

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

Liquifast 1599

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

Relevant identified uses of the substance or mixture:

Adhesive sealant

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
Resp. Sens.	1	H334-May cause allergy or asthma symptoms or breathing difficulties if inhaled.

2.2 Label elements

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



Danger

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H334-May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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. P284-Wear respiratory protection.

P304+P340-IF INHALED: Remove person to fresh air and keep comfortable for breathing. P342+P311-If experiencing respiratory symptoms: Call a POISON CENTER / doctor.

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

2.3 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

4,4'-methylenediphenyl diisocyanate	
Registration number (REACH)	01-2119457014-47-XXXX
Index	615-005-00-9
EINECS, ELINCS, NLP, REACH-IT List-No.	202-966-0
CAS	101-68-8
content %	0,1-<1
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	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

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

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

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Wash thoroughly with soap and water - consult doctor if necessary.
Remove contaminated clothing immediately.

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.
Consult doctor immediately - keep Data Sheet available.

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.

The following may occur:

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

Irritation of the respiratory tract

Allergic contact eczema

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

Water jet spray
CO2
Extinction powder

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

Calcium oxide

Hydrocarbons

Oxides of nitrogen

Oxides of phosphorus

Metal oxides

Hydrocyanic acid (hydrogen cyanide)

5.3 Advice for firefighters

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

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

Ensure sufficient ventilation.

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.

6.3 Methods and material for containment and cleaning up

Pick up mechanically 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.

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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, and contact with eyes or skin.
 No contact with products of this type in case of allergies, asthma und chronic respiratory tract disorders.
 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.
 Only store at temperatures from > 0°C to < 35°C.

7.3 Specific end use(s)

No information available at present.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Chemical Name	4,4'-methylenediphenyl diisocyanate		Content %:0,1-<1
WEL-TWA:	0,02 mg/m ³ (Isocyanates, all (as -NCO))	WEL-STEL:	0,07 mg/m ³ (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))
Chemical Name	Diisononyl phthalate		Content %:
WEL-TWA:	5 mg/m ³	WEL-STEL:	---
Monitoring procedures:	---		
BMGV:	---	Other information:	---
Chemical Name	Carbon black		Content %:
WEL-TWA:	3,5 mg/m ³	WEL-STEL:	7 mg/m ³
Monitoring procedures:	---		
BMGV:	---	Other information:	---
Chemical Name	Calcium carbonate		Content %:
WEL-TWA:	4 mg/m ³ (respirable dust), 10 mg/m ³ (total inhalable dust)	WEL-STEL:	---
Monitoring procedures:	---		
BMGV:	---	Other information:	---

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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/m ³	
Consumer	Human - oral	Short term, systemic effects	DNEL	20	mg/kg bw/d	
Consumer	Human - dermal	Short term, local effects	DNEL	17,2	mg/cm ²	
Consumer	Human - inhalation	Short term, local effects	DNEL	0,05	mg/m ³	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	0,025	mg/m ³	
Consumer	Human - inhalation	Long term, local effects	DNEL	0,025	mg/m ³	
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/m ³	
Workers / employees	Human - dermal	Short term, local effects	DNEL	28,7	mg/cm ²	
Workers / employees	Human - inhalation	Short term, local effects	DNEL	0,1	mg/m ³	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	0,05	mg/m ³	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	0,05	mg/m ³	

Diisononyl phthalate

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - soil		PNEC	30	mg/kg	
	Environment - oral (animal feed)		PNEC	150	mg/kg	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	15,3	mg/m ³	
Consumer	Human - dermal	Long term, systemic effects	DNEL	220	mg/kg	
Consumer	Human - oral	Long term, systemic effects	DNEL	4,4	mg/kg	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	366	mg/kg	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	51,72	mg/m ³	

Carbon black

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	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	0,06	mg/m ³	

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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:
With danger of contact with eyes.
Tight fitting protective goggles with side protection (EN 166).

Skin protection - Hand protection:
Rubber gloves (EN 374).
Protective nitrile gloves (EN 374).
Minimum layer thickness in mm:
0,4
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.
If OES or MEL is exceeded.
Filter A P3 (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.

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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:	Pastelike, Liquid
Colour:	Black
Odour:	Characteristic
Odour threshold:	Not determined
pH-value:	Not determined
Melting point/freezing point:	Not determined
Initial boiling point and boiling range:	270 °C
Flash point:	151 °C
Evaporation rate:	Not determined
Flammability (solid, gas):	Not determined
Lower explosive limit:	0,4 Vol-%
Upper explosive limit:	2,9 Vol-%
Vapour pressure:	Not determined
Vapour density (air = 1):	Not determined
Density:	1,21 g/cm ³ (20°C)
Bulk density:	Not determined
Solubility(ies):	Not determined
Water solubility:	Mixable
Partition coefficient (n-octanol/water):	Not determined
Auto-ignition temperature:	>300 °C (Ignition temperature)
Auto-ignition temperature:	No
Decomposition temperature:	Not determined
Viscosity:	Viscous
Explosive properties:	Product is not explosive.
Oxidising properties:	Not determined

9.2 Other information

Miscibility:	Not determined
Fat solubility / solvent:	Not determined
Conductivity:	Not determined
Surface tension:	Not determined
Solvents content:	0 %

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.

None known

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).

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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.
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.

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.

