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 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 02.03.2021 / 0005
 Replacing version dated / version: 13.11.2019 / 0004
 Valid from: 02.03.2021
 PDF print date: 03.03.2021
 kLine Multi Fix 2K MMA

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

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

1.1 Product identifier

kLine Multi Fix 2K MMA

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

Relevant identified uses of the substance or mixture:

Adhesive

Uses advised against:

No information available at present.

1.3 Details of the supplier of the safety data sheet

DKS Technik GmbH
 Gnadewald 90a
 A - 6069 Gnadewald
 Tel.: 0043 5223 48488 0
 e-mail: office@dks.at

1.4 Emergency telephone number

Emergency information services / official advisory body:

Vergiftungsinformationszentrale Österreich, Tel.: +43 1 406 4343

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
 Ethoxylated trimethylolpropane triacrylate
 Bis[2-(acryloyloxy)ethyl] hydrogen phosphate
 2-(phosphonoxy)ethyl acrylate

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 %).
 Dangerous vapours heavier than air.
 In case of spreading near the ground, flashback to distance sources of ignition is possible.

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	201-297-1
CAS	80-62-6
content %	50-75
Classification according to Regulation (EC) 1272/2008 (CLP)	Flam. Liq. 2, H225 STOT SE 3, H335 Skin Irrit. 2, H315 Skin Sens. 1, H317

Maleic acid	
Registration number (REACH)	01-2119488705-25-XXXX

Index	607-095-00-3
EINECS, ELINCS, NLP	203-742-5
CAS	110-16-7
content %	<5
Classification according to Regulation (EC) 1272/2008 (CLP)	Acute Tox. 4, H302 Eye Irrit. 2, H319 STOT SE 3, H335 Skin Irrit. 2, H315 Skin Sens. 1, H317

Methacrylic acid	
Registration number (REACH)	01-2119463884-26-XXXX
Index	607-088-00-5
EINECS, ELINCS, NLP	201-204-4
CAS	79-41-4
content %	<5
Classification according to Regulation (EC) 1272/2008 (CLP)	Acute Tox. 4, H312 Acute Tox. 4, H302 Skin Corr. 1A, H314 Eye Dam. 1, H318

Rosin	
Registration number (REACH)	01-2119480418-32-XXXX
Index	650-015-00-7
EINECS, ELINCS, NLP	232-475-7
CAS	8050-09-7
content %	<3
Classification according to Regulation (EC) 1272/2008 (CLP)	Skin Sens. 1, H317

2,6-di-tert-butyl-p-cresol	
Registration number (REACH)	01-2119555270-46-XXXX
Index	---
EINECS, ELINCS, NLP	204-881-4
CAS	128-37-0
content %	<2,5
Classification according to Regulation (EC) 1272/2008 (CLP)	Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)

.alpha.,.alpha.-dimethylbenzyl hydroperoxide	
Registration number (REACH)	---
Index	617-002-00-8
EINECS, ELINCS, NLP	201-254-7
CAS	80-15-9
content %	<1
Classification according to Regulation (EC) 1272/2008 (CLP)	Acute Tox. 3, H331 Acute Tox. 4, H312 Acute Tox. 4, H302 STOT RE 2, H373 Skin Corr. 1B, H314 Aquatic Chronic 2, H411 Org. Perox. Type E, H242 Eye Dam. 1, H318

Tosyl chloride	
Registration number (REACH)	01-2119971273-36-XXXX
Index	---
EINECS, ELINCS, NLP	202-684-8
CAS	98-59-9
content %	<1

Classification according to Regulation (EC) 1272/2008 (CLP)	Eye Dam. 1, H318 Met. Corr. 1, H290 Skin Irrit. 2, H315 Skin Sens. 1A, H317
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Ethoxylated trimethylolpropane triacrylate	
Registration number (REACH)	---
Index	---
EINECS, ELINCS, NLP	500-066-5 (NLP)
CAS	28961-43-5
content %	<1
Classification according to Regulation (EC) 1272/2008 (CLP)	Eye Irrit. 2, H319 Skin Sens. 1B, H317

Bis[2-(acryloyloxy)ethyl] hydrogen phosphate	
Registration number (REACH)	---
Index	---
EINECS, ELINCS, NLP	254-783-0
CAS	40074-34-8
content %	<1
Classification according to Regulation (EC) 1272/2008 (CLP)	Skin Irrit. 2, H315 Skin Sens. 1B, H317 Eye Dam. 1, H318

2-(phosphonooxy)ethyl acrylate	
Registration number (REACH)	---
Index	---
EINECS, ELINCS, NLP	250-927-1
CAS	32120-16-4
content %	<1
Classification according to Regulation (EC) 1272/2008 (CLP)	Skin Irrit. 2, H315 Skin Sens. 1B, H317 Eye Dam. 1, H318

Impurities, test data and additional information may have been taken into account in classifying and labelling the product.

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.

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

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
Conjunctivitis
reddening of the skin
Allergic reaction
Inhalation:
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
Explosive vapour/air or gas/air mixtures.

5.3 Advice for firefighters

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

Keep unprotected persons away.
Remove possible causes of ignition - do not smoke.
Ensure sufficient supply of air.
Avoid inhalation, and contact with eyes or skin.
If applicable, caution - risk of slipping.

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.
- Observe special storage conditions.
- Store in a well ventilated place.
- Protect from direct sunlight and warming.
- Store cool.

7.3 Specific end use(s)

No information available at present.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Chemical Name	Methyl methacrylate		Content %:50-75
WEL-TWA: 50 ppm (208 mg/m3) (WEL), 50 ppm (EU)	WEL-STEL: 100 ppm (416 mg/m3) (WEL), 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 		
BMGV: ---	Other information: ---		
Chemical Name	Methacrylic acid		Content %:<5
WEL-TWA: 20 ppm (72 mg/m3)	WEL-STEL: 40 ppm (143 mg/m3)	---	
Monitoring procedures:	---		
BMGV: ---	Other information: ---		
Chemical Name	Rosin		Content %:<3
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	2,6-di-tert-butyl-p-cresol		Content %:<2,5
WEL-TWA: 10 mg/m3	WEL-STEL: ---	---	
Monitoring procedures:	---		
BMGV: ---	Other information: ---		
Chemical Name	Tosyl chloride		Content %:<1

WEL-TWA: ---	WEL-STEL: 5 mg/m3	---
Monitoring procedures: ---		
BMGV: ---	Other information: ---	

Methyl methacrylate						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,94	mg/l	
	Environment - marine		PNEC	0,094	mg/l	
	Environment - sediment		PNEC	5,74	mg/kg	
	Environment - soil		PNEC	1,47	mg/kg	
	Environment - sewage treatment plant		PNEC	10	mg/l	
Consumer	Human - inhalation	Long term, local effects	DNEL	105	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	

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	
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	

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	

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 wwt	
	Environment - sewage treatment plant		PNEC	0,17	mg/l	
	Environment - sediment		PNEC	1,29	mg/kg wwt	
	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	8,33	mg/kg feed	
	Environment - soil		PNEC	0,04769	mg/kg dw	
	Environment - sediment, freshwater		PNEC	0,0996	mg/kg dw	
	Environment - sediment, marine		PNEC	0,00996	mg/kg dw	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	0,86	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	3,5	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	0,5	mg/kg bw/day	

.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	

WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period)

EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany).

(8) = Inhalable fraction (Directive 2017/164/EU, Directive 2004/37/CE). (9) = Respirable fraction (Directive 2017/164/EU, Directive 2004/37/CE). (11) = Inhalable fraction (Directive 2004/37/CE). (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 (Directive 2004/37/CE). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period).

(8) = Inhalable fraction (2017/164/EU, 2017/2398/EU). (9) = Respirable fraction (2017/164/EU, 2017/2398/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. BGW = "Biologischer Grenzwert" (biological limit value, Germany) | Other information: Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.

** = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision.

(13) = The substance can cause sensitisation of the skin and of the respiratory tract (Directive 2004/37/CE), (14) = The substance can cause sensitisation of the skin (Directive 2004/37/CE).

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 374).

Recommended

Protective gloves in butyl rubber (EN 374).

Minimum layer thickness in mm:

0,7

Permeation time (penetration time) in minutes:

> 60

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.

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
Odour threshold:	Not determined
pH-value:	n.a.
Melting point/freezing point:	Not determined
Initial boiling point and boiling range:	Not determined
Flash point:	11 °C (closed cup)
Evaporation rate:	Not determined
Flammability (solid, gas):	n.a.
Lower explosive limit:	Not determined
Upper explosive limit:	Not determined
Vapour pressure:	Not determined
Vapour density (air = 1):	Not determined
Density:	1-1,03 (relative density)
Bulk density:	Does not apply to liquids.
Solubility(ies):	Not determined
Water solubility:	Not miscible
Partition coefficient (n-octanol/water):	Not determined
Auto-ignition temperature:	Not determined
Decomposition temperature:	Not determined
Viscosity:	>40 mm ² /s (40°C)
Explosive properties:	Product is not explosive. Possible build up of explosive/highly flammable vapour/air mixture.
Oxidising properties:	Not determined

9.2 Other information

Miscibility:	Not determined
Fat solubility / solvent:	Not determined
Conductivity:	Not determined
Surface tension:	Not determined
Solvents content:	Not determined

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 toxicological effects

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

MMA 6207 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
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Mild irritant
Respiratory or skin sensitisation:				Human being		Skin Sens. 1

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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.
Symptoms:						breathing difficulties, respiratory distress, drowsiness, drop in blood pressure, coughing, headaches, fatigue, mucous membrane irritation, watering eyes, mental confusion
Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	NOAEL	1000	ppm	Mouse		14w, 6h/d, 5d/w

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 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.

Methacrylic acid						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	1320-2260	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	500	mg/kg	Rabbit		
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

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

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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

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		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

.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 dermal route:	LD50	1200	mg/kg	Rat		
Acute toxicity, by inhalation:	LC50	220	ppm	Rat		(4h)
Skin corrosion/irritation:				Rabbit		Skin Corr. 1B

Symptoms:						respiratory distress, vomiting, cornea opacity, coughing, mucous membrane irritation
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Tosyl chloride						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	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	OECD 405 (Acute Eye Irritation/Corrosion)	Risk of serious damage to eyes.
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
Germ cell mutagenicity:					OECD 474 (Mammalian Erythrocyte Micronucleus Test)	Negative
Reproductive toxicity:	NOAEL	750	mg/kg bw/d	Rat	OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/Development. Tox. Screening Test)	
Specific target organ toxicity - repeated exposure (STOT-RE):	NOAEL	750	mg/kg bw/d	Rat	OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/Development. Tox. Screening Test)	
Symptoms:						Lung damage, cramps, in contact: coughing, vomiting and nausea may occur., hoarseness, may cause headaches and vertigo.

SECTION 12: Ecological information

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

MMA 6207 Adhesive							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes

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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. Other adverse effects:							n.d.a.
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 algae:	EC50	72h	>110	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)	
12.1. Toxicity to algae:		7d	37	mg/l	Scenedesmus quadricauda		
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

Maleic acid							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	75	mg/l	Pimephales promelas		

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12.1. Toxicity to daphnia:	EC50	48h	42,81	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	EC50	72h	74,35	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	97	%		OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	Readily biodegradable
Other information:	ThOD		830	mg/g			References
Water solubility:			478,8	g/l			20°C

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).

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)	

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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

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

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.4. Mobility in soil:	Log Koc		3,9-4,2				
Other information:	Koc		14750				
Other information:	Log Koc		3,9-4,2				
12.1. Toxicity to fish:	LC50	96h	>0,57	mg/l	Brachydanio rerio	84/449/EEC C.1	
12.1. Toxicity to fish:	NOEC/NOEL	42d	0,053	mg/l	Oryzias latipes	OECD 210 (Fish, Early-Life Stage Toxicity Test)	
12.3. Bioaccumulative potential:			230-2500		Cyprinus carpio	OECD 305 (Bioconcentration - Flow-Through Fish Test)	56d
12.1. Toxicity to daphnia:	EC50	48h	0,45	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
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 algae:	NOEC/NOEL	72h	0,4	mg/l	Desmodesmus subspicatus	84/449/EEC C.3	
12.1. Toxicity to algae:	EC50	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		>2000		Cyprinus caprio	OECD 305 (Bioconcentration - Flow-Through Fish Test)	
12.4. Mobility in soil:	Koc		14750				
12.5. Results of PBT and vPvB assessment							No PBT substance
Toxicity to bacteria:	EC50	3h	>10000	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	

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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			

.alpha.,.alpha.-dimethylbenzyl hydroperoxide							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.2. Persistence and degradability:		28d	3	%		OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	
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)	

Tosyl chloride							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.2. Persistence and degradability:		28d	60	%		OECD 301 D (Ready Biodegradability - Closed Bottle Test)	Biodegradable
12.1. Toxicity to fish:	LC50	96h	>100	mg/l	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity Test)	
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

SECTION 13: Disposal considerations

13.1 Waste treatment methods

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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.
 Untampered 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

14.1. UN number: 1133

Transport by road/by rail (ADR/RID)

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



Transport by sea (IMDG-code)

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



Transport by air (IATA)

14.2. UN proper shipping name:
 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. Transport in bulk according to Annex II of MARPOL and the IBC Code

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

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

Observe restrictions:
 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): ~ 65 %

Observe incident regulations.

15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

SECTION 16: Other information

Revised sections: 3, 8, 9, 11, 12, 15

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):

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 (specified in Section 2 and 3).

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 - oral

Eye Irrit. — Eye irritation

Acute Tox. — Acute toxicity - dermal

Skin Corr. — Skin corrosion

Aquatic Acute — Hazardous to the aquatic environment - acute

Acute Tox. — Acute toxicity - inhalation

STOT RE — Specific target organ toxicity - repeated exposure

Org. Perox. — Organic peroxide

Met. Corr. — Substance or mixture corrosive to metals

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)

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

dw dry weight

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

EC European Community

ECHA European Chemicals Agency

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)

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

IARC International Agency for Research on Cancer

IATA International Air Transport Association

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IBC (Code) International Bulk Chemical (Code)

IMDG-code International Maritime Code for Dangerous Goods

incl. including, inclusive

IUCID 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)

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

OECD Organisation for Economic Co-operation and Development

org. organic

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

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.

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

1.1 Product identifier

kLine Multi Fix 2K MMA

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

Relevant identified uses of the substance or mixture:

Adhesive

Uses advised against:

No information available at present.

1.3 Details of the supplier of the safety data sheet

DKS Technik GmbH
 Gnadenwald 90a
 A - 6069 Gnadenwald
 Tel.: 0043 5223 48488 0
 e-mail: office@dks.at

1.4 Emergency telephone number

Emergency information services / official advisory body:

Vergiftungsinformationszentrale Österreich, Tel.: +43 1 406 4343

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.
Skin Sens.	1	H317-May cause an allergic skin reaction.

2.2 Label elements

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



Danger

H225-Highly flammable liquid and vapour. H335-May cause respiratory irritation. H315-Causes skin irritation. H317-May cause an allergic skin reaction.

P210-Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P261-Avoid breathing vapours. P280-Wear protective gloves.

P312-Call a POISON CENTRE / doctor if you feel unwell.

Methyl methacrylate

Cobalt bis(2-ethylhexanoate)

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 %).

SECTION 3: Composition/information on ingredients

3.1 Substance

n.a.

3.2 Mixture

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	201-297-1
CAS	80-62-6
content %	50-75
Classification according to Regulation (EC) 1272/2008 (CLP)	Flam. Liq. 2, H225 STOT SE 3, H335 Skin Irrit. 2, H315 Skin Sens. 1, H317

Oxydipropyl dibenzoate	
Registration number (REACH)	01-2119529241-49-XXXX
Index	---
EINECS, ELINCS, NLP	248-258-5
CAS	27138-31-4
content %	<15
Classification according to Regulation (EC) 1272/2008 (CLP)	Aquatic Chronic 3, H412

3,5-diethyl-1,2-dihydro-1-phenyl-2-propylpyridine	
Registration number (REACH)	---
Index	---
EINECS, ELINCS, NLP	252-091-3
CAS	34562-31-7
content %	<5
Classification according to Regulation (EC) 1272/2008 (CLP)	Acute Tox. 4, H302 Eye Irrit. 2, H319 Skin Irrit. 2, H315

Cobalt bis(2-ethylhexanoate)	
Registration number (REACH)	01-2119524678-29-XXXX
Index	---
EINECS, ELINCS, NLP	205-250-6

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CAS	136-52-7
content %	<0,3
Classification according to Regulation (EC) 1272/2008 (CLP)	Skin Sens. 1A, H317 Eye Irrit. 2, H319 Repr. 1B, H360 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 3, H412

Impurities, test data and additional information may have been taken into account in classifying and labelling the product.
 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.

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

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. Seek medical help if necessary.

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.
 Irritant to mucosa of the nose and throat

Coughing

In high doses:

Narcotic effect.

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

Oxides of nitrogen

Toxic gases

Explosive vapour/air or gas/air mixtures.

Dangerous vapours heavier than air.

In case of spreading near the ground, flashback to distance sources of ignition is possible.

5.3 Advice for firefighters

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

Keep unprotected persons away.
Remove possible causes of ignition - do not smoke.
Ensure sufficient supply of air.
Avoid inhalation, and contact with eyes or skin.
If applicable, caution - risk of slipping.

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.
Observe special storage conditions.
Store in a well ventilated place.
Protect from direct sunlight and warming.
Store cool.

7.3 Specific end use(s)

No information available at present.

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Chemical Name	Methyl methacrylate		Content %:50-75
WEL-TWA: 50 ppm (208 mg/m3) (WEL), 50 ppm (EU)	WEL-STEL: 100 ppm (416 mg/m3) (WEL), 100 ppm (EU)	---	
Monitoring procedures:	- 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)		
BMGV: ---	Other information: ---		

Chemical Name	Cobalt bis(2-ethylhexanoate)		Content %:<0,3
WEL-TWA: 0,1 mg/m3 (cobalt and cobalt compounds, as Co)	WEL-STEL: ---	---	
Monitoring procedures:	ISO 15202 (Workplace air — Determination of metals and metalloids in airborne particulate matter by Inductively Coupled Plasma Atomic Emission Spectrometry), Part 1-3 - 2000(Part 1), 2001(Part 2), 2004 (Part 3) - EU project BC/CEN/ENTR/000/2002-16 card 83-1 (2004) - MDHS 91 (Metals and metalloids in workplace air by X-ray fluorescence spectrometry) - 1998 - EU project BC/CEN/ENTR/000/2002-16 card 83-3 (2004) - NIOSH 7027 (Cobalt and compounds, as Co) - 1994 - NIOSH 7300 (Elements by ICP (nitric/perchloric ashing)) - 2003 - NIOSH 7301 (Elements by ICP (aqua regia ashing)) - 2003 - NIOSH 7303 (Elements by ICP (Hot block HCl/HNO3 digestion)) - 2003 - OSHA ID-213 (Tungsten and cobalt in workplace atmospheres (ICP analysis)) - 1994 - OSHA ID-121 (Metal and metalloid particulates in workplace atmospheres (Atomic absorption)) - 2002 - OSHA ID-125G (Metal and metalloid particulates in workplace atmospheres (ICP)) - 2002 ISO 15202 (Workplace air — Determination of metals and metalloids in airborne particulate matter by Inductively Coupled Plasma Atomic Emission Spectrometry), Part 1-3 - 2000(Part 1), 2001(Part 2), 2004 (Part 3) - EU project BC/CEN/ENTR/000/2002-16 card 83-1 (2004) - MDHS 91 (Metals and metalloids in workplace air by X-ray fluorescence spectrometry) - 1998 - EU project BC/CEN/ENTR/000/2002-16 card 83-3 (2004) - NIOSH 7027 (Cobalt and compounds, as Co) - 1994 - NIOSH 7300 (Elements by ICP (nitric/perchloric ashing)) - 2003 - NIOSH 7301 (Elements by ICP (aqua regia ashing)) - 2003 - NIOSH 7303 (Elements by ICP (Hot block HCl/HNO3 digestion)) - 2003 - OSHA ID-213 (Tungsten and cobalt in workplace atmospheres (ICP analysis)) - 1994 - OSHA ID-121 (Metal and metalloid particulates in workplace atmospheres (Atomic absorption)) - 2002 - OSHA ID-125G (Metal and metalloid particulates in workplace atmospheres (ICP)) - 2002		
BMGV: ---	Other information: ---		

Chemical Name	Silica, amorphous		Content %:
WEL-TWA: 6 mg/m3 (total inh. dust), 2,4 mg/m3 (resp. dust)	WEL-STEL: ---	---	
Monitoring procedures:	---		
BMGV: ---	Other information: ---		

Chemical Name	Calcium carbonate		Content %:
WEL-TWA: 4 mg/m3 (respirable dust), 10 mg/m3 (total inhalable dust)	WEL-STEL: ---	---	
Monitoring procedures:	---		
BMGV: ---	Other information: ---		

Methyl methacrylate						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,94	mg/l	
	Environment - marine		PNEC	0,094	mg/l	
	Environment - sediment		PNEC	5,74	mg/kg	
Industrial / commercial	Human - dermal	Long term, local effects	DNEL	1,5	mg/kg	
Industrial / commercial	Human - inhalation	Long term, local effects	DNEL	210	mg/m ³	
Industrial / commercial	Human - inhalation	Long term, systemic effects	DNEL	210	mg/m ³	
Industrial / commercial	Human - dermal	Long term, systemic effects	DNEL	13,67	mg/kg	

Oxydipropyl dibenzoate						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,0037	mg/l	
	Environment - water, sporadic (intermittent) release		PNEC	0,037	mg/l	
	Environment - marine		PNEC	0,00037	mg/l	
	Environment - sediment, freshwater		PNEC	1,49	mg/kg	
	Environment - sediment, marine		PNEC	0,149	mg/kg	
	Environment - sewage treatment plant		PNEC	10	mg/l	
	Environment - soil		PNEC	1	mg/kg	
Consumer	Human - oral	Short term, systemic effects	DNEL	80	mg/kg	
Consumer	Human - dermal	Short term, systemic effects	DNEL	80	mg/kg	
Consumer	Human - inhalation	Short term, systemic effects	DNEL	8,7	mg/m ³	
Consumer	Human - oral	Long term, systemic effects	DNEL	5	mg/kg	
Consumer	Human - dermal	Long term, systemic effects	DNEL	0,22	mg/kg	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	8,69	mg/m ³	
Workers / employees	Human - dermal	Short term, systemic effects	DNEL	170	mg/kg	
Workers / employees	Human - inhalation	Short term, systemic effects	DNEL	35,08	mg/m ³	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	10	mg/kg	

Cobalt bis(2-ethylhexanoate)						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
Consumer	Human - inhalation	Long term, local effects	DNEL	0,037	mg/m ³	

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Consumer	Human - oral	Long term, systemic effects	DNEL	0,0558	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	0,2351	mg/m3	

Silica, amorphous						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
Workers / employees	Human - inhalation	Long term, local effects	DNEL	4	mg/m3	

Calcium carbonate						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - sewage treatment plant		PNEC	100	mg/l	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	10	mg/m3	
Consumer	Human - inhalation	Long term, local effects	DNEL	1,06	mg/m3	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	10	mg/m3	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	4,26	mg/m3	

GB WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany). (8) = Inhalable fraction (2017/164/EU, 2017/2398/EU). (9) = Respirable fraction (2017/164/EU, 2017/2398/EU). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period). (8) = Inhalable fraction (2017/164/EU, 2017/2398/EU). (9) = Respirable fraction (2017/164/EU, 2017/2398/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. BGW = "Biologischer Grenzwert" (biological limit value, Germany) | Other information: Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage. ** = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision.

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. BS EN 14042.
 BS 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:

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Chemical resistant protective gloves (EN 374).

Recommended

Protective gloves in butyl rubber (EN 374).

Minimum layer thickness in mm:

0,7

Permeation time (penetration time) in minutes:

> 60

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.

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:

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
Odour threshold:	Not determined
pH-value:	Not determined
Melting point/freezing point:	Not determined
Initial boiling point and boiling range:	Not determined
Flash point:	10 °C (closed cup)
Evaporation rate:	Not determined
Flammability (solid, gas):	n.a.
Lower explosive limit:	Not determined
Upper explosive limit:	Not determined
Vapour pressure:	Not determined
Vapour density (air = 1):	Not determined
Density:	0,97-1,01 (relative density)
Bulk density:	n.a.
Solubility(ies):	Not determined
Water solubility:	Not miscible
Partition coefficient (n-octanol/water):	Not determined
Auto-ignition temperature:	Not determined
Decomposition temperature:	Not determined
Viscosity:	>40 mm ² /s (40°C)
Explosive properties:	Product is not explosive. Possible build up of explosive/highly flammable vapour/air mixture.
Oxidising properties:	No

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9.2 Other information

Miscibility: Not determined
 Fat solubility / solvent: Not determined
 Conductivity: Not determined
 Surface tension: Not determined
 Solvents content: Not determined

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 decomposition if used as intended.

10.4 Conditions to avoid

Heating, open flame, ignition sources

10.5 Incompatible materials

Mineral acids
 Oxidizing agents
 Reducing agent
 Peroxides
 Amines
 Heavy metals

10.6 Hazardous decomposition products

No decomposition when used as directed.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

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

MMA 6207 Activator

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:						n.d.a.
Acute toxicity, by inhalation:						n.d.a.
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 dermal route:	LD50	>5000	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	

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Serious eye damage/irritation:				Rabbit		Mild irritant
Respiratory or skin sensitisation:				Human being		Sensitising (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.
Symptoms:						breathing difficulties, respiratory distress, drowsiness, drop in blood pressure, coughing, headaches, fatigue, mucous membrane irritation, watering eyes, mental confusion
Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	NOAEL	1000	ppm	Mouse		14w, 6h/d, 5d/w

Oxydipropyl dibenzoate						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	3914	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rat		
Acute toxicity, by inhalation:	LC50	>200	mg/l/4h	Rat		
Skin corrosion/irritation:				Rabbit		Not irritant
Serious eye damage/irritation:				Rabbit		Mild irritant
Respiratory or skin sensitisation:				Guinea pig		Not sensitizing
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAEL	1000	mg/kg	Rat		

Silica, amorphous						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>5000	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	Analogous conclusion
Acute toxicity, by dermal route:	LD50	>5000	mg/kg	Rabbit		
Acute toxicity, by inhalation:	LC50	>0,139	mg/l/4h	Rat		References, Maximum achievable concentration.
Skin corrosion/irritation:				Rabbit		Not irritant, References

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Serious eye damage/irritation:				Rabbit		Not irritant, Mechanical irritation possible., References
Respiratory or skin sensitisation:				Guinea pig		Not sensitizing
Germ cell mutagenicity:						Negative
Carcinogenicity:						No indications of such an effect.
Reproductive toxicity (Developmental toxicity):						No indications of such an effect.
Symptoms:						eyes, reddened

Calcium carbonate						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>2000	mg/kg	Rat	OECD 420 (Acute Oral toxicity - Fixe Dose Procedure)	
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rat	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LC50	>3	mg/l/4h	Rat	OECD 403 (Acute Inhalation 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:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	Not sensitizing
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Germ cell mutagenicity:					OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	Negative
Germ cell mutagenicity:					OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative
Carcinogenicity:						No indications of such an effect.
Reproductive toxicity:	NOEL	1000	mg/kg bw/d	Rat	OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/Development. Tox. Screening Test)	
Specific target organ toxicity - single exposure (STOT-SE):						No indications of such an effect.
Specific target organ toxicity - repeated exposure (STOT-RE):						No indications of such an effect.
Aspiration hazard:						No

Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAEL	1000	mg/kg bw/d	Rat	OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/Development. Tox. Screening Test)	
Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	NOAEC	0,212	mg/l	Rat	OECD 413 (Subchronic Inhalation Toxicity - 90-Day Study)	

SECTION 12: Ecological information

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

MMA 6207 Activator							
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. Other adverse effects:							n.d.a.
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 algae:	EC50	72h	>110	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)	
12.1. Toxicity to algae:		7d	37	mg/l	Scenedesmus quadricauda		

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

Oxydipropyl dibenzoate

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	3,7	mg/l			
12.1. Toxicity to daphnia:	LL50	48h	19,3	mg/l			
12.1. Toxicity to algae:	LL50	72h	4,9	mg/l			
12.1. Toxicity to algae:	NOELR	72h	1	mg/l			
12.2. Persistence and degradability:	BOD5		650	mg/g			
12.2. Persistence and degradability:	COD		2230	mg/g			
12.2. Persistence and degradability:		28d	87	%			Readily biodegradable
Other information:	BOD5		2,23	g/g			

Silica, amorphous

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	>10000	mg/l	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	24h	>10000	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	EL50	72h	>10000	mg/l		OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:							Abiotically degradable.
12.3. Bioaccumulative potential:							Not to be expected
12.4. Mobility in soil:							Not to be expected
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance

Calcium carbonate

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h			Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	No observation with saturated solution of test material.

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12.1. Toxicity to daphnia:	EC50	48h			Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	No observation with saturated solution of test material.
12.1. Toxicity to algae:	EC50	72h	>14	mg/l	Desmodesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	NOEC/NOEL	72h	14	mg/l	Desmodesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:							Not relevant for inorganic substances.
12.3. Bioaccumulative potential:							Not to be expected
12.4. Mobility in soil:							n.a.
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EC50	3h	>1000	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	
Toxicity to bacteria:	NOEC/NOEL	3h	1000	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	
Other organisms:	EC50	21d	>1000	mg/kg dw		OECD 208 (Terrestrial Plants, Growth Test)	Glycine max
Other organisms:	EC50	21d	>1000	mg/kg dw		OECD 208 (Terrestrial Plants, Growth Test)	Lycopersicon esculentum
Other organisms:	EC50	21d	>1000	mg/kg dw		OECD 208 (Terrestrial Plants, Growth Test)	Avena sativa
Other organisms:	NOEC/NOEL	21d	1000	mg/kg dw		OECD 208 (Terrestrial Plants, Growth Test)	Glycine max
Other organisms:	NOEC/NOEL	21d	1000	mg/kg dw		OECD 208 (Terrestrial Plants, Growth Test)	Lycopersicon esculentum
Other organisms:	NOEC/NOEL	21d	1000	mg/kg dw		OECD 208 (Terrestrial Plants, Growth Test)	Avena sativa

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Other organisms:	EC50	14d	>1000	mg/kg dw	Eisenia foetida	OECD 207 (Earthworm, Acute Toxicity Tests)	
Other organisms:	NOEC/NOEL	14d	1000	mg/kg dw	Eisenia foetida	OECD 207 (Earthworm, Acute Toxicity Tests)	
Other organisms:	EC50	28d	>1000	mg/kg dw		OECD 216 (Soil Microorganisms - Nitrogen Transformation Test)	
Other organisms:	NOEC/NOEL	28d	1000	mg/kg dw		OECD 216 (Soil Microorganisms - Nitrogen Transformation Test)	
Water solubility:			0,0166	g/l		OECD 105 (Water Solubility)	20°C

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

14.1. UN number: 1133

Transport by road/by rail (ADR/RID)

14.2. UN proper shipping name:

UN 1133 ADHESIVES

14.3. Transport hazard class(es): 3

14.4. Packing group: III

Classification code: F1

LQ: 5 L

14.5. Environmental hazards: Not applicable

Tunnel restriction code: D/E

Transport by sea (IMDG-code)



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



Transport by air (IATA)

14.2. UN proper shipping name:
 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. Transport in bulk according to Annex II of MARPOL and the IBC Code

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 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): ~ 54 %

Observe incident regulations.

15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

SECTION 16: Other information

Revised sections: 3, 8, 11, 12, 15
 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.
Skin Sens. 1, H317	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 (specified in Section 2 and 3).

H225 Highly flammable liquid and vapour.
 H317 May cause an allergic skin reaction.
 H360 May damage fertility or the unborn child.
 H302 Harmful if swallowed.
 H315 Causes skin irritation.
 H319 Causes serious eye irritation.
 H335 May cause respiratory irritation.
 H400 Very toxic to aquatic life.
 H412 Harmful 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
 Skin Sens. — Skin sensitization
 Aquatic Chronic — Hazardous to the aquatic environment - chronic
 Acute Tox. — Acute toxicity - oral
 Eye Irrit. — Eye irritation
 Repr. — Reproductive toxicity
 Aquatic Acute — Hazardous to the aquatic environment - acute

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)
 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)
 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
 dw dry weight
 e.g. for example (abbreviation of Latin 'exempli gratia'), for instance
 EC European Community
 ECHA European Chemicals Agency
 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)
 etc. et cetera

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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
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
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
OECD Organisation for Economic Co-operation and Development
org. organic
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
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.