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Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
Revision date / version: 18.09.2022 / 0024  
Replacing version dated / version: 01.11.2021 / 0023  
Valid from: 18.09.2022  
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Unterbodenschutz Bitumen schwarz

## 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

### Unterbodenschutz Bitumen schwarz

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

##### Relevant identified uses of the substance or mixture:

Corrosion protection

##### Uses advised against:

No information available at present.

#### 1.3 Details of the supplier of the safety data sheet

LIQUI MOLY GmbH  
Jerg-Wieland-Str. 4  
89081 Ulm-Lehr  
Tel.: (+49) 0731-1420-0  
Fax: (+49) 0731-1420-88

Qualified person's e-mail address: info@chemical-check.de, k.schnurbusch@chemical-check.de Please DO NOT use for requesting Safety Data Sheets.

#### 1.4 Emergency telephone number

##### Emergency information services / official advisory body:

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##### Telephone number of the company in case of emergencies:

+49 (0) 700 / 24 112 112 (LMR)  
+1 872 5888271 (LMR)

### 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	H336-May cause drowsiness or dizziness.
Aquatic Chronic	2	H411-Toxic 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. H336-May cause drowsiness or dizziness. H411-Toxic to aquatic life with long lasting effects.

P101-If medical advice is needed, have product container or label at hand. P102-Keep out of reach of children.

P210-Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P261-Avoid breathing vapours or spray. P271-Use only outdoors or in a well-ventilated area. P273-Avoid release to the environment.

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

P403+P233-Store in a well-ventilated place. Keep container tightly closed. P405-Store locked up.

P501-Dispose of contents / container to an approved waste disposal facility.

EUH066-Repeated exposure may cause skin dryness or cracking.

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

Hydrocarbons, C9, aromatics

### 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 (&lt; 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 (&lt; 0,1 %).

The mixture does not contain any substance with endocrine disrupting properties (&lt; 0,1 %).

Hazardous to drinking water, on escape of even small quantities.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

n.a.

### 3.2 Mixtures

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics	
Registration number (REACH)	01-2119473851-33-XXXX
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	920-750-0
CAS	---
content %	25-<50
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	EUH066 Flam. Liq. 2, H225 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411

Hydrocarbons, C9, aromatics	
Registration number (REACH)	01-2119455851-35-XXXX
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	918-668-5
CAS	(64742-95-6)
content %	1-<3

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<b>Classification according to Regulation (EC) 1272/2008 (CLP), M-factors</b>	EUH066 Flam. Liq. 3, H226 STOT SE 3, H335 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
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<b>Propylene carbonate</b>	
<b>Registration number (REACH)</b>	01-2119537232-48-XXXX
<b>Index</b>	607-194-00-1
<b>EINECS, ELINCS, NLP, REACH-IT List-No.</b>	203-572-1
<b>CAS</b>	108-32-7
<b>content %</b>	1-<3
<b>Classification according to Regulation (EC) 1272/2008 (CLP), M-factors</b>	Eye Irrit. 2, H319

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.  
 If the person is unconscious, place in a stable side position and consult a doctor.

#### 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.

### 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

CO<sub>2</sub>  
 Sand  
 Extinction powder  
 Water jet spray / alcohol resistant foam

#### 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 sulphur  
 Oxides of nitrogen

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Calcium oxide  
Hydrogen chloride  
Aldehydes  
Ketones

### 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.  
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.

#### 6.1.2 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 surface and ground-water infiltration, as well as ground penetration.  
Prevent from entering drainage system.  
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.  
Do not wash away with water or watery cleaning agents.

### 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.  
Keep away from sources of ignition - Do not smoke.  
Take precautions against electrostatic charges.  
Avoid contact with eyes or skin.  
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

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Keep out of access to unauthorised individuals.  
 Not to be stored in gangways or stair wells.  
 Store product closed and only in original packing.  
 Observe special storage conditions.  
 Do not store with flammable or self-igniting materials.  
 Protect from direct sunlight and warming.  
 Store in a well-ventilated place.  
 Store cool.

### 7.3 Specific end use(s)

No information available at present.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Workplace exposure limit (WEL) of the total hydrocarbon solvent content of the mixture (RCP method according to EH40):  
 1200 mg/m<sup>3</sup>

Chemical Name	Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics		
WEL-TWA: 1200 mg/m <sup>3</sup>	WEL-STEL: ---	---	
Monitoring procedures:	<ul style="list-style-type: none"> <li>- Draeger - Hydrocarbons 0,1%/c (81 03 571)</li> <li>- Draeger - Hydrocarbons 2/a (81 03 581)</li> <li>- Compur - KITA-187 S (551 174)</li> </ul>		
BMGV: ---	Other information: (OEL acc. to RCP-method, paragraphs 84-87, EH40)		

Chemical Name	Hydrocarbons, C9, aromatics		
WEL-TWA: 500 mg/m <sup>3</sup> (Aromatics)	WEL-STEL: ---	---	
Monitoring procedures:	<ul style="list-style-type: none"> <li>- Draeger - Hydrocarbons 0,1%/c (81 03 571)</li> <li>- Draeger - Hydrocarbons 2/a (81 03 581)</li> <li>- Compur - KITA-187 S (551 174)</li> </ul>		
BMGV: ---	Other information: ---		

Chemical Name	Calcium carbonate		
WEL-TWA: 4 mg/m <sup>3</sup> (respirable dust), 10 mg/m <sup>3</sup> (total inhalable dust)	WEL-STEL: ---	---	
Monitoring procedures:	---		
BMGV: ---	Other information: ---		

Chemical Name	Quartz		
WEL-TWA: 0,1 mg/m <sup>3</sup> (silica, respirable, crystalline)	WEL-STEL: ---	---	
Monitoring procedures:	<ul style="list-style-type: none"> <li>INSHT MTA/MA-036/A00 (Determination of Quartz in Air – Membrane Filter Method/ Xray Diffraction) - 2000, 2004</li> <li>MDHS 101/2 (Crystalline silica in respirable airborne dust – Direct on-filter analysis by infrared spectroscopy and X-ray diffraction) - 2015 - EU project</li> <li>BC/CEN/ENTR/000/2002-16 card 52-1 (2004)</li> <li>NIOSH 7500 (Crystalline Silica, by XRD (filter redeposition)) - 2003 - EU project</li> <li>BC/CEN/ENTR/000/2002-16 card 52-6 (2004)</li> <li>NIOSH 7601 (SILICA, CRYSTALLINE, by VIS) - 2003</li> <li>NIOSH 7602 (Crystalline Silica, by IR (KBr pellet)) - 2003</li> <li>NIOSH 7603 (QUARTZ in coal mine dust, by IR (redeposition)) - 2017</li> <li>OSHA ID-142 (Quartz and Cristobalite in Workplace Atmospheres) - 2016</li> </ul>		
BMGV: ---	Other information: ---		

Chemical Name	Bitumen		
WEL-TWA: 5 mg/m <sup>3</sup> (Asphalt, petroleum fumes)	WEL-STEL: 10 mg/m <sup>3</sup> (Asphalt, petroleum fumes)	---	
Monitoring procedures:	---		
BMGV: ---	Other information: ---		

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note

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	Human - oral	Long term, systemic effects	DNEL	699	mg/kg bw/d	
Consumer	Human - dermal	Long term, systemic effects	DNEL	699	mg/kg bw/d	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	608	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	773	mg/kg bw/d	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	2035	mg/m3	

Hydrocarbons, C9, aromatics						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
Consumer	Human - inhalation	Long term, systemic effects	DNEL	32	mg/m3	
Consumer	Human - dermal	Long term, systemic effects	DNEL	11	mg/kg bw/day	
Consumer	Human - oral	Long term, systemic effects	DNEL	11	mg/kg bw/day	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	25	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	150	mg/m3	

Propylene carbonate						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - sporadic (intermittent) release		PNEC	9	mg/l	
	Environment - marine		PNEC	0,09	mg/l	
	Environment - sediment, marine		PNEC	0,083	mg/l	
	Environment - soil		PNEC	0,81	mg/l	
	Environment - freshwater		PNEC	0,9	mg/l	
	Environment - sediment, freshwater		PNEC	0,83	mg/l	
	Environment - sewage treatment plant		PNEC	7400	mg/l	
Consumer	Human - oral	Long term, systemic effects	DNEL	10	mg/kg	
Consumer	Human - dermal	Long term, systemic effects	DNEL	10	mg/kg	
Consumer	Human - inhalation	Long term, local effects	DNEL	10	mg/m3	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	17,4	mg/m3	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	70,53	mg/kg	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	176	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	20	mg/kg	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	20	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 (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:

Protective nitrile gloves (EN ISO 374).

Minimum layer thickness in mm:

$\geq 0,12$

Permeation time (penetration time) in minutes:

$> 480$

Protective hand cream recommended.

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.

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.

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## 9.1 Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	Black
Odour:	Characteristic
Melting point/freezing point:	There is no information available on this parameter.
Boiling point or initial boiling point and boiling range:	106-140 °C
Flammability:	Flammable
Lower explosion limit:	0,9 Vol-%
Upper explosion limit:	7 Vol-%
Flash point:	6 °C (DIN 53213 (Pensky-Martens, closed cup))
Auto-ignition temperature:	>200 °C
Decomposition temperature:	There is no information available on this parameter.
pH:	Mixture is non-soluble (in water).
Kinematic viscosity:	45 s (20°C, ISO 2431 (6 mm))
Solubility:	Not miscible
Partition coefficient n-octanol/water (log value):	Does not apply to mixtures.
Vapour pressure:	20 hPa (20°C)
Vapour pressure:	111 hPa (50°C)
Density and/or relative density:	1,09 g/cm <sup>3</sup> (20°C, DIN 51757)
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. When using: development of explosive vapour/air mixture possible.
Oxidising liquids:	There is no information available on this parameter.
Solvents content:	34,57 % (Organic solvents )

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Possible build up of flammable vapour/air mixture.

### 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

See also section 7.

Heating, open flame, ignition sources

### 10.5 Incompatible materials

Avoid contact with strong oxidizing agents.

### 10.6 Hazardous decomposition products

See also section 5.2

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).

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Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:						n.d.a.
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.



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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.

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>5000	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	>2800	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LC50	>23,3	mg/l/4h	Rat	OECD 403 (Acute Inhalation Toxicity)	Vapours
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Skin corrosion/irritation:						Repeated exposure may cause skin dryness or cracking.
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
Germ cell mutagenicity:					OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	Negative
Germ cell mutagenicity:		2000	mg/kg	Mouse	OECD 474 (Mammalian Erythrocyte Micronucleus Test)	Negative
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Reproductive toxicity:					OECD 414 (Prenatal Developmental Toxicity Study)	Negative
Reproductive toxicity:	LOAEL	9000	ppm	Rat	OECD 416 (Two-generation Reproduction Toxicity Study)	Negative
Specific target organ toxicity - single exposure (STOT-SE):						STOT SE 3, H336
Specific target organ toxicity - repeated exposure (STOT-RE):					OECD 413 (Subchronic Inhalation Toxicity - 90-Day Study)	Negative
Aspiration hazard:						Yes

