1 Identification oft he substance/mixture and of the company/undertaking

1.1 Product identifier:

NORIT-TE-Klebstoff

Item Part No.: **00600506**

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

Relevant identified uses of the substance or mixture: **Adhesive**

Uses advised against: **No information available at present.**

1.3 Manufacturer/supplier

Lindner GFT GmbH
Lange Länge 5
D-97337 Dettelbach

Phone: **+49 9324 309-5000**
Mail: **NORIT@Lindner-Group.com**

1.4 Environmental officer/ Emergency telephone number

Umweltbeauftragter: Bernhard Stömmer

Telefon: +49 8723 20-0

E-Mail: Sicherheitsdatenblatt@Lindner-Group.com

Erreichbarkeit: Mo.-Fr. 08.00 Uhr bis 17.00 Uhr

Constant availability

2 Hazards identification

2.1 Classification of the substance or mixture according to Regulation (EC) 1272/2008 (CLP)

Hazard class:	Hazard category	Hazard statement
Eye Irrit.	2	H319-Causes serious eye irritation.
STOT SE	3	H335-May cause respiratory irritation.

continued on page 2

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.
STOT RE	2	H373-May cause damage to organs through prolonged or repeated exposure by inhalation (respiratory system).
Carc.	2	H351-Suspected of causing cancer.

2.2 Label elements

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





Danger

Hazard-determining components of labelling: Diphenylmethandiisocyanate, isomeres and homologues; 4,4`-methylenediphenyldiisocyanate, o-(p-isocyanatobenzyl)phenyl isocyanate, 2,2`-methylenediphenyldiisocyanate

Hazard statements:

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.
H373 May cause damage to organs through prolonged or repeated exposure by inhalation (respiratory system).
H351 Suspected of causing cancer.

Precautionary statements:

continued on page 3

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.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves / protective clothing / eye protection / face protection.
P284 Wear respiratory protection.
P302+P352 IF ON SKIN: Wash with plenty of water / soap.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
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.

2.3 Other hazards

The mixture does not contain any vPvB substance (vPvB = very persistent, very bioaccumulative) or is not included under XIII oft he regulation (EC) 1907/2006 (<0,1 %).

The mixture does not contain PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII oft the regulation (EC) 1907/2006 (<0,1 %).

3 Composition/information on ingredients

3.1 Substance

n.d.a.

3.2 Mixture

Diphenylmethandiisocyanate, isