

Page 1 of 37  
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
Revision date / version: 19.05.2021 / 0019  
Replacing version dated / version: 10.03.2021 / 0018  
Valid from: 19.05.2021  
PDF print date: 19.05.2021  
Liquimate 7700 Mini Rapid Kartusche

## 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

#### Liquimate 7700 Mini Rapid Kartusche

#### 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

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:

---

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

+49 (0) 700 / 24 112 112 (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
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.

#### 2.2 Label elements

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

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

Revision date / version: 19.05.2021 / 0019

Replacing version dated / version: 10.03.2021 / 0018

Valid from: 19.05.2021

PDF print date: 19.05.2021

Liquimate 7700 Mini Rapid Kartusche



Danger

H315-Causes skin irritation. H318-Causes serious eye damage. H317-May cause an allergic skin reaction.

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

P261-Avoid breathing vapours or spray. 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.

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

Trimethoxyvinylsilane

4,4'-methylenebis(cyclohexylamine)

## 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 %).

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

n.a.

### 3.2 Mixtures

Polyether polyol	
Registration number (REACH)	01-2119471485-32-XXXX
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	500-035-6
CAS	25214-63-5
content %	50-<70
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Eye Irrit. 2, H319
4,4'-methylenebis(cyclohexylamine)	
Registration number (REACH)	01-2119541673-38-XXXX
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	217-168-8
CAS	1761-71-3
content %	1-<5
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Acute Tox. 4, H302 Skin Corr. 1B, H314 Skin Sens. 1B, H317 Eye Dam. 1, H318 STOT RE 2, H373 (muscles, liver)
Trimethoxyvinylsilane	
Registration number (REACH)	01-2119513215-52-XXXX
Index	014-049-00-0
EINECS, ELINCS, NLP, REACH-IT List-No.	220-449-8

Page 3 of 37  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 19.05.2021 / 0019  
 Replacing version dated / version: 10.03.2021 / 0018  
 Valid from: 19.05.2021  
 PDF print date: 19.05.2021  
 Liquimate 7700 Mini Rapid Kartusche

<b>CAS</b>	2768-02-7
<b>content %</b>	1-<5
<b>Classification according to Regulation (EC) 1272/2008 (CLP), M-factors</b>	Flam. Liq. 3, H226 Acute Tox. 4, H332 Skin Sens. 1B, H317

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.  
 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  
 Dermatitis (skin inflammation)  
 Allergic reaction

### 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 / alcohol resistant 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  
 Hydrogen cyanide  
 Toxic gases  
 Danger of bursting (explosion) when heated

### 5.3 Advice for firefighters

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

Page 4 of 37  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 19.05.2021 / 0019  
 Replacing version dated / version: 10.03.2021 / 0018  
 Valid from: 19.05.2021  
 PDF print date: 19.05.2021  
 Liquimate 7700 Mini Rapid Kartusche

Protective respirator with independent air supply.  
 Full protection, if necessary.  
 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.  
 Ensure sufficient supply of air.  
 Avoid 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, sawdust) and dispose of according to Section 13.

### 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 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

Keep out of access to unauthorised individuals.  
 Not to be stored in gangways or stair wells.  
 Store product closed and only in original packing.  
 Avoid exposure to moist air and water.  
 Store in a dry place.

### 7.3 Specific end use(s)

No information available at present.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Polyether polyol						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,085	mg/l	
	Environment - marine		PNEC	0,0085	mg/l	

Page 5 of 37  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 19.05.2021 / 0019  
 Replacing version dated / version: 10.03.2021 / 0018  
 Valid from: 19.05.2021  
 PDF print date: 19.05.2021  
 Liquimate 7700 Mini Rapid Kartusche

	Environment - water, sporadic (intermittent) release		PNEC	1,51	mg/l	
	Environment - sewage treatment plant		PNEC	70	mg/l	
	Environment - sediment, freshwater		PNEC	0,193	mg/kg	
	Environment - sediment, marine		PNEC	0,0193	mg/kg	
	Environment - soil		PNEC	0,0183	mg/kg	
Consumer	Human - dermal	Long term, systemic effects	DNEL	8,3	mg/kg	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	29	mg/kg	
Consumer	Human - oral	Long term, systemic effects	DNEL	8,3	mg/kg	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	13,9	mg/kg	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	98	mg/m3	

Trimethoxyvinylsilane						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,4	mg/l	Für entsprechendes Silantriol (Hydrolyspr odukt) ermittelt.
	Environment - marine		PNEC	0,04	mg/l	Für entsprechendes Silantriol (Hydrolyspr odukt) ermittelt.
	Environment - water, sporadic (intermittent) release		PNEC	2,4	mg/l	Für entsprechendes Silantriol (Hydrolyspr odukt) ermittelt.
	Environment - sewage treatment plant		PNEC	6,6	mg/l	Für entsprechendes Silantriol (Hydrolyspr odukt) ermittelt.
	Environment - sediment, freshwater		PNEC	1,5	mg/kg dw	Für entsprechendes Silantriol (Hydrolyspr odukt) ermittelt.

Page 6 of 37  
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
Revision date / version: 19.05.2021 / 0019  
Replacing version dated / version: 10.03.2021 / 0018  
Valid from: 19.05.2021  
PDF print date: 19.05.2021  
Liquimate 7700 Mini Rapid Kartusche

	Environment - sediment, marine		PNEC	0,15	mg/kg dw	Für entsprechendes Silantriol (Hydrolyspr odukt) ermittelt.
	Environment - soil		PNEC	0,06	mg/kg dw	Für entsprechendes Silantriol (Hydrolyspr odukt) ermittelt.
Consumer	Human - dermal	Short term, systemic effects	DNEL	0,1	mg/kg bw/day	
Consumer	Human - dermal	Long term, systemic effects	DNEL	0,1	mg/kg bw/day	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	0,7	mg/m3	
Consumer	Human - oral	Long term, systemic effects	DNEL	0,1	mg/kg bw/day	
Consumer	Human - inhalation	Short term, systemic effects	DNEL	93,4	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	0,2	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	2,6	mg/m3	
Workers / employees	Human - inhalation	Short term, systemic effects	DNEL	4,9	mg/m3	

Reaction mass of dimethyl adipate and dimethyl glutarate and dimethyl succinate						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,018	mg/l	
	Environment - marine		PNEC	0,0018	mg/l	
	Environment - sewage treatment plant		PNEC	10	mg/l	
	Environment - water		PNEC	0,18	mg/l	PNEC-Interval
	Environment - sediment, freshwater		PNEC	0,16	mg/kg dry weight	
	Environment - sediment, marine		PNEC	0,016	mg/kg	
	Environment - water, sporadic (intermittent) release		PNEC	0,18	mg/l	
	Environment - soil		PNEC	0,09	mg/kg	
Consumer	Human - inhalation	Long term, local effects	DNEL	5	mg/m3	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	8,3	mg/m3	

## 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.

### 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.

Page 7 of 37  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 19.05.2021 / 0019  
 Replacing version dated / version: 10.03.2021 / 0018  
 Valid from: 19.05.2021  
 PDF print date: 19.05.2021  
 Liquimate 7700 Mini Rapid Kartusche

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 Neoprene® / polychloroprene gloves (EN 374).

Protective nitrile gloves (EN 374).

Protective gloves in butyl rubber (EN 374).

Minimum layer thickness in mm:

$\geq 0,35 - 0,5$

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:

Normally not necessary.

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
Colour:	Black
Odour:	Slightly
Odour threshold:	Not determined
pH-value:	Mixture is non-soluble (in water).
Melting point/freezing point:	Not determined
Initial boiling point and boiling range:	Not determined
Flash point:	$>150\text{ }^{\circ}\text{C}$
Evaporation rate:	Not determined
Flammability (solid, gas):	Not determined
Lower explosive limit:	Not determined
Upper explosive limit:	Not determined
Vapour pressure:	Not determined
Vapour density (air = 1):	Not determined
Density:	1,02 g/cm <sup>3</sup> (23°C)
Bulk density:	Not determined
Solubility(ies):	Not determined
Water solubility:	Not miscible
Partition coefficient (n-octanol/water):	Not determined
Auto-ignition temperature:	$>300\text{ }^{\circ}\text{C}$ (Ignition temperature )

Page 8 of 37  
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
Revision date / version: 19.05.2021 / 0019  
Replacing version dated / version: 10.03.2021 / 0018  
Valid from: 19.05.2021  
PDF print date: 19.05.2021  
Liquimate 7700 Mini Rapid Kartusche

Decomposition temperature: Not determined  
Viscosity: 1400 mPas (23°C)  
Explosive properties: Product is not explosive.  
Oxidising properties: No

## 9.2 Other information

Miscibility: Not determined  
Fat solubility / solvent: Not determined  
Conductivity: Not determined  
Surface tension: Not determined  
Solvents content: 0 % (Organic solvents )

## 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

See also section 7.

None known

### 10.5 Incompatible materials

See also section 7.

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 toxicological effects

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

Liquimate 7700 Mini Rapid Kartusche						
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:	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.

Polyether polyol						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes



Page 9 of 37  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 19.05.2021 / 0019  
 Replacing version dated / version: 10.03.2021 / 0018  
 Valid from: 19.05.2021  
 PDF print date: 19.05.2021  
 Liquimate 7700 Mini Rapid Kartusche

Symptoms:						headaches, mucous membrane irritation
-----------	--	--	--	--	--	------------------------------------------------

Trimethoxyvinylsilane						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	7120	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by inhalation:	LD50	2773	ppm/4h	Rat	OECD 403 (Acute Inhalation Toxicity)	Aerosol
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Slightly irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	Skin Sens. 1B
Germ cell mutagenicity:					OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative
Germ cell mutagenicity:				Mouse	OECD 474 (Mammalian Erythrocyte Micronucleus Test)	Negative
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Carcinogenicity:						Negative
Symptoms:						drowsiness, dizziness, nausea, abdominal pain, breathing difficulties, visual disturbances
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAEL	62,5	mg/kg	Rat	OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/Developm. Tox. Screening Test)	Target organ(s): bladder
Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	NOAEC	0,058	mg/l	Rat	OECD 413 (Subchronic Inhalation Toxicity - 90-Day Study)	Vapours

## SECTION 12: Ecological information

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

Liquimate 7700 Mini Rapid Kartusche							
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.

Trimethoxyvinylsilane							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes

12.1. Toxicity to fish:	LC50	96h	191	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	48h	169	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	28	mg/l	Daphnia magna	OECD 211 (Daphnia magna Reproduction Test)	
12.1. Toxicity to algae:	EC50	72h	>100	mg/l	Selenastrum capricornutum	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	NOEC/NOEL	72h	25	mg/l	Selenastrum capricornutum		
12.2. Persistence and degradability:	BOD	28d	51	%		OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	Not readily biodegradable
12.2. Persistence and degradability:		28d	51	%		OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	Readily biodegradable
Toxicity to bacteria:	EC50	3h	>2500	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	
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 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.

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.

## SECTION 14: Transport information

### General statements

14.1. UN number:

n.a.

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

Revision date / version: 19.05.2021 / 0019

Replacing version dated / version: 10.03.2021 / 0018

Valid from: 19.05.2021

PDF print date: 19.05.2021

Liquimate 7700 Mini Rapid Kartusche

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

14.2. UN proper shipping name:

14.3. Transport hazard class(es):

n.a.

14.4. Packing group:

n.a.

Classification code:

n.a.

LQ:

n.a.

14.5. Environmental hazards:

Not applicable

Tunnel restriction code:

## Transport by sea (IMDG-code)

14.2. UN proper shipping name:

14.3. Transport hazard class(es):

n.a.

14.4. Packing group:

n.a.

Marine Pollutant:

n.a.

14.5. Environmental hazards:

Not applicable

## Transport by air (IATA)

14.2. UN proper shipping name:

14.3. Transport hazard class(es):

n.a.

14.4. Packing group:

n.a.

14.5. Environmental hazards:

Not applicable

## 14.6. Special precautions for user

Unless specified otherwise, general measures for safe transport must be followed.

## 14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Non-dangerous material according to Transport Regulations.

## 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 trade association/occupational health regulations.

Directive 2010/75/EU (VOC):

0 %

### 15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

## SECTION 16: Other information

Revised sections:

2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 15, 16

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
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.

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).

H226 Flammable liquid and vapour.

H317 May cause an allergic skin reaction.

H302 Harmful if swallowed.

Page 12 of 37  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 19.05.2021 / 0019  
 Replacing version dated / version: 10.03.2021 / 0018  
 Valid from: 19.05.2021  
 PDF print date: 19.05.2021  
 Liquimate 7700 Mini Rapid Kartusche

H314 Causes severe skin burns and eye damage.  
 H318 Causes serious eye damage.  
 H319 Causes serious eye irritation.  
 H332 Harmful if inhaled.  
 H373 May cause damage to organs through prolonged or repeated exposure.

Skin Irrit. — Skin irritation  
 Eye Dam. — Serious eye damage  
 Skin Sens. — Skin sensitization  
 Eye Irrit. — Eye irritation  
 Acute Tox. — Acute toxicity - oral  
 Skin Corr. — Skin corrosion  
 STOT RE — Specific target organ toxicity - repeated exposure  
 Flam. Liq. — Flammable liquid  
 Acute Tox. — Acute toxicity - inhalation

### 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  
 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)  
 LQ Limited Quantities  
 MARPOL International Convention for the Prevention of Marine Pollution from Ships

Page 13 of 37

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

Revision date / version: 19.05.2021 / 0019

Replacing version dated / version: 10.03.2021 / 0018

Valid from: 19.05.2021

PDF print date: 19.05.2021

Liquimate 7700 Mini Rapid Kartusche

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.

These statements were made by:

**Chemical Check GmbH, Chemical Check Platz 1-7, D-32839 Steinheim, Tel.: +49 5233 94 17 0, Fax: +49 5233 94 17 90**

© by Chemical Check GmbH Gefahrstoffberatung. The copying or changing of this document is forbidden except with consent of the Chemical Check GmbH Gefahrstoffberatung.

Page 14 of 37  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 19.05.2021 / 0019  
 Replacing version dated / version: 10.03.2021 / 0018  
 Valid from: 19.05.2021  
 PDF print date: 19.05.2021  
 Liquimate 7700 Mini Rapid Kartusche

## 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

#### Liquimate 7700 Mini Rapid Kartusche

#### 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

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:

---

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

+49 (0) 700 / 24 112 112 (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
Acute Tox.	4	H332-Harmful if inhaled.
STOT RE	2	H373-May cause damage to organs through prolonged or repeated exposure.
Eye Irrit.	2	H319-Causes serious eye irritation.
STOT SE	3	H335-May cause respiratory irritation.
Skin Irrit.	2	H315-Causes skin irritation.
Resp. Sens.	1	H334-May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin Sens.	1	H317-May cause an allergic skin reaction.
Carc.	2	H351-Suspected of causing cancer.

#### 2.2 Label elements

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

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
Revision date / version: 19.05.2021 / 0014  
Replacing version dated / version: 29.10.2019 / 0013  
Valid from: 19.05.2021  
PDF print date: 19.05.2021  
Liquimate 7700 Mini Rapid Kartusche



**Danger**

H332-Harmful if inhaled. H373-May cause damage to organs through prolonged or repeated exposure. H319-Causes serious eye irritation. H335-May cause respiratory irritation. H315-Causes skin irritation. H334-May cause allergy or asthma symptoms or breathing difficulties if inhaled. H317-May cause an allergic skin reaction. H351-Suspected of causing cancer.

P101-If medical advice is needed, have product container or label at hand. P102-Keep out of reach of children.  
P201-Obtain special instructions before use. P260-Do not breathe vapours or spray. P280-Wear protective gloves / protective clothing / eye protection / face protection. P284-Wear respiratory protection.  
P304+P340-IF INHALED: Remove person to fresh air and keep comfortable for breathing. P308+P313-IF exposed or concerned: Get medical advice / attention.  
P405-Store locked up.  
P501-Dispose of contents / container to an approved waste disposal facility.

EUH204-Contains isocyanates. May produce an allergic reaction.

Persons already sensitised to diisocyanates may develop allergic reactions when using this product.  
Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product.  
This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.  
As from 24 August 2023 adequate training is required before industrial or professional use.  
4,4'-methylenediphenyl diisocyanate  
2,2'-methylenediphenyl diisocyanate  
o-(p-isocyanatobenzyl)phenyl isocyanate  
Diphenylmethanediisocyanate, isomeres and homologues  
Polyisocyanate prepolymer

## 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 Substances

n.a.

### 3.2 Mixtures

Diphenylmethanediisocyanate, isomeres and homologues	
Registration number (REACH)	---
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	---
CAS	9016-87-9
content %	30-<50

Page 16 of 37  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 19.05.2021 / 0014  
 Replacing version dated / version: 29.10.2019 / 0013  
 Valid from: 19.05.2021  
 PDF print date: 19.05.2021  
 Liquimate 7700 Mini Rapid Kartusche

<b>Classification according to Regulation (EC) 1272/2008 (CLP), M-factors</b>	Acute Tox. 4, H332 Eye Irrit. 2, H319 STOT SE 3, H335 Skin Irrit. 2, H315 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT RE 2, H373
<b>Polyisocyanate prepolymer</b>	
<b>Registration number (REACH)</b>	---
<b>Index</b>	---
<b>EINECS, ELINCS, NLP, REACH-IT List-No.</b>	---
<b>CAS</b>	---
<b>content %</b>	30-<50
<b>Classification according to Regulation (EC) 1272/2008 (CLP), M-factors</b>	Skin Irrit. 2, H315 Skin Sens. 1, H317 Eye Irrit. 2, H319 Acute Tox. 4, H332 Resp. Sens. 1, H334 STOT SE 3, H335 Carc. 2, H351 STOT RE 2, H373
<b>4,4'-methylenediphenyl diisocyanate</b>	
<b>Registration number (REACH)</b>	01-2119457014-47-XXXX
<b>Index</b>	615-005-00-9
<b>EINECS, ELINCS, NLP, REACH-IT List-No.</b>	202-966-0
<b>CAS</b>	101-68-8
<b>content %</b>	10-<20
<b>Classification according to Regulation (EC) 1272/2008 (CLP), M-factors</b>	Carc. 2, H351 Acute Tox. 4, H332 STOT RE 2, H373 Eye Irrit. 2, H319 STOT SE 3, H335 Skin Irrit. 2, H315 Resp. Sens. 1, H334 Skin Sens. 1, H317
<b>o-(p-isocyanatobenzyl)phenyl isocyanate</b>	
<b>Registration number (REACH)</b>	01-2119480143-45-XXXX
<b>Index</b>	615-005-00-9
<b>EINECS, ELINCS, NLP, REACH-IT List-No.</b>	227-534-9
<b>CAS</b>	5873-54-1
<b>content %</b>	10-<20
<b>Classification according to Regulation (EC) 1272/2008 (CLP), M-factors</b>	Carc. 2, H351 Acute Tox. 4, H332 STOT RE 2, H373 Eye Irrit. 2, H319 STOT SE 3, H335 Skin Irrit. 2, H315 Resp. Sens. 1, H334 Skin Sens. 1, H317
<b>[3-(2,3-epoxypropoxy)propyl]trimethoxysilane</b>	
<b>Registration number (REACH)</b>	01-2119513212-58-XXXX
<b>Index</b>	---
<b>EINECS, ELINCS, NLP, REACH-IT List-No.</b>	219-784-2
<b>CAS</b>	2530-83-8
<b>content %</b>	1-<3
<b>Classification according to Regulation (EC) 1272/2008 (CLP), M-factors</b>	Eye Dam. 1, H318
<b>2,2'-methylenediphenyl diisocyanate</b>	
<b>Registration number (REACH)</b>	01-2119927323-43-XXXX



Page 17 of 37  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 19.05.2021 / 0014  
 Replacing version dated / version: 29.10.2019 / 0013  
 Valid from: 19.05.2021  
 PDF print date: 19.05.2021  
 Liquimate 7700 Mini Rapid Kartusche

<b>Index</b>	615-005-00-9
<b>EINECS, ELINCS, NLP, REACH-IT List-No.</b>	219-799-4
<b>CAS</b>	2536-05-2
<b>content %</b>	0,1-<1
<b>Classification according to Regulation (EC) 1272/2008 (CLP), M-factors</b>	Carc. 2, H351 Acute Tox. 4, H332 STOT RE 2, H373 Eye Irrit. 2, H319 STOT SE 3, H335 Skin Irrit. 2, H315 Resp. Sens. 1, H334 Skin Sens. 1, H317

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. 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  
 reddening of the skin  
 Dermatitis (skin inflammation)  
 Allergic reaction  
 Irritant to mucosa of the nose and throat  
 coughing  
 respiratory distress

In case of sensitivity, concentrations below the limit value may already result in asthmatic symptoms.

### 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

Page 18 of 37  
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
Revision date / version: 19.05.2021 / 0014  
Replacing version dated / version: 29.10.2019 / 0013  
Valid from: 19.05.2021  
PDF print date: 19.05.2021  
Liquimate 7700 Mini Rapid Kartusche

In case of fire the following can develop:  
Oxides of carbon  
Toxic gases  
Danger of bursting (explosion) when heated

### 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.  
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.  
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, sawdust) and dispose of according to Section 13.

### 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.  
No contact with products of this type in case of allergies, asthma and chronic respiratory tract disorders.  
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.  
Not to be stored in gangways or stair wells.  
Store product closed and only in original packing.  
Avoid exposure to moist air and water.  
Store in a dry place.

### 7.3 Specific end use(s)

No information available at present.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

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

Revision date / version: 19.05.2021 / 0014

Replacing version dated / version: 29.10.2019 / 0013

Valid from: 19.05.2021

PDF print date: 19.05.2021

Liquimate 7700 Mini Rapid Kartusche

(GB) Chemical Name	Diphenylmethanediisocyanate, isomeres and homologues	Content %:30- <50
WEL-TWA: 0,02 mg/m3 (Isocyanates, all (as -NCO))	WEL-STEL: 0,07 mg/m3 (Isocyanates, all (as -NCO))	---
Monitoring procedures: ---		
BMGV: 1 µmol isocyanate-derived diamine/mol creatinine in urine (At the end of the period of exposure)		Other information: Sen (Isocyanates, all (as -NCO))

(GB) Chemical Name	Polyisocyanate prepolymer	Content %:30- <50
WEL-TWA: 0,02 mg/m3 (Isocyanates, all (as -NCO))	WEL-STEL: 0,07 mg/m3 (Isocyanates, all (as -NCO))	---
Monitoring procedures: ---		
BMGV: 1 µmol isocyanate-derived diamine/mol creatinine in urine (At the end of the period of exposure)		Other information: Sen (Isocyanates, all (as -NCO))

(GB) Chemical Name	4,4'-methylenediphenyl diisocyanate	Content %:10- <20
WEL-TWA: 0,02 mg/m3 (Isocyanates, all (as -NCO))	WEL-STEL: 0,07 mg/m3 (Isocyanates, all (as -NCO))	---
Monitoring procedures: ISO 16702 (Workplace air quality – determination of total isocyanate groups in air using 2-(1-methoxyphenyl)piperazine and liquid chromatography) - 2007 MDHS 25/4 (Organic isocyanates in air – Laboratory method using sampling either onto 2-(1-methoxyphenyl)piperazine coated glass fibre filters followed by solvent desorption or into impingers and analysis using high performance liquid chromatography) - 2015 - - EU project BC/CEN/ENTR/000/2002-16 card 7-4 (2004) - NIOSH 5521 (ISOCYANATES, MONOMERIC) - 1994 - NIOSH 5522 (ISOCYANATES) - 1998 - NIOSH 5525 (ISOCYANATES, TOTAL (MAP)) - 2003 - OSHA 18 (Diisocyanates 2,4-TDI and MDI) - 1980 - OSHA 47 (Methylene Bisphenyl Isocyanate (MDI)) - 1984		
BMGV: 1 µmol isocyanate-derived diamine/mol creatinine in urine (At the end of the period of exposure)		Other information: Sen (Isocyanates, all (as -NCO))

(GB) Chemical Name	o-(p-isocyanatobenzyl)phenyl isocyanate	Content %:10- <20
WEL-TWA: 0,02 mg/m3 (Isocyanates, all (as -NCO))	WEL-STEL: 0,07 mg/m3 (Isocyanates, all (as -NCO))	---
Monitoring procedures: ---		
BMGV: 1 µmol isocyanate-derived diamine/mol creatinine in urine (At the end of the period of exposure)		Other information: Sen (Isocyanates, all (as -NCO))

(GB) Chemical Name	2,2'-methylenediphenyl diisocyanate	Content %:0,1-<1
WEL-TWA: 0,02 mg/m3 (Isocyanates, all (as -NCO))	WEL-STEL: 0,07 mg/m3 (Isocyanates, all (as -NCO))	---
Monitoring procedures: ---		
BMGV: 1 µmol isocyanate-derived diamine/mol creatinine in urine (At the end of the period of exposure)		Other information: Sen (Isocyanates, all (as -NCO))

Diphenylmethanediisocyanate, isomeres and homologues						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	1	mg/l	
	Environment - marine		PNEC	0,1	mg/l	
	Environment - water, sporadic (intermittent) release		PNEC	10	mg/l	
	Environment - sewage treatment plant		PNEC	1	mg/l	
	Environment - soil		PNEC	1	mg/kg	
Consumer	Human - oral	Short term, local effects	DNEL	20	mg/kg bw/d	
Consumer	Human - inhalation	Short term, local effects	DNEL	0,05	mg/m3	
Consumer	Human - inhalation	Short term, systemic effects	DNEL	0,05	mg/m3	
Consumer	Human - inhalation	Long term, local effects	DNEL	0,025	mg/m3	

Page 20 of 37  
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
Revision date / version: 19.05.2021 / 0014  
Replacing version dated / version: 29.10.2019 / 0013  
Valid from: 19.05.2021  
PDF print date: 19.05.2021  
Liquimate 7700 Mini Rapid Kartusche

Consumer	Human - inhalation	Long term, systemic effects	DNEL	0,025	mg/m3	
Consumer	Human - dermal	Short term, local effects	DNEL	17,2	mg/cm2	
Consumer	Human - dermal	Short term, systemic effects	DNEL	25	mg/kg bw/d	
Workers / employees	Human - inhalation	Short term, local effects	DNEL	0,1	mg/m3	
Workers / employees	Human - inhalation	Short term, systemic effects	DNEL	0,1	mg/m3	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	0,05	mg/m3	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	0,05	mg/m3	
Workers / employees	Human - dermal	Short term, local effects	DNEL	28,7	mg/cm2	
Workers / employees	Human - dermal	Short term, systemic effects	DNEL	50	mg/kg bw/d	

#### 4,4'-methylenediphenyl diisocyanate

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	1	mg/l	
	Environment - marine		PNEC	0,1	mg/l	
	Environment - soil		PNEC	1	mg/kg dw	
	Environment - sewage treatment plant		PNEC	1	mg/l	
	Environment - water, sporadic (intermittent) release		PNEC	10	mg/l	
Consumer	Human - dermal	Short term, systemic effects	DNEL	25	mg/kg bw/d	
Consumer	Human - inhalation	Short term, systemic effects	DNEL	0,05	mg/m3	
Consumer	Human - oral	Short term, systemic effects	DNEL	20	mg/kg bw/d	
Consumer	Human - dermal	Short term, local effects	DNEL	17,2	mg/cm2	
Consumer	Human - inhalation	Short term, local effects	DNEL	0,05	mg/m3	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	0,025	mg/m3	
Consumer	Human - inhalation	Long term, local effects	DNEL	0,025	mg/m3	
Workers / employees	Human - dermal	Short term, systemic effects	DNEL	50	mg/kg bw/d	
Workers / employees	Human - inhalation	Short term, systemic effects	DNEL	0,1	mg/m3	
Workers / employees	Human - dermal	Short term, local effects	DNEL	28,7	mg/cm2	
Workers / employees	Human - inhalation	Short term, local effects	DNEL	0,1	mg/m3	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	0,05	mg/m3	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	0,05	mg/m3	

#### o-(p-isocyanatobenzyl)phenyl isocyanate

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	1	mg/l	
	Environment - marine		PNEC	0,1	mg/l	

Page 21 of 37  
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
Revision date / version: 19.05.2021 / 0014  
Replacing version dated / version: 29.10.2019 / 0013  
Valid from: 19.05.2021  
PDF print date: 19.05.2021  
Liquimate 7700 Mini Rapid Kartusche

	Environment - soil		PNEC	1	mg/kg dry weight	
	Environment - sewage treatment plant		PNEC	1	mg/l	
Consumer	Human - dermal	Short term, systemic effects	DNEL	25	mg/kg body weight/day	
Consumer	Human - inhalation	Short term, systemic effects	DNEL	0,05	mg/m3	
Consumer	Human - oral	Short term, systemic effects	DNEL	20	mg/kg body weight/day	
Consumer	Human - dermal	Short term, local effects	DNEL	17,2	mg/cm2	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	0,025	mg/m3	
Consumer	Human - inhalation	Long term, local effects	DNEL	0,025	mg/m3	
Workers / employees	Human - dermal	Short term, systemic effects	DNEL	50	mg/kg bw/day	
Workers / employees	Human - inhalation	Short term, systemic effects	DNEL	0,1	mg/m3	
Workers / employees	Human - dermal	Short term, local effects	DNEL	28,7	mg/cm2	
Workers / employees	Human - inhalation	Short term, local effects	DNEL	0,1	mg/m3	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	0,05	mg/m3	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	0,05	mg/m3	

<b>[3-(2,3-epoxypropoxy)propyl]trimethoxysilane</b>						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	1	mg/l	
	Environment - marine		PNEC	0,1	mg/l	
	Environment - water, sporadic (intermittent) release		PNEC	1	mg/l	
	Environment - sediment		PNEC	0,79	mg/kg dry weight	
	Environment - soil		PNEC	0,13	mg/kg dry weight	
	Environment - sewage treatment plant		PNEC	10	mg/l	
Consumer	Human - dermal	Short term, systemic effects	DNEL	12,5	mg/kg bw/d	
Consumer	Human - inhalation	Short term, systemic effects	DNEL	43,5	mg/m3	
Consumer	Human - oral	Long term, systemic effects	DNEL	12,5	mg/kg bw/day	
Consumer	Human - dermal	Long term, systemic effects	DNEL	12,5	mg/kg bw/day	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	43,5	mg/m3	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	147	mg/m3	
Workers / employees	Human - dermal	Short term, systemic effects	DNEL	21	mg/kg bw/day	
Workers / employees	Human - inhalation	Short term, systemic effects	DNEL	147	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	21	mg/kg bw/day	

Page 22 of 37  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 19.05.2021 / 0014  
 Replacing version dated / version: 29.10.2019 / 0013  
 Valid from: 19.05.2021  
 PDF print date: 19.05.2021  
 Liquimate 7700 Mini Rapid Kartusche

2,2'-methylenediphenyl diisocyanate						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	1	mg/l	
	Environment - marine		PNEC	0,1	mg/l	
	Environment - soil		PNEC	1	mg/kg	
	Environment - sewage treatment plant		PNEC	1	mg/l	
Consumer	Human - dermal	Short term, systemic effects	DNEL	25	mg/kg body weight/day	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	0,05	mg/kg	
Consumer	Human - oral	Short term, systemic effects	DNEL	20	mg/kg body weight/day	
Consumer	Human - dermal	Short term, local effects	DNEL	17,2	mg/cm2	
Consumer	Human - inhalation	Short term, local effects	DNEL	0,05	mg/m3	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	0,025	mg/m3	
Consumer	Human - inhalation	Long term, local effects	DNEL	0,025	mg/m3	
Workers / employees	Human - dermal	Short term, systemic effects	DNEL	50	mg/kg bw/day	
Workers / employees	Human - inhalation	Short term, systemic effects	DNEL	0,1	mg/m3	
Workers / employees	Human - dermal	Short term, local effects	DNEL	28,7	mg/cm2	
Workers / employees	Human - inhalation	Short term, local effects	DNEL	0,1	mg/m3	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	0,05	mg/m3	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	0,05	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.

Page 23 of 37  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 19.05.2021 / 0014  
 Replacing version dated / version: 29.10.2019 / 0013  
 Valid from: 19.05.2021  
 PDF print date: 19.05.2021  
 Liquimate 7700 Mini Rapid Kartusche

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).  
 Protective gloves made of fluorocarbon rubber (EN 374).  
 Protective nitrile gloves (EN 374).  
 Protective gloves made of polychloroprene (EN 374).  
 Minimum layer thickness in mm:  
 >= 0,35 - 0,5  
 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.  
 Filter A P2 (EN 14387), code colour brown, white  
 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
Colour:	Brown
Odour:	Slightly
Odour threshold:	Not determined
pH-value:	Not determined
Melting point/freezing point:	Not determined
Initial boiling point and boiling range:	>300 °C
Flash point:	>200 °C
Evaporation rate:	Not determined
Flammability (solid, gas):	n.a.
Lower explosive limit:	Not determined
Upper explosive limit:	Not determined
Vapour pressure:	<0,0001 hPa (20°C)
Vapour density (air = 1):	Not determined
Density:	1,17 g/cm3 (20°C, relative density )



Page 24 of 37  
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
Revision date / version: 19.05.2021 / 0014  
Replacing version dated / version: 29.10.2019 / 0013  
Valid from: 19.05.2021  
PDF print date: 19.05.2021  
Liquimate 7700 Mini Rapid Kartusche

Bulk density: n.a.  
Solubility(ies): Not determined  
Water solubility: Mixable  
Partition coefficient (n-octanol/water): Not determined  
Auto-ignition temperature: >400 °C (Ignition temperature )  
Decomposition temperature: Not determined  
Viscosity: 500 mPas (23°C)  
Explosive properties: Product is not explosive.  
Oxidising properties: No

## 9.2 Other information

Miscibility: Not determined  
Fat solubility / solvent: Not determined  
Conductivity: Not determined  
Surface tension: Not determined  
Solvents content: 0 % (Organic solvents )

## 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

reacts with water  
Development of:  
Carbon dioxide  
CO<sub>2</sub> formation in closed tanks causes pressure to rise.  
Pressure increase will result in danger of bursting.

### 10.4 Conditions to avoid

See also section 7.  
Protect from humidity.

### 10.5 Incompatible materials

See also section 7.  
Water  
Alcohols  
Amines  
Bases  
Acids  
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 toxicological effects

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

#### Liquimate 7700 Mini Rapid Kartusche

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:	ATE	11,22	mg/l/4h			Vapours, calculated value
Acute toxicity, by inhalation:	ATE	1,53	mg/l/4h			Aerosol, calculated value
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.



Page 25 of 37  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 19.05.2021 / 0014  
 Replacing version dated / version: 29.10.2019 / 0013  
 Valid from: 19.05.2021  
 PDF print date: 19.05.2021  
 Liquimate 7700 Mini Rapid Kartusche

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.

Diphenylmethanediisocyanate, isomeres and homologues						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>10000	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	>9400	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LC50	0,49	mg/l/4h	Rat	OECD 403 (Acute Inhalation Toxicity)	Aerosol, Does not conform with EU classification.
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Mild irritant
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	Yes (skin contact)
Germ cell mutagenicity:					OECD 474 (Mammalian Erythrocyte Micronucleus Test)	Negative
Carcinogenicity:		1	mg/m3	Rat	OECD 453 (Combined Chronic Toxicity/Carcinogenicity Studies)	Positive
Reproductive toxicity:	NOAEL	12	mg/m3	Rat	OECD 414 (Prenatal Developmental Toxicity Study)	Negative, Aerosol
Reproductive toxicity (Developmental toxicity):		4		Rat	OECD 414 (Prenatal Developmental Toxicity Study)	Negative
Reproductive toxicity (Effects on fertility):				Rat	OECD 414 (Prenatal Developmental Toxicity Study)	Negative
Specific target organ toxicity - single exposure (STOT-SE):						Irritation of the respiratory tract
Specific target organ toxicity - repeated exposure (STOT-RE):	NOEC	0,2	mg/kg		OECD 453 (Combined Chronic Toxicity/Carcinogenicity Studies)	
Aspiration hazard:						No
Symptoms:						fever, coughing, headaches, nausea and vomiting., dizziness, breathing difficulties, laryngeal oedema, abdominal pain, diarrhoea

Page 26 of 37  
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
Revision date / version: 19.05.2021 / 0014  
Replacing version dated / version: 29.10.2019 / 0013  
Valid from: 19.05.2021  
PDF print date: 19.05.2021  
Liquimate 7700 Mini Rapid Kartusche

Specific target organ toxicity - single exposure (STOT-SE), inhalative:						Target organ(s): respiratory organs, May cause respiratory irritation.
-------------------------------------------------------------------------	--	--	--	--	--	------------------------------------------------------------------------

Polyisocyanate prepolymer						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Respiratory or skin sensitisation:						Sensitising (inhalation and skin contact)

4,4'-methylenediphenyl diisocyanate						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>10000	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by oral route:	LD50	>2000	mg/kg	Rat	Regulation (EC) 440/2008 B.1 (ACUTE ORAL TOXICITY)	
Acute toxicity, by dermal route:	LD50	>9400	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LC50	>2,24	mg/l/4h	Rat	OECD 403 (Acute Inhalation Toxicity)	Aerosol
Acute toxicity, by inhalation:	LC50	0,368	mg/l/4h	Rat	OECD 403 (Acute Inhalation Toxicity)	Does not conform with EU classification.
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Irritant, Analogous conclusion
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Irritant, Analogous conclusion
Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	Yes (skin contact), Analogous conclusion
Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	Yes (inhalation and skin contact), Analogous conclusion
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative, Analogous conclusion
Carcinogenicity:					OECD 453 (Combined Chronic Toxicity/Carcinogenicity Studies)	Analogous conclusion, Limited evidence of a carcinogenic effect.
Reproductive toxicity:	NOAEL	4	mg/m3	Rat	OECD 414 (Prenatal Developmental Toxicity Study)	Negative, Analogous conclusion
Symptoms:						respiratory distress, coughing, mucous membrane irritation
Specific target organ toxicity - single exposure (STOT-SE), inhalative:						Irritation of the respiratory tract

Page 27 of 37  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 19.05.2021 / 0014  
 Replacing version dated / version: 29.10.2019 / 0013  
 Valid from: 19.05.2021  
 PDF print date: 19.05.2021  
 Liquimate 7700 Mini Rapid Kartusche

Specific target organ toxicity - single exposure (STOT-SE), inhalative:						Irritation of the respiratory tract, Target organ(s): respiratory system
-------------------------------------------------------------------------	--	--	--	--	--	--------------------------------------------------------------------------

<b>o-(p-isocyanatobenzyl)phenyl isocyanate</b>						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>2000	mg/kg	Rat	Regulation (EC) 440/2008 B.1 (ACUTE ORAL TOXICITY)	Analogous conclusion
Acute toxicity, by dermal route:	LD50	>9400	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	Analogous conclusion
Acute toxicity, by inhalation:	LC50	0,387	mg/l/4h	Rat		Does not conform with EU classification.
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Irritant, Analogous conclusion
Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	Sensitising (skin contact), Analogous conclusion
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	Yes (inhalation), Analogous conclusion
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative, Analogous conclusion
Carcinogenicity:					OECD 453 (Combined Chronic Toxicity/Carcinogenicity Studies)	Analogous conclusion, Limited evidence of a carcinogenic effect.
Reproductive toxicity:					OECD 414 (Prenatal Developmental Toxicity Study)	Negative
Symptoms:						asthmatic symptoms, mucous membrane irritation
Specific target organ toxicity - single exposure (STOT-SE), inhalative:						Target organ(s): respiratory tract, Irritant

<b>[3-(2,3-epoxypropoxy)propyl]trimethoxysilane</b>						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	8025	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LC50	5,3	mg/l	Rat	OECD 403 (Acute Inhalation Toxicity)	Aerosol
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Eye Dam. 1
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	Negative
Carcinogenicity:	NOAEL	>11,1	mg/kg	Mouse		Negative
Reproductive toxicity:		1500	mg/kg/d			
Aspiration hazard:						No

Page 28 of 37  
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
Revision date / version: 19.05.2021 / 0014  
Replacing version dated / version: 29.10.2019 / 0013  
Valid from: 19.05.2021  
PDF print date: 19.05.2021  
Liquimate 7700 Mini Rapid Kartusche

Symptoms:						acidosis, drop in blood pressure, vomiting, headaches, cramps, dizziness, visual disturbances, nausea
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAEL	500	mg/kg	Rat	OECD 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents)	
Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	NOAEL	0,225	mg/kg	Rat	OECD 412 (Subacute Inhalation Toxicity - 28-Day Study)	

2,2'-methylenediphenyl diisocyanate						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>2000	mg/kg	Rat	Regulation (EC) 440/2008 B.1 (ACUTE ORAL TOXICITY)	Analogous conclusion
Acute toxicity, by dermal route:	LD50	>9400	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LC50	>2,24	mg/l/1h	Rat	OECD 403 (Acute Inhalation Toxicity)	Mist
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Mild irritant
Serious eye damage/irritation:				Rabbit		Irritant
Respiratory or skin sensitisation:				Guinea pig		Yes (inhalation), Analogous conclusion
Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	Yes (skin contact)
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative, Analogous conclusion
Carcinogenicity:				Rat	OECD 453 (Combined Chronic Toxicity/Carcinogenicity Studies)	Limited evidence of a carcinogenic effect., Analogous conclusion
Reproductive toxicity:	NOAEL	4	mg/m3	Rat	OECD 414 (Prenatal Developmental Toxicity Study)	No indications of such an effect.
Specific target organ toxicity - single exposure (STOT-SE):						May cause respiratory irritation.
Aspiration hazard:						Not to be expected
Symptoms:						respiratory distress, coughing, mucous membrane irritation

## SECTION 12: Ecological information

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

### Liquimate 7700 Mini Rapid Kartusche

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.

Diphenylmethanediisocyanate, isomeres and homologues							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	>1000	mg/l	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	>10	mg/l	Daphnia magna	OECD 211 (Daphnia magna Reproduction Test)	
12.1. Toxicity to daphnia:	EC50	24h	>1000	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	EC50	72h	>1640	mg/l	Scenedesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	0	%		OECD 301 C (Ready Biodegradability - Modified MITI Test (I))	Not biodegradable
12.3. Bioaccumulative potential:	BCF	42d	<14		Cyprinus caprio	OECD 305 (Bioconcentration - Flow-Through Fish Test)	A notable biological accumulation potential is not to be expected (LogPow 1-3).
12.5. Results of PBT and vPvB assessment							No PBT substance
Toxicity to bacteria:	EC50	3h	>100	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	
Other organisms:	NOEC/NOEL	14d	>1000	mg/kg	Eisenia foetida	OECD 207 (Earthworm, Acute Toxicity Tests)	
Other information:	BOD	28d	<10	%		OECD 302 C (Inherent Biodegradability - Modified MITI Test (II))	

Page 30 of 37  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 19.05.2021 / 0014  
 Replacing version dated / version: 29.10.2019 / 0013  
 Valid from: 19.05.2021  
 PDF print date: 19.05.2021  
 Liquimate 7700 Mini Rapid Kartusche

Other information:							Does not contain any organically bound halogens which can contribute to the AOX value in waste water.
--------------------	--	--	--	--	--	--	-------------------------------------------------------------------------------------------------------

4,4'-methylenediphenyl diisocyanate							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	>1000	mg/l	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to fish:	LC0	96h	>1000	mg/l	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity Test)	Analogous conclusion
12.1. Toxicity to daphnia:	EC50	24h	>1000	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	Analogous conclusion
12.1. Toxicity to algae:	EC50	72h	1,5	mg/l		OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	EC50	72h	1640	mg/l	Desmodesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	Analogous conclusion
12.1. Toxicity to algae:	NOEC/NOEL	72h	1640	mg/l	Desmodesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	Analogous conclusion
12.2. Persistence and degradability:		28d	0	%		OECD 302 C (Inherent Biodegradability - Modified MITI Test (II))	With water at the interface, transforms slowly with formation of CO <sub>2</sub> into a firm, insoluble reaction product with a high melting point (polycarbamide)., According to experience available to date, polycarbamide is inert and non-degradable.
12.2. Persistence and degradability:	BOD	28d	0	%		OECD 302 C (Inherent Biodegradability - Modified MITI Test (II))	With water at the interface, transforms slowly with formation of CO <sub>2</sub> into a firm, insoluble reaction product with a high melting point (polycarbamide)., According to experience available to date, polycarbamide is inert and non-degradable.

12.3. Bioaccumulative potential:	BCF	28d	200		Cyprinus caprio	OECD 305 (Bioconcentration - Flow-Through Fish Test)	A notable biological accumulation potential has to be expected (LogPow > 3).
12.3. Bioaccumulative potential:	Log Pow		5,22			OECD 117 (Partition Coefficient (n-octanol/water) - HPLC method)	A notable biological accumulation potential has to be expected (LogPow > 3).
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EC50	3h	>100	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	
Toxicity to bacteria:	EC50	3h	>100	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	Analogous conclusion
Other information:							Does not contain any organically bound halogens which can contribute to the AOX value in waste water.
Toxicity to annelids:	EC50	14d	>1000	mg/kg	Eisenia foetida	OECD 207 (Earthworm, Acute Toxicity Tests)	

o-(p-isocyanatobenzyl)phenyl isocyanate							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC0	96h	> 1000	mg/l	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity Test)	Analogous conclusion
12.1. Toxicity to daphnia:	EC50	24h	>1000	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	Analogous conclusion
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	>10	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	Analogous conclusion
12.1. Toxicity to algae:	ErC50	72h	>1640	mg/l	Scenedesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	Analogous conclusion

Page 32 of 37  
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
Revision date / version: 19.05.2021 / 0014  
Replacing version dated / version: 29.10.2019 / 0013  
Valid from: 19.05.2021  
PDF print date: 19.05.2021  
Liquimate 7700 Mini Rapid Kartusche

12.2. Persistence and degradability:		28d	0	%		OECD 302 C (Inherent Biodegradability - Modified MITI Test (II))	With water at the interface, transforms slowly with formation of CO <sub>2</sub> into a firm, insoluble reaction product with a high melting point (polycarbamide),. Analogous conclusion
12.3. Bioaccumulative potential:	BCF	28d	200		Cyprinus caprio	OECD 305 (Bioconcentration - Flow-Through Fish Test)	Not to be expected, Analogous conclusion
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EC50	3h	>100	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	Analogous conclusion
Other organisms:	NOEC/NOEL	14d	>1000		Lumbricus terrestris	OECD 207 (Earthworm, Acute Toxicity Tests)	Analogous conclusion

[3-(2,3-epoxypropoxy)propyl]trimethoxysilane							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	237	mg/l	Oncorhynchus mykiss		
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	>=100	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to daphnia:	EC50	48h	324	mg/l	Daphnia magna	U.S. EPA ECOTOX Database	
12.1. Toxicity to algae:	EC50	7d	119	mg/l	Anabaena flos-aquae	U.S. EPA ECOTOX Database	
12.1. Toxicity to algae:	NOEC/NOEL	7d	<50	mg/l	Anabaena flos-aquae	U.S. EPA ECOTOX Database	
12.2. Persistence and degradability:		28d	37	%	activated sludge	Regulation (EC) 440/2008 C.4-A (DETERMINATION OF 'READY' BIODEGRADABILITY - DOC DIE-AWAY TEST)	Not readily biodegradable
12.2. Persistence and degradability:	DOC	28d	37	%		Regulation (EC) 440/2008 C.4-A (DETERMINATION OF 'READY' BIODEGRADABILITY - DOC DIE-AWAY TEST)	Not readily biodegradable



12.3. Bioaccumulative potential:	Log Pow		0,5				Not to be expected
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	NOEC/NOEL	3h	>100	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	

<b>2,2'-methylenediphenyl diisocyanate</b>							
<b>Toxicity / effect</b>	<b>Endpoint</b>	<b>Time</b>	<b>Value</b>	<b>Unit</b>	<b>Organism</b>	<b>Test method</b>	<b>Notes</b>
12.1. Toxicity to fish:	LC50	96h	>1000	mg/l	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity Test)	Analogous conclusion
12.1. Toxicity to daphnia:	EC50	24h	>1000	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	Analogous conclusion
12.1. Toxicity to algae:	EC50	72h	>1640	mg/l	Scenedesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	Analogous conclusion
12.2. Persistence and degradability:		28d	0	%		OECD 302 C (Inherent Biodegradability - Modified MITI Test (II))	With water at the interface, transforms slowly with formation of CO <sub>2</sub> into a firm, insoluble reaction product with a high melting point (polycarbamide)., According to experience available to date, polycarbamide is inert and non-degradable.
12.3. Bioaccumulative potential:	BCF	28d	200		Cyprinus caprio	OECD 305 (Bioconcentration - Flow-Through Fish Test)	A notable biological accumulation potential has to be expected (LogPow > 3).
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EC50	3h	>100		activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	Analogous conclusion
Toxicity to annelids:	NOEC/NOEL	14d	>1000	mg/kg	Eisenia foetida	OECD 207 (Earthworm, Acute Toxicity Tests)	Analogous conclusion

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
Revision date / version: 19.05.2021 / 0014  
Replacing version dated / version: 29.10.2019 / 0013  
Valid from: 19.05.2021  
PDF print date: 19.05.2021  
Liquimate 7700 Mini Rapid Kartusche

## 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

08 05 01 waste isocyanates

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.

Recommendation:

Empty container completely.

Uncontaminated packaging can be recycled.

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

## SECTION 14: Transport information

### General statements

14.1. UN number: n.a.

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

14.2. UN proper shipping name:

14.3. Transport hazard class(es):

n.a.

14.4. Packing group:

n.a.

Classification code:

n.a.

LQ:

n.a.

14.5. Environmental hazards:

Not applicable

Tunnel restriction code:

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

14.2. UN proper shipping name:

14.3. Transport hazard class(es):

n.a.

14.4. Packing group:

n.a.

Marine Pollutant:

n.a.

14.5. Environmental hazards:

Not applicable

#### Transport by air (IATA)

14.2. UN proper shipping name:

14.3. Transport hazard class(es):

n.a.

14.4. Packing group:

n.a.

14.5. Environmental hazards:

Not applicable

#### 14.6. Special precautions for user

Unless specified otherwise, general measures for safe transport must be followed.

#### 14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Non-dangerous material according to Transport Regulations.

## 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)!

Regulation (EC) No 1907/2006, Annex XVII

Diphenylmethanediisocyanate, isomeres and homologues

Page 35 of 37  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 19.05.2021 / 0014  
 Replacing version dated / version: 29.10.2019 / 0013  
 Valid from: 19.05.2021  
 PDF print date: 19.05.2021  
 Liquimate 7700 Mini Rapid Kartusche

Polyisocyanate prepolymer  
 4,4'-methylenediphenyl diisocyanate  
 o-(p-isocyanatobenzyl)phenyl isocyanate  
 2,2'-methylenediphenyl diisocyanate  
 Comply with national regulations/laws governing maternity protection (national implementation of the Directive 92/85/EEC)!  
 Comply with trade association/occupational health regulations.

Directive 2010/75/EU (VOC): 0 %

## 15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

## SECTION 16: Other information

Revised sections: 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16

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
Acute Tox. 4, H332	Classification according to calculation procedure.
STOT RE 2, H373	Classification according to calculation procedure.
Eye Irrit. 2, H319	Classification according to calculation procedure.
STOT SE 3, H335	Classification according to calculation procedure.
Skin Irrit. 2, H315	Classification according to calculation procedure.
Resp. Sens. 1, H334	Classification according to calculation procedure.
Skin Sens. 1, H317	Classification according to calculation procedure.
Carc. 2, H351	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).

H315 Causes skin irritation.  
 H317 May cause an allergic skin reaction.  
 H318 Causes serious eye damage.  
 H319 Causes serious eye irritation.  
 H332 Harmful if inhaled.  
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
 H335 May cause respiratory irritation.  
 H351 Suspected of causing cancer.  
 H373 May cause damage to organs through prolonged or repeated exposure.

Acute Tox. — Acute toxicity - inhalation  
 STOT RE — Specific target organ toxicity - repeated exposure  
 Eye Irrit. — Eye irritation  
 STOT SE — Specific target organ toxicity - single exposure - respiratory tract irritation  
 Skin Irrit. — Skin irritation  
 Resp. Sens. — Respiratory sensitization  
 Skin Sens. — Skin sensitization  
 Carc. — Carcinogenicity  
 Eye Dam. — Serious eye damage

## 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

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)

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

Page 37 of 37

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

Revision date / version: 19.05.2021 / 0014

Replacing version dated / version: 29.10.2019 / 0013

Valid from: 19.05.2021

PDF print date: 19.05.2021

Liquimate 7700 Mini Rapid Kartusche

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:

**Chemical Check GmbH, Chemical Check Platz 1-7, D-32839 Steinheim, Tel.: +49 5233 94 17 0, Fax: +49 5233 94 17 90**

© by Chemical Check GmbH Gefahrstoffberatung. The copying or changing of this document is forbidden except with consent of the Chemical Check GmbH Gefahrstoffberatung.