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Symptoms:						drowsiness, unconsciousness , heart/circulatory disorders, headaches, cramps, drowsiness, mucous membrane irritation, dizziness, nausea and vomiting.
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Hydrocarbons, C9, aromatics						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	3492	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	>3160	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LC50	>5,693	mg/l/4h	Rat	OECD 403 (Acute Inhalation Toxicity)	Analogous conclusion
Acute toxicity, by inhalation:	LC50	> 6,193	mg/l/4h	Rat	OECD 403 (Acute Inhalation Toxicity)	Vapours
Skin corrosion/irritation:						Repeated exposure may cause skin dryness or cracking.
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)	No (skin contact)
Germ cell mutagenicity:					OECD 475 (Mammalian Bone Marrow Chromosome Aberration Test)	Negative
Germ cell mutagenicity:					OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative
Germ cell mutagenicity:					OECD 479 (Genetic Toxicology - In Vitro Sister Chromatid Exchange assay in Mammalian Cells)	Negative
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative, Analogous conclusion
Carcinogenicity:						Negative
Reproductive toxicity:				Rat	OECD 421 (Reproduction/Developmental Toxicity Screening Test)	Negative, Analogous conclusion
Reproductive toxicity:					OECD 414 (Prenatal Developmental Toxicity Study)	Negative
Reproductive toxicity:					OECD 416 (Two-generation Reproduction Toxicity Study)	Negative

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Specific target organ toxicity - single exposure (STOT-SE):						STOT SE 3, H335, STOT SE 3, H336
Specific target organ toxicity - repeated exposure (STOT-RE):					OECD 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)	Negative
Specific target organ toxicity - repeated exposure (STOT-RE):					OECD 452 (Chronic Toxicity Studies)	Negative
Aspiration hazard:						Yes
Symptoms:						respiratory distress, coughing, burning of the membranes of the nose and throat, drowsiness, dizziness, headaches, nausea, unconsciousness, fever, ear noises, drying of the skin.

Propylene carbonate						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>5000	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	OECD 405 (Acute Eye Irritation/Corrosion)	Irritant
Respiratory or skin sensitisation:				Human being		No (skin contact)
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Germ cell mutagenicity:					OECD 474 (Mammalian Erythrocyte Micronucleus Test)	Negative
Germ cell mutagenicity:					OECD 482 (Gen. Tox. - DNA Damage and Repair, Unscheduled DNA Synthesis in Mammalian Cells In Vitro)	Negative
Carcinogenicity:				Mouse	OECD 451 (Carcinogenicity Studies)	Negative
Reproductive toxicity:	NOAEL	1000	mg/kg	Rat	OECD 414 (Prenatal Developmental Toxicity Study)	Negative
Aspiration hazard:						No
Symptoms:						breathing difficulties, headaches, gastrointestinal disturbances, dizziness, nausea



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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.

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.7. Other adverse effects:							Product floats on the water surface.
12.3. Bioaccumulative potential:							Not to be expected (evaporation)
12.4. Mobility in soil:							Product is slightly volatile.
12.1. Toxicity to fish:	NOELR	28d	0,574		Oncorhynchus mykiss		
12.1. Toxicity to fish:	LC50	96h	3 - 10	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EL50	48h	4,6 - 10	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to daphnia:	NOELR	21d	1 - 1,6	mg/l	Daphnia magna	OECD 211 (Daphnia magna Reproduction Test)	
12.1. Toxicity to algae:	NOEC/NOEL	72h	10	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	EL50	72h	10	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	98	%		OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	Completely biodegradable.
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EL50	48h	11,14	mg/l			calculated value

Hydrocarbons, C9, aromatics							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	9,2	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	

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12.1. Toxicity to daphnia:	EC50	48h	3,2	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	ErL50	72h	2,9	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	54-56	%		OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	
12.2. Persistence and degradability:		28d	78	%	activated sludge	OECD 301 E (Ready Biodegradability - Modified OECD Screening Test)	Readily biodegradable
12.2. Persistence and degradability:		28d	78	%		OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	
12.3. Bioaccumulative potential:	Log Pow		3,7 - 4,5				
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EC50	10min	>99	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	

Propylene carbonate							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	>1000	mg/l	Cyprinus caprio	92/69/EC	
12.1. Toxicity to daphnia:	EC50	48h	>1000	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	EC50	72h	>900	mg/l	Desmodesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:			83,5-87-7	%		OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	Readily biodegradable 29 d
12.2. Persistence and degradability:	DOC	14d	90-100	%		OECD 301 A (Ready Biodegradability - DOC Die-Away Test)	
12.3. Bioaccumulative potential:	Log Pow		-0,48				Bioaccumulation is unlikely (LogPow < 1), calculated value

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12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EC10	16h	7400	mg/l	<i>Pseudomonas putida</i>	DIN 38412 T.8	
Other information:	AOX		0	%			Does not contain any organically bound halogens which can contribute to the AOX value in waste water.

#### Calcium carbonate

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to bacteria:	EC50	3h	>1000	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	
Toxicity to annelids:					<i>Eisenia foetida</i>	OECD 207 (Earthworm, Acute Toxicity Tests)	Negative
12.1. Toxicity to daphnia:	EC50	48h	>100	mg/l	<i>Daphnia magna</i>	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to fish:	LC50	96h	>100	mg/l	<i>Oncorhynchus mykiss</i>	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to fish:	LC50	96h	>10000	mg/l	<i>Oncorhynchus mykiss</i>		
12.1. Toxicity to daphnia:	EC50	48h	>1000	mg/l	<i>Daphnia magna</i>		
12.1. Toxicity to algae:	EC50	72h	>200	mg/l	<i>Desmodesmus subspicatus</i>		
12.1. Toxicity to algae:	EC50	72h	>14	mg/l	<i>Desmodesmus subspicatus</i>	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:							Inorganic products cannot be eliminated from water through biological purification methods.
12.3. Bioaccumulative potential:							Not relevant for inorganic substances.
12.4. Mobility in soil:							Not relevant for inorganic substances.
12.5. Results of PBT and vPvB assessment							Not relevant for inorganic substances.

#### Quartz

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
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12.2. Persistence and degradability:							Not relevant for inorganic substances.
12.3. Bioaccumulative potential:							Not to be expected
12.4. Mobility in soil:							Low
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance

## 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 01 11 waste paint and varnish 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.

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 or ID number: 1139

#### Transport by road/by rail (ADR/RID)

14.2. UN proper shipping name:

UN 1139 COATING SOLUTION

14.3. Transport hazard class(es): 3

14.4. Packing group: II

Classification code: F1

LQ: 5 L

14.5. Environmental hazards: environmentally hazardous

Tunnel restriction code: D/E

#### Transport by sea (IMDG-code)

14.2. UN proper shipping name:

COATING SOLUTION (HYDROCARBONS, C7-C9)

14.3. Transport hazard class(es): 3

14.4. Packing group: II

EmS: F-E, S-E

Marine Pollutant: Yes

14.5. Environmental hazards: environmentally hazardous

#### Transport by air (IATA)

14.2. UN proper shipping name:

Coating solution

14.3. Transport hazard class(es): 3

14.4. Packing group: II

14.5. Environmental hazards: Not applicable





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### 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

Freight 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
E2		200	500

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): 34,57 %

Observe incident regulations.

### 15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

## SECTION 16: Other information

Revised sections:

2

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, H336	Classification according to calculation procedure.
Aquatic Chronic 2, H411	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.

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H226 Flammable liquid and vapour.  
 H304 May be fatal if swallowed and enters airways.  
 H319 Causes serious eye irritation.  
 H335 May cause respiratory irritation.  
 H336 May cause drowsiness or dizziness.  
 H411 Toxic to aquatic life with long lasting effects.  
 EUH066 Repeated exposure may cause skin dryness or cracking.

Flam. Liq. — Flammable liquid  
 STOT SE — Specific target organ toxicity - single exposure - narcotic effects  
 Aquatic Chronic — Hazardous to the aquatic environment - chronic  
 Asp. Tox. — Aspiration hazard  
 STOT SE — Specific target organ toxicity - single exposure - respiratory tract irritation  
 Eye Irrit. — Eye irritation

### 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 (EG) Nr. 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)

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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  
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.

These statements were made by:

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