiratory tract

Coughing

4.3 Indication of any immediate medical attention and special treatment needed

Symptomatic treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water jet spray/foam/CO2/dry extinguisher

Unsuitable extinguishing media

High volume water jet

5.2 Special hazards arising from the substance or mixture

In case of fire the following can develop:

Oxides of carbon

Halogen halides

Toxic gases

Possible build up of explosive/highly flammable vapour/air mixture.

5.3 Advice for firefighters

For personal protective equipment see Section 8.

In case of fire and/or explosion do not breathe fumes.

Protective respirator with independent air supply.

According to size of fire

Full protection, if necessary.

Cool container at risk with water.

Dispose of contaminated extinction water according to official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel

In case of spillage or accidental release, wear personal protective equipment as specified in section 8 to prevent contamination.

Ensure sufficient ventilation, remove sources of ignition.

Avoid dust formation with solid or powder products.

Leave the danger zone if possible, use existing emergency plans if necessary.

Keep unprotected persons away.

Avoid inhalation, and contact with eyes or skin.

If applicable, caution - risk of slipping.

6.1.2 For emergency responders

See section 8 for suitable protective equipment and material specifications.

6.2 Environmental precautions

If leakage occurs, dam up.

Resolve leaks if this possible without risk.

Prevent from entering drainage system.

Prevent surface and ground-water infiltration, as well as ground penetration.

If accidental entry into drainage system occurs, inform responsible authorities.

6.3 Methods and material for containment and cleaning up

Soak up with absorbent material (e.g. universal binding agent, sand, diatomaceous earth) and dispose of according to Section 13.

Fill the absorbed material into lockable containers.

6.4 Reference to other sections

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

SECTION 7: Handling and storage

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.

7.1 Precautions for safe handling

7.1.1 General recommendations

Ensure good ventilation.

Avoid inhalation of the vapours.

Avoid contact with eyes or skin.

Keep away from sources of ignition - Do not smoke.

Take measures against electrostatic charging, if appropriate.

Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.

Observe directions on label and instructions for use.

Use working methods according to operating instructions.

7.1.2 Notes on general hygiene measures at the workplace

General hygiene measures for the handling of chemicals are applicable.

Wash hands before breaks and at end of work.

Keep away from food, drink and animal feedingstuffs.

Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

7.2 Conditions for safe storage, including any incompatibilities

Keep out of access to unauthorised individuals.

Store product closed and only in original packing.

Not to be stored in gangways or stair wells.

Do not store with flammable or self-igniting materials.

Protect from direct sunlight and warming.

Store in a well ventilated place.

Store cool.

Observe special storage conditions.

7.3 Specific end use(s)

No information available at present.

Observe the instructions for good working practice and the recommendations for risk assessment.

Consult hazardous substance information systems, e.g. from the professional associations, the chemical industry or different industries,

depending on the application (building materials, wood, chemistry, laboratory, leather, metal).

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Chemical Name	Methyl methacrylate		
WEL-TWA: 50 ppm (208 mg/m3) (WEL-TWA), 50 ppm (EU)	WEL-STEL: 100 ppm (416 mg/m3) (WEL-STEL), 100 ppm (EU)	---	
Monitoring procedures:	<ul style="list-style-type: none">- Compur - KITA-184 S (548 618)- NIOSH 2537 (Methyl and ethyl metacrylate) - 2003 - EU project- BC/CEN/ENTR/000/2002-16 card 109-2 (2004)- OSHA 94 (Methyl Methacrylate) - 1992		

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BMGV: --- Other information: ---	
Chemical Name	Methacrylic acid
WEL-TWA: 20 ppm (72 mg/m3) WEL-STEL: 40 ppm (143 mg/m3) ---	
Monitoring procedures: ---	
BMGV: --- Other information: ---	
Chemical Name	2,6-di-tert-butyl-p-cresol
WEL-TWA: 10 mg/m3 WEL-STEL: --- ---	
Monitoring procedures: ---	
BMGV: --- Other information: ---	
Chemical Name	Rosin
WEL-TWA: 0,05 mg/m3 (Rosin-based solder flux fume) WEL-STEL: 0,15 mg/m3 (Rosin-based solder flux fume) ---	
Monitoring procedures: ---	
BMGV: ---	Other information: Sen (Rosin-based solder flux fume)
Chemical Name	Tosyl chloride
WEL-TWA: --- WEL-STEL: 5 mg/m3 ---	
Monitoring procedures: ---	
BMGV: ---	Other information: ---
Chemical Name	Methanol
WEL-TWA: 200 ppm (266 mg/m3) (WEL-TWA), 200 ppm (260 mg/m3) (EU) WEL-STEL: 250 ppm (333 mg/m3) (WEL-STEL) ---	
Monitoring procedures:	<ul style="list-style-type: none"> - Draeger - Alcohol 25/a Methanol (81 01 631) - Compur - KITA-119 SA (549 640) - Compur - KITA-119 U (549 657) - DFG Meth. Nr. 6 (D) (Lösungsmittelgemische 6), DFG (E) (Solvent mixtures 6) - 2013, 2002 - EU project BC/CEN/ENTR/000/2002-16 card 65-1 (2004) - NIOSH 2000 (METHANOL) - 1998 - NIOSH 2549 (VOLATILE ORGANIC COMPOUNDS (SCREENING)) - 1996 - NIOSH 3800 (ORGANIC AND INORGANIC GASES BY EXTRACTIVE FTIR SPECTROMETRY) - 2016 - Draeger - Alcohol 100/a (CH 29 701)
BMGV: ---	Other information: Sk (WEL, EU)

Methyl methacrylate						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,94	mg/l	
	Environment - soil		PNEC	1,47	mg/kg	
	Environment - sewage treatment plant		PNEC	10	mg/l	
	Environment - marine		PNEC	0,094	mg/l	
	Environment - sediment		PNEC	5,74	mg/kg	
	Environment - sediment, freshwater		PNEC	10,2	mg/kg	
	Environment - sediment, marine		PNEC	0,102	mg/kg	
Consumer	Human - inhalation	Short term, local effects	DNEL	208	mg/m3	
Consumer	Human - oral	Long term, systemic effects	DNEL	8,2	mg/kg	
Consumer	Human - dermal	Short term, local effects	DNEL	1,5	mg/cm2	
Consumer	Human - inhalation	Long term, local effects	DNEL	104	mg/m3	
Consumer	Human - dermal	Long term, local effects	DNEL	1,5	mg/cm2	

Consumer Human - inhalation	Long term, systemic effects	DNEL	74,3	mg/m3	
Consumer	Human - dermal	Long term, systemic effects	DNEL	8,2	mg/kg bw/day
Consumer	Human - oral	Long term, local effects	DNEL	1,5	mg/cm2
Industrial / commercial	Human - dermal	Long term, local effects	DNEL	1,5	mg/cm2
Industrial / commercial	Human - inhalation	Long term, local effects	DNEL	208	mg/m3
Industrial / commercial	Human - inhalation	Long term, systemic effects	DNEL	208	mg/m3
Industrial / commercial	Human - dermal	Long term, systemic effects	DNEL	13,67	mg/kg
Industrial / commercial	Human - dermal	Short term, local effects	DNEL	1,5	mg/cm2
Workers / employees	Human - inhalation	Long term, local effects	DNEL	208	mg/m3
Workers / employees	Human - dermal	Long term, local effects	DNEL	1,5	mg/cm2
Workers / employees	Human - inhalation	Short term, local effects	DNEL	416	mg/m3
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	13,67	mg/kg
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	348,4	mg/m3
Workers / employees	Human - dermal	Short term, local effects	DNEL	1,5	mg/cm2

Methacrylic acid

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
Consumer	Human - inhalation	Long term, local effects	DNEL	6,55	mg/m3	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	6,3	mg/m3	
Consumer	Human - dermal	Long term, systemic effects	DNEL	2,55	mg/kg bw/d	
Consumer	Human - dermal	Short term, local effects	DNEL	1	% (w/w)	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	29,6	mg/m3	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	88	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	4,25	mg/kg bw/d	

Maleic acid

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,074	mg/l	
	Environment - periodic release		PNEC	0,744	mg/l	
	Environment - sediment, freshwater		PNEC	0,0624	mg/kg	
	Environment - sewage treatment plant		PNEC	3,33	mg/l	

Environment - marine PNEC	0,01mg/l					
Environment - sediment,			PNEC	0,033	mg/kg	
marine						
	Environment - soil		PNEC	0,042	mg/kg	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	3	mg/m3	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	3	mg/m3	
Workers / employees	Human - inhalation	Short term, local effects	DNEL	3	mg/m3	
Workers / employees	Human - inhalation	Short term, systemic effects	DNEL	3	mg/m3	
Workers / employees	Human - dermal	Short term, local effects	DNEL	0,55	mg/cm2	
Workers / employees	Human - dermal	Long term, local effects	DNEL	0,04	mg/cm2	
Workers / employees	Human - dermal	Short term, systemic effects	DNEL	58	mg/kg	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	3,3	mg/kg	

2,6-di-tert-butyl-p-cresol						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - soil		PNEC	1,04	mg/kg ww	
	Environment - sewage treatment plant		PNEC	0,017	mg/l	
	Environment - sediment		PNEC	1,29	mg/kg ww	
	Environment - marine		PNEC	0,02	µg/l	
	Environment - water, sporadic (intermittent) release		PNEC	1,99	µg/l	
	Environment - freshwater		PNEC	0,199	µg/l	
	Environment - oral (animal feed)		PNEC	16,67	mg/kg feed	
	Environment - soil		PNEC	0,054	mg/kg dw	
	Environment - sediment, freshwater		PNEC	0,458	mg/kg dw	
	Environment - sediment, marine		PNEC	0,046	mg/kg dw	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	0,435	mg/m3	
Consumer	Human - dermal	Long term, systemic effects	DNEL	0,25	mg/kg bw/d	
Consumer	Human - oral	Long term, systemic effects	DNEL	0,25	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	1,76	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	0,5	mg/kg bw/day	

Rosin						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,005	mg/l	
	Environment - marine		PNEC	0,0005	mg/l	

Environment - sewage	treatment plant		PNEC	1000	mg/l	
	Environment - soil		PNEC	21,4	mg/kg	
	Environment - sediment, freshwater		PNEC	0,007	mg/kg dw	
	Environment - sediment, marine		PNEC	0,0007	mg/kg dw	
	Environment - sporadic (intermittent) release		PNEC	0,016	mg/l	
Consumer	Human - dermal	Long term, systemic effects	DNEL	10	mg/kg bw/d	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	35	mg/m3	
Consumer	Human - oral	Long term, systemic effects	DNEL	10	mg/kg bw/d	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	17	mg/kg bw/d	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	117	mg/m3	

.alpha.,.alpha.-dimethylbenzyl hydroperoxide						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,0031	mg/l	
	Environment - marine		PNEC	0,00031	mg/l	
	Environment - sporadic (intermittent) release		PNEC	0,031	mg/l	
	Environment - soil		PNEC	0,0029	mg/kg	
	Environment - sewage treatment plant		PNEC	0,35	mg/l	
	Environment - sediment, freshwater		PNEC	0,023	mg/kg	
	Environment - sediment, marine		PNEC	0,0023	mg/kg	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	6	mg/m3	

Tosyl chloride						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	0,5	mg/kg bw/d	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	3,5	mg/m3	

2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, reaction products with phosphorus oxide						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
Consumer	Human - oral	Long term, systemic effects	DNEL	0,5	mg/kg bw/d	
Consumer	Human - dermal	Long term, systemic effects	DNEL	0,5	mg/kg bw/d	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	3,53	mg/m3	

Workers / employees Human	- dermal	Long term, systemic effects	DNEL	1	mg/kg bw/d	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	7,05	mg/m3	

Ethylenebis(oxyethylene) bis[3-(5-tert-butyl-4-hydroxy-m-tolyl)propionate]						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
Consumer	Human - oral	Long term, systemic effects	DNEL	4,3	mg/kg bw/d	
Consumer	Human - dermal	Long term, systemic effects	DNEL	43	mg/kg bw/d	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	86	mg/kg bw/d	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	3	mg/m3	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	3	mg/m3	

Methanol						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	154	mg/l	
	Environment - marine		PNEC	15,4	mg/l	
	Environment - sediment, freshwater		PNEC	570,4	mg/kg	
	Environment - sediment, marine		PNEC	57,04	mg/kg	
	Environment - soil		PNEC	23,5	mg/kg	
	Environment - water, sporadic (intermittent) release		PNEC	1540	mg/l	
	Environment - sewage treatment plant		PNEC	100	mg/l	
Consumer	Human - inhalation	Long term, local effects	DNEL	26	mg/m3	
Consumer	Human - inhalation	Short term, local effects	DNEL	26	mg/m3	
Consumer	Human - dermal	Short term, systemic effects	DNEL	4	mg/kg bw/day	
Consumer	Human - inhalation	Short term, systemic effects	DNEL	26	mg/m3	
Consumer	Human - oral	Short term, systemic effects	DNEL	4	mg/kg bw/day	
Consumer	Human - dermal	Long term, systemic effects	DNEL	4	mg/kg bw/day	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	26	mg/m3	
Consumer	Human - oral	Long term, systemic effects	DNEL	4	mg/kg bw/day	
Workers / employees	Human - dermal	Short term, systemic effects	DNEL	20	mg/kg bw/day	
Workers / employees	Human - inhalation	Short term, systemic effects	DNEL	130	mg/m3	
Workers / employees	Human - inhalation	Short term, local effects	DNEL	130	mg/m3	

Workers / employees Human - dermal	Long term, systemic effects	DNEL	20	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	130	mg/m3
Workers / employees	Human - inhalation	Long term, local effects	DNEL	130	mg/m3

GB - United Kingdom | WEL-TWA = Workplace Exposure Limit - Long-term exposure limit - 8-hour TWA (= time weighted average) reference period (EH40/2005 Workplace exposure limits (Fourth Edition 2020)).
 (EU) = Directive 91/322/EEC, 98/24/EC, 2000/39/EC, 2004/37/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU or 2019/1831/EU:
 (8) = Inhalable fraction (2004/37/EC, 2017/164/EU). (9) = Respirable fraction (2004/37/EC, 2017/164/EU). (11) = Inhalable fraction (2004/37/EC). (12) = Inhalable fraction. Respirable fraction in those Member States that implement, on the date of the entry into force of this Directive, a biomonitoring system with a biological limit value not exceeding 0,002 mg Cd/g creatinine in urine (2004/37/EC). |
 | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit - 15-minute reference period (EH40/2005 Workplace exposure limits (Fourth Edition 2020)).
 (EU) = Directive 91/322/EEC, 98/24/EC, 2000/39/EC, 2004/37/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU or 2019/1831/EU:
 (8) = Inhalable fraction (2004/37/EC, 2017/164/EU). (9) = Respirable fraction (2004/37/EC, 2017/164/EU). (10) = Short-term exposure limit value in relation to a reference period of 1 minute (2017/164/EU). |
 | BMGV = Biological monitoring guidance value (EH40/2005 Workplace exposure limits (Fourth Edition 2020)).
 (EU) = Directive 98/24/EC or 2004/37/EC or SCOEL (Biological Limit Value - BLV, Recommendation from the Scientific Committee on Occupational Exposure Limits (SCOEL)) |
 | Other information (EH40/2005 Workplace exposure limits (Fourth Edition 2020)): Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.
 (EU) = Directive 91/322/EEC, 98/24/EC, 2000/39/EC, 2004/37/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU or 2019/1831/EU:
 (13) = The substance can cause sensitisation of the skin and of the respiratory tract (2004/37/EC), (14) = The substance can cause sensitisation of the skin (2004/37/EC). |

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Ensure good ventilation. This can be achieved by local suction or general air extraction.

If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn.

Applies only if maximum permissible exposure values are listed here.

Suitable assessment methods for reviewing the effectiveness of protection measures adopted include metrological and non-metrological investigative techniques.

These are specified by e.g. EN 14042.

EN 14042 "Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents".

8.2.2 Individual protection measures, such as personal protective equipment

General hygiene measures for the handling of chemicals are applicable.

Wash hands before breaks and at end of work.

Keep away from food, drink and animal feedingstuffs.

Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

Eye/face protection:

Tight fitting protective goggles with side protection (EN 166).

Skin protection - Hand protection:

Chemical resistant protective gloves (EN ISO 374).

Recommended

Protective gloves in butyl rubber (EN ISO 374).

Minimum layer thickness in mm:

0,7

Permeation time (penetration time) in minutes:

> 60

The statement depends on the properties of the individual components.

The breakthrough times determined in accordance with EN 16523-1 were not obtained under practical conditions.

The recommended maximum wearing time is 50% of breakthrough time.

Protective hand cream recommended.

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Skin protection - Other:

Protective working garments (e.g. safety shoes EN ISO 20345, long-sleeved protective working garments).

Respiratory protection:

If OES or MEL is exceeded.

Gas mask filter A (EN 14387), code colour brown

Observe wearing time limitations for respiratory protection equipment.

Thermal hazards:

Not applicable

Additional information on hand protection - No tests have been performed.

In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents.

Selection of materials derived from glove manufacturer's indications.

Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.

Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.

In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use.

The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

8.2.3 Environmental exposure controls

No information available at present.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state: Liquid 20°C

Colour: According to specification

Odour: Characteristic

Melting point/freezing point: There is no information available on this parameter.

Boiling point or initial boiling point and boiling range: There is no information available on this parameter.

Flammability: Flammable

Lower explosion limit: There is no information available on this parameter.

Upper explosion limit: There is no information available on this parameter.

Flash point: 11 °C (closed cup)

Auto-ignition temperature: There is no information available on this parameter.

Decomposition temperature: There is no information available on this parameter.

pH: Mixture is non-soluble (in water).

Kinematic viscosity: >40 mm²/s (40°C)

Solubility: Not miscible

Partition coefficient n-octanol/water (log value): Does not apply to mixtures.

Vapour pressure: There is no information available on this parameter.

Density and/or relative density: 1-1,03 (relative density)

Relative vapour density: There is no information available on this parameter.

Particle characteristics: Does not apply to liquids.

9.2 Other information

Explosives: Product is not explosive. Possible build up of explosive/highly flammable vapour/air mixture.

Oxidising liquids: There is no information available on this parameter.

SECTION 10: Stability and reactivity

10.1 Reactivity

The product has not been tested.

10.2 Chemical stability

Stable with proper storage and handling.

10.3 Possibility of hazardous reactions

No dangerous reactions are known.

10.4 Conditions to avoid

Heating, open flame, ignition sources

10.5 Incompatible materials

Avoid contact with strong oxidizing agents.

10.6 Hazardous decomposition products

No decomposition when used as directed.

SECTION 11: Toxicological information**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

Possibly more information on health effects, see Section 2.1 (classification).

MMA 6208 Adhesive						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	ATE	>2000	mg/kg		calculated value	
Acute toxicity, by dermal route:	ATE	>2000	mg/kg			calculated value
Acute toxicity, by inhalation:	ATE	>20	mg/l/4h			calculated value, Vapours
Acute toxicity, by inhalation:	ATE	>5	mg/l/4h			calculated value, Aerosol
Skin corrosion/irritation:						n.d.a.
Serious eye damage/irritation:						n.d.a.
Respiratory or skin sensitisation:						n.d.a.
Germ cell mutagenicity:						n.d.a.
Carcinogenicity:						n.d.a.
Reproductive toxicity:						n.d.a.
Specific target organ toxicity - single exposure (STOT-SE):						n.d.a.
Specific target organ toxicity - repeated exposure (STOT-RE):						n.d.a.
Aspiration hazard:						n.d.a.
Symptoms:						n.d.a.

Methyl methacrylate						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>6000	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	>5000	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LC50	29,8	mg/l/4h	Rat		Vapours
Skin corrosion/irritation:				Rabbit		Skin Irrit. 2
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Mild irritant
Respiratory or skin sensitisation:				Human being		Skin Sens. 1
Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	Yes (skin contact)
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Carcinogenicity:						Negative
Reproductive toxicity:						Negative
Specific target organ toxicity - repeated exposure (STOT-RE):	NOAEL	2000	ppm	Rat		

Aspiration hazard: No indications						of such an effect.
Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	NOAEL	25	ppm	Rat	OECD 453 (Combined Chronic Toxicity/Carcinogenicity Studies)	
Symptoms:						breathing difficulties, respiratory distress, drowsiness, drop in blood pressure, coughing, headaches, fatigue, mucous membrane irritation, watering eyes, mental confusion

Methacrylic acid						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	1320-2260	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by oral route:	LD50	1250	mg/kg	Mouse		
Acute toxicity, by oral route:	ATE	1320	mg/kg			
Acute toxicity, by dermal route:	ATE	1100	mg/kg			
Acute toxicity, by inhalation:	LC50	7,1	mg/l/4h	Rat		
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Corrosive
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Corrosive
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	Not sensitising
Germ cell mutagenicity:					in vitro	Negative
Symptoms:						asthmatic symptoms, respiratory distress, eyes, reddened, unconsciousness, burning of the membranes of the nose and throat, heart/circulatory disorders, cornea opacity, coughing, headaches

Maleic acid						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	1030	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	

Acute toxicity, by oral route: AT	E1030mg/kg					
Acute toxicity, by dermal route:	LD50	2620	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LC50	>720	mg/m3	Rat		
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Intensively irritant
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	Sensitising
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Symptoms:						breathing difficulties, respiratory distress, eyes, reddened, coughing, headaches, gastrointestinal disturbances, mucous membrane irritation, nausea and vomiting.
Specific target organ toxicity - single exposure (STOT-SE), inhalative:						Target organ(s): respiratory organs, May cause respiratory irritation.

2,6-di-tert-butyl-p-cresol

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>2930	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:				Rabbit	(Draize-Test)	Not irritant
Respiratory or skin sensitisation:				Human being		No (skin contact)
Germ cell mutagenicity:					(Ames-Test)	Negative
Germ cell mutagenicity:				Mouse	in vivo	Negative
Carcinogenicity:	NOAEL	247	mg/kg bw/d	Rat		Negative
Reproductive toxicity (Developmental toxicity):	NOAEL	100	mg/kg	Rat		
Reproductive toxicity (Effects on fertility):	NOAEL	500	mg/kg	Rat		
Specific target organ toxicity - repeated exposure (STOT-RE):	NOEL	25	mg/kg	Rat		(28 d)
Aspiration hazard:						No

Symptoms: mucous						membrane irritation
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Rosin						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	2800	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rat		
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:						Mechanical irritation possible.
Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	Negative, Does not conform with EU classification.
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Reproductive toxicity:	NOEL	3000	ppm	Rat	OECD 421 (Reproduction/Developmental Toxicity Screening Test)	No indications of such an effect.
Specific target organ toxicity - repeated exposure (STOT-RE):	NOAEL	600	mg/kg/d	Rat	OECD 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)	
Aspiration hazard:						No
Symptoms:						asthmatic symptoms, headaches, gastrointestinal disturbances, dizziness, nausea

.alpha.,.alpha.-dimethylbenzyl hydroperoxide						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	382	mg/kg	Rat		
Acute toxicity, by oral route:	ATE	382	mg/kg			
Acute toxicity, by dermal route:	ATE	1200	mg/kg			
Acute toxicity, by dermal route:	LD50	1200	mg/kg	Rat		
Acute toxicity, by inhalation:	LC50	220	ppm	Rat		(4h)
Acute toxicity, by inhalation:	ATE	3	mg/l/4h			Vapours
Acute toxicity, by inhalation:	ATE	0,5	mg/l/4h			Dusts or mist
Skin corrosion/irritation:				Rabbit		Skin Corr. 1B
Symptoms:						respiratory distress, vomiting, cornea opacity, coughing, mucous membrane irritation

Tosyl chloride						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes

Acute toxicity, by oral route: LD ₅₀ 4680 mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Skin corrosion/irritation:	Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Irritant
Serious eye damage/irritation:			Rabbit
Respiratory or skin sensitisation:			Mouse
Germ cell mutagenicity:			
Germ cell mutagenicity:			
Reproductive toxicity:	NOAEL	750	mg/kg bw/d
Specific target organ toxicity - repeated exposure (STOT-RE):	NOAEL	750	mg/kg bw/d
Symptoms:			

Ethylenebis(oxyethylene) bis[3-(5-tert-butyl-4-hydroxy-m-tolyl)propionate]

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD ₅₀	> 7000	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD ₅₀	>2000	mg/kg	Rat	OECD 402 (Acute Dermal Toxicity)	
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	Not sensitising
Carcinogenicity:	NOAEL	15	mg/kg	Rat	OECD 453 (Combined Chronic Toxicity/Carcinogenicity Studies)	

Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAEL	1000	mg/kg/d	Monkey	OECD 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents)	
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Methanol						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	ATE	300	mg/kg	Human being		Experiences on persons.
Acute toxicity, by dermal route:	LD50	17100	mg/kg	Rabbit		Does not conform with EU classification.
Acute toxicity, by dermal route:	ATE	300	mg/kg			
Acute toxicity, by inhalation:	ATE	3	mg/l/4h			Vapours
Acute toxicity, by inhalation:	ATE	0,5	mg/l/4h			Dusts or mist
Skin corrosion/irritation:				Rabbit		Not irritantBASF-Test
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	No (skin contact)
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Germ cell mutagenicity:				Mammalian	OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative
Germ cell mutagenicity:				Mouse	OECD 474 (Mammalian Erythrocyte Micronucleus Test)	Negative
Carcinogenicity:				Mouse	OECD 453 (Combined Chronic Toxicity/Carcinogenicity Studies)	Negative
Reproductive toxicity:	NOAEL	1,3	mg/l	Mouse	OECD 416 (Two-generation Reproduction Toxicity Study)	
Specific target organ toxicity - repeated exposure (STOT-RE):	NOAEL	0,13	mg/l	Rat	OECD 453 (Combined Chronic Toxicity/Carcinogenicity Studies)	
Symptoms:						abdominal pain, vomiting, headaches, gastrointestinal disturbances, drowsiness, visual disturbances, watering eyes, nausea, mental confusion, intoxication, dizziness

11.2. Information on other hazards

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Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Endocrine disrupting properties:						Does not apply to mixtures.
Other information:						No other relevant information available on adverse effects on health.

SECTION 12: Ecological information

Possibly more information on environmental effects, see Section 2.1 (classification).

MMA 6208 Adhesive

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish: n.d.a.							
12.1. Toxicity to daphnia:							n.d.a.
12.1. Toxicity to algae:							n.d.a.
12.2. Persistence and degradability:							n.d.a.
12.3. Bioaccumulative potential:							n.d.a.
12.4. Mobility in soil:							n.d.a.
12.5. Results of PBT and vPvB assessment							n.d.a.
12.6. Endocrine disrupting properties:							Does not apply to mixtures.
12.7. Other adverse effects:							No information available on other adverse effects on the environment.
Other information:							Does not contain any organically bound halogens which can contribute to the AOX value in waste water.
Other information:							DOC-elimination degree(complexing organic substance)>= 80%/28d: n.a.

Methyl methacrylate

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	130	mg/l	Pimephales promelas	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	48h	69	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	

12.1. Toxicity to daphnia:	NOEC/NOEL	21d	37	mg/l	Daphnia magna	OECD 211 (Daphnia magna Reproduction Test)	
12.1. Toxicity to algae:	NOEC/NOEL	72h	49	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	EC50	96h	37	mg/l	Selenastrum capricornutum	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	>95	%		OECD 302 B (Inherent Biodegradability - Zahn-Wellens/EMPA Test)	Readily biodegradable
12.3. Bioaccumulative potential:	Log Pow		1,32-1,38			OECD 107 (Partition Coefficient (n-octanol/water) - Shake Flask Method)	A notable biological accumulation potential is not to be expected (LogPow 1-3).
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance

Methacrylic acid

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	85	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to fish:	LC50	96h	100-180	mg/l	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to fish:	NOEC/NOEL	35d	10	mg/l	Brachydanio rerio	OECD 210 (Fish, Early-Life Stage Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	48h	>130	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	53	mg/l		OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	EC50	72h	45	mg/l	Selenastrum capricornutum	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	86	%		OECD 301 D (Ready Biodegradability - Closed Bottle Test)	
12.3. Bioaccumulative potential:	Log Pow		0,93				Bioaccumulation is unlikely (LogPow < 1).

Maleic acid

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	75mg/l	Pimephales			
12.1. Toxicity to daphnia:	EC50	48h	42,81	mg/l	promelas Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	EC50	72h	74,35	mg/l	Pseudokirchnerie lla subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	97	%		OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	Readily biodegradable
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Other information:	ThOD		830	mg/g			References
Water solubility:			478,8	g/l			20°C

2,6-di-tert-butyl-p-cresol

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	NOEC/NOEL	42d	0,053	mg/l	Oryzias latipes	OECD 210 (Fish, Early-Life Stage Toxicity Test)	
12.1. Toxicity to fish:	LC50	96h	>0,57	mg/l	Brachydanio rerio	84/449/EEC C.1	
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	0,023	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to daphnia:	EC50	48h	0,45	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	EC50	72h	>0,4	mg/l	Desmodesmus subspicatus	84/449/EEC C.3	
12.1. Toxicity to algae:	EC50	72h	0,5	mg/l	Desmodesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	NOEC/NOEL	72h	0,4	mg/l	Desmodesmus subspicatus	84/449/EEC C.3	
12.2. Persistence and degradability:		28d	4,5	%		OECD 301 C (Ready Biodegradability - Modified MITI Test (I))	Not readily biodegradable
12.3. Bioaccumulative potential:	Log Pow		5,1				High
12.3. Bioaccumulative potential:	BCF		330-1800		Cyprinus caprio	OECD 305 (Bioconcentration - Flow-Through Fish Test)	
12.3. Bioaccumulative potential:			230-2500		Cyprinus carpio	OECD 305 (Bioconcentration - Flow-Through Fish Test)	56d
12.4. Mobility in soil:	Log Koc		3,9-4,2				

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12.4. Mobility in soil: Koc	14750						
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EC50	3h	>10000	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	
Other information:	Koc		14750				
Other information:	Log Koc		3,9-4,2				
Other information:	AOX						Does not contain any organically bound halogens which can contribute to the AOX value in waste water.
Water solubility:			0,00076	g/l			

Rosin							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	NOELR	96h	1	mg/l	Brachydanio rerio		
12.1. Toxicity to daphnia:	LC0	48h	3,8-5,4	mg/l		OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	EC50	72h	400-410	mg/l	Scenedesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	89	%		OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	Readily biodegradable
12.3. Bioaccumulative potential:	BCF		<=130				Oncorhynchus mykiss
Toxicity to bacteria:	EC50	3h	>10000	mg/l	activated sludge	DIN EN ISO 11348-2	
Water solubility:			<1	mg/l			20°C

.alpha.,.alpha.-dimethylbenzyl hydroperoxide							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	3,9	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	48h	18	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	ErC50	72h	3,1	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	

12.2. Persistence and degradability:		28d	3	%		OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	
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Tosyl chloride							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	>100	mg/l	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity Test)	
12.2. Persistence and degradability:		28d	60	%		OECD 301 D (Ready Biodegradability - Closed Bottle Test)	Biodegradable
12.1. Toxicity to daphnia:	EC50	48h	>334	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	EC50	72h	>100	mg/l	Pseudokirchneriella subcapitata	U.S. EPA ECOTOX Database	
Toxicity to bacteria:	NOEC/NOEL	3h	580	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	Analogous conclusion

Methanol							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	15400	mg/l	Lepomis macrochirus		EPA-660/3-75-009
12.1. Toxicity to daphnia:	EC50	96h	18260	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	EC50	96h	22000	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	99	%		OECD 301 D (Ready Biodegradability - Closed Bottle Test)	Readily biodegradable
12.3. Bioaccumulative potential:	BCF		28400		Chlorella vulgaris		Not to be expected
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance

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Toxicity to bacteria: IC ₅₀ 3h>1000mg/lactivated sludgeOECD 209						(Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	
Other information: Log Pow-0,77							
Other information: DOC<70%							
Other information: BOD>60%							

SECTION 13: Disposal considerations

13.1 Waste treatment methods

For the substance / mixture / residual amounts

EC disposal code no.:

The waste codes are recommendations based on the scheduled use of this product.

Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2014/955/EU)

08 04 09 waste adhesives and sealants containing organic solvents or other hazardous substances

Recommendation:

Sewage disposal shall be discouraged.

Pay attention to local and national official regulations.

E.g. suitable incineration plant.

Hardened product:

E.g. dispose at suitable refuse site.

For contaminated packing material

Pay attention to local and national official regulations.

Empty container completely.

Uncontaminated packaging can be recycled.

Dispose of packaging that cannot be cleaned in the same manner as the substance.

Do not perforate, cut up or weld uncleaned container.

Residues may present a risk of explosion.

SECTION 14: Transport information

General statements

Transport by road/by rail (ADR/RID)

14.1. UN number or ID number:	1133	
14.2. UN proper shipping name:		
UN 1133 ADHESIVES		
14.3. Transport hazard class(es):	3	
14.4. Packing group:	III	
14.5. Environmental hazards:	Not applicable	
Tunnel restriction code:	E	
Classification code:	F1	
LQ:	5 L	
Transport category:	3	



Transport by sea (IMDG-code)

14.1. UN number or ID number:	1133	
14.2. UN proper shipping name:		
UN 1133 ADHESIVES		
14.3. Transport hazard class(es):	3	
14.4. Packing group:	III	
14.5. Environmental hazards:	Not applicable	
Marine Pollutant:	Not applicable	
EmS:	F-E, S-D	



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Transport by air (IATA)

- 14.1. UN number or ID number: 1133
14.2. UN proper shipping name:
UN 1133 Adhesives
14.3. Transport hazard class(es): 3
14.4. Packing group: III
14.5. Environmental hazards: Not applicable



14.6. Special precautions for user

Persons employed in transporting dangerous goods must be trained.
All persons involved in transporting must observe safety regulations.
Precautions must be taken to prevent damage.

14.7. Maritime transport in bulk according to IMO instruments

Freighted as packaged goods rather than in bulk, therefore not applicable.
Minimum amount regulations have not been taken into account.
Danger code and packing code on request.
Comply with special provisions.

SECTION 15: Regulatory information

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

Observe restrictions:

Comply with national regulations/laws governing the protection of young people at work (national implementation of the Directive 94/33/EC)!
Comply with national regulations/laws governing maternity protection (national implementation of the Directive 92/85/EEC)!
Comply with trade association/occupational health regulations.

Directive 2012/18/EU ("Seveso III"), Annex I, Part 1 - The following categories apply to this product (others may also need to be considered according to storage, handling etc.):

Hazard categories	Notes to Annex I	Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of - Lower-tier requirements	Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of - Upper-tier requirements
P5c		5000	50000

The Notes to Annex 1 of Directive 2012/18/EU, in particular those named in the tables here and notes 1-6, must be taken into account when assigning categories and qualifying quantities.

Directive 2010/75/EU (VOC): 60 %

Observe incident regulations.

National requirements/regulations on safety and health protection must be applied when using work equipment.

15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

SECTION 16: Other information

Revised sections:

1 - 16

Employee training in handling dangerous goods is required.
These details refer to the product as it is delivered.
Employee instruction/training in handling hazardous materials is required.

Classification and processes used to derive the classification of the mixture in accordance with the ordinance (EG) 1272/2008 (CLP):

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Classification in accordance with regulation (EC) No. 1272/2008 (CLP)	Evaluation method used
Flam. Liq. 2, H225	Classification based on test data.
STOT SE 3, H335	Classification according to calculation procedure.
Skin Irrit. 2, H315	Classification according to calculation procedure.
Eye Dam. 1, H318	Classification according to calculation procedure.
Skin Sens. 1, H317	Classification according to calculation procedure.
Aquatic Chronic 3, H412	Classification according to calculation procedure.

The following phrases represent the posted Hazard Class and Risk Category Code (GHS/CLP) of the product and the constituents.

H314 Causes severe skin burns and eye damage.

H225 Highly flammable liquid and vapour.

H242 Heating may cause a fire.

H317 May cause an allergic skin reaction.

H290 May be corrosive to metals.

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H315 Causes skin irritation.

H318 Causes serious eye damage.

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.

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.

Flam. Liq. — Flammable liquid

STOT SE — Specific target organ toxicity - single exposure - respiratory tract irritation

Skin Irrit. — Skin irritation

Eye Dam. — Serious eye damage

Skin Sens. — Skin sensitization

Aquatic Chronic — Hazardous to the aquatic environment - chronic

Acute Tox. — Acute toxicity - dermal

Acute Tox. — Acute toxicity - oral

Skin Corr. — Skin corrosion

Eye Irrit. — Eye irritation

Aquatic Acute — Hazardous to the aquatic environment - acute

Org. Perox. — Organic peroxide

Acute Tox. — Acute toxicity - inhalation

STOT RE — Specific target organ toxicity - repeated exposure

Met. Corr. — Substance or mixture corrosive to metals

Key literature references and sources for data:

Regulation (EC) No 1907/2006 (REACH) and Regulation (EC) No 1272/2008 (CLP) as amended.

Guidelines for the preparation of safety data sheets as amended (ECHA).

Guidelines on labelling and packaging according to the Regulation (EC) No. 1272/2008 (CLP) as amended (ECHA).

Safety data sheets for the constituent substances.

ECHA Homepage - Information about chemicals.

GESTIS Substance Database (Germany).

German Environment Agency "Rigoletto" information site on substances that are hazardous to water (Germany).

EU Occupation Exposure Limits Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, (EU) 2017/164, (EU) 2019/1831, each as amended.

National Lists of Occupational Exposure Limits for each country as amended.

Regulations on the transport of hazardous goods by road, rail, sea and air (ADR, RID, IMDG, IATA) as amended.

Any abbreviations and acronyms used in this document:

acc., acc. to according, according to

ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)

AOX Adsorbable organic halogen compounds

approx. approximately

Art., Art. no. Article number

ASTM ASTM International (American Society for Testing and Materials)

ATE Acute Toxicity Estimate

BAM Bundesanstalt für Materialforschung und -prüfung (Federal Institute for Materials Research and Testing, Germany)

BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)

BCF Bioconcentration factor

BSEF The International Bromine Council

bw body weight

CAS Chemical Abstracts Service

CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)

CMR carcinogenic, mutagenic, reproductive toxic

DMEL Derived Minimum Effect Level

DNEL Derived No Effect Level

DOC Dissolved organic carbon

dw dry weight

e.g. for example (abbreviation of Latin 'exempli gratia'), for instance

EbCx, EyCx, EbLx (x = 10, 50) Effect Concentration/Level of x % on reduction of the biomass (algae, plants)

EC European Community

ECHA European Chemicals Agency

ECx, ELx (x = 0, 3, 5, 10, 20, 50, 80, 100) Effect Concentration/Level for x % effect

EEC European Economic Community

EINECS European Inventory of Existing Commercial Chemical Substances

ELINCS European List of Notified Chemical Substances

EN European Norms

EPA United States Environmental Protection Agency (United States of America)

ErCx, EμCx, ErLx (x = 10, 50) Effect Concentration/Level of x % on inhibition of the growth rate (algae, plants)

etc. et cetera

EU European Union

EVAL Ethylene-vinyl alcohol copolymer

Fax. Fax number

gen. general

GHS Globally Harmonized System of Classification and Labelling of Chemicals

GWP Global warming potential

Koc Adsorption coefficient of organic carbon in the soil

Kow octanol-water partition coefficient

IARC International Agency for Research on Cancer

IATA International Air Transport Association

IBC (Code) International Bulk Chemical (Code)

IMDG-code International Maritime Code for Dangerous Goods

incl. including, inclusive

IUCLID International Uniform Chemical Information Database

IUPAC International Union for Pure Applied Chemistry

LC50 Lethal Concentration to 50 % of a test population

LD50 Lethal Dose to 50% of a test population (Median Lethal Dose)

Log Koc Logarithm of adsorption coefficient of organic carbon in the soil

Log Kow, Log Pow Logarithm of octanol-water partition coefficient

LQ Limited Quantities

MARPOL International Convention for the Prevention of Marine Pollution from Ships

n.a. not applicable

n.av. not available

n.c. not checked

n.d.a. no data available

NIOSH National Institute for Occupational Safety and Health (USA)

NLP No-longer-Polymer

NOEC, NOEL No Observed Effect Concentration/Level

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OECD Organisation for Economic Co-operation and Development

org. organic

OSHA Occupational Safety and Health Administration (USA)

PBT persistent, bioaccumulative and toxic

PE Polyethylene

PNEC Predicted No Effect Concentration

ppm parts per million

PVC Polyvinylchloride

REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)

REACH-IT List-No.9xx-xxx-x No. is automatically assigned, e.g. to pre-registrations without a CAS No. or other numerical identifier. List Numbers do not have any legal significance, rather they are purely technical identifiers for processing a submission via REACH-IT.

RID Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)

SVHC Substances of Very High Concern

Tel. Telephone

TOC Total organic carbon

UN RTDG United Nations Recommendations on the Transport of Dangerous Goods

VOC Volatile organic compounds

vPvB very persistent and very bioaccumulative

wwt wet weight

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge.
No responsibility.