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Reproductive toxicity:	NOAEL	4	mg/m ³	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
Specific target organ toxicity - single exposure (STOT-SE), inhalative:						Irritation of the respiratory tract, Target organ(s): respiratory system

Diisononyl phthalate						
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	>3160	mg/kg	Rabbit		
Acute toxicity, by inhalation:	LC50	>4,4	mg/l/4h	Rat	Limit-Test	Aerosol
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	Regulation (EC) 440/2008 B.6 (SKIN SENSITISATION)	No (skin contact)
Germ cell mutagenicity:					(Ames-Test)	Negative
Symptoms:						diarrhoea, nausea and vomiting.

Carbon black						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>2000	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	>3000	mg/kg			
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	Not sensitising
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Carcinogenicity:				Mouse		Negative
Specific target organ toxicity - repeated exposure (STOT-RE):	NOEL	0,0011	mg/l			References, Target organ(s): lung90d
Aspiration hazard:						No
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAEL	137	mg/kg	Mouse		
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAEL	52	mg/kg	Rat		

Calcium carbonate						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes

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Acute toxicity, by oral route:	LD50	>2000	mg/kg	Rat	OECD 420 (Acute Oral toxicity - Fixed Dose Procedure)	
Acute toxicity, by oral route:	LD50	> 5000	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rat	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LC50	>3	mg/l/4h	Rat	OECD 403 (Acute Inhalation Toxicity)	
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant, Mechanical irritation possible.
Respiratory or skin sensitisation:						No (skin contact)
Germ cell mutagenicity:					in vitro	Negative
Carcinogenicity:						Negative, administered as Ca-lactate
Reproductive toxicity:						Negative, administered as Ca-carbonate

SECTION 12: Ecological information

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

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Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:							n.d.a.
12.1. Toxicity to daphnia:							n.d.a.
12.1. Toxicity to algae:							n.d.a.
12.2. Persistence and degradability:							n.d.a.
12.3. Bioaccumulative potential:							n.d.a.
12.4. Mobility in soil:							n.d.a.
12.5. Results of PBT and vPvB assessment							n.d.a.
12.6. Other adverse effects:							n.d.a.
Other information:							According to the recipe, contains no AOX.

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)	

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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 ₂ 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 ₂ 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))	

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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)	

Diisononyl phthalate

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	>102	mg/l	Brachydanio rerio	92/69/EC	
12.1. Toxicity to daphnia:	EC50	48h	>=74	mg/l	Daphnia magna	84/449/EEC C.2	
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	>=100	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	NOEC/NOEL	72h	88	mg/l	Scenedesmus subspicatus		
12.1. Toxicity to algae:	EC50	72h	>88	mg/l	Scenedesmus subspicatus	84/449/EEC C.3	
12.2. Persistence and degradability:		28d	81	%	activated sludge	Regulation (EC) 440/2008 C.4-C (DETERMINATION OF 'READY' BIODEGRADABILITY - CO2 EVOLUTION TEST)	Readily biodegradable
12.3. Bioaccumulative potential:	Log Kow		8,8-9,7			OECD 117 (Partition Coefficient (n-octanol/water) - HPLC method)	Analogous conclusion
12.3. Bioaccumulative potential:	BCF	14d	<3				Analogous conclusion
12.4. Mobility in soil:	Koc		>5000				
12.4. Mobility in soil:	H (Henry)		0,00000149	atm*m3/mol			
Toxicity to bacteria:	EC50	30min	>83,9	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	
Other organisms:	NOEC/NOEL	56d	>982,4	mg/kg	Eisenia foetida		
Other organisms:	LC50	14d	>7372	mg/kg	Eisenia foetida	OECD 207 (Earthworm, Acute Toxicity Tests)	

Carbon black

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Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Water solubility:							Insoluble, Product floats on the water surface.
12.1. Toxicity to fish:	LC50	96h	>1000	mg/l	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	24h	>5600	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	NOEC/NOEL	3d	10000	mg/l	Scenedesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:							Not biodegradable
12.3. Bioaccumulative potential:							Not to be expected
Toxicity to bacteria:	EC0	3h	>=800	mg/l	activated sludge	Regulation (EC) 440/2008 C.22 (SOIL MICROORGANISMS - CARBON TRANSFORMATION TEST)	

Calcium carbonate							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to daphnia:	EC50	48h	>100	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	EC50	72h	>14	mg/l	Desmodesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
Toxicity to bacteria:	EC50	3h	>1000	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	
Toxicity to annelids:					Eisenia foetida	OECD 207 (Earthworm, Acute Toxicity Tests)	Negative
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.
12.1. Toxicity to fish:	LC50	96h	>10000	mg/l	Oncorhynchus mykiss		
12.1. Toxicity to fish:	LC50	96h	>100	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	48h	>1000	mg/l	Daphnia magna		

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12.1. Toxicity to algae:	EC50	72h	>200	mg/l	Desmodesmus subspicatus		
12.2. Persistence and degradability:							Inorganic products cannot be eliminated from water through biological purification methods.

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

20 01 27 paint, inks, adhesives and resins containing hazardous substances

Recommendation:

Sewage disposal shall be discouraged.

Pay attention to local and national official regulations.

E.g. suitable incineration plant.

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.

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.

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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
 4,4'-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, 8, 9, 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
Resp. Sens. 1, H334	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.
 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.

Resp. Sens. — Respiratory sensitization
 Carc. — Carcinogenicity
 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
 Skin Sens. — Skin sensitization

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

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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
UN RTDG	United Nations Recommendations on the Transport of Dangerous Goods
VOC	Volatile organic compounds
vPvB	very persistent and very bioaccumulative
wwt	wet weight

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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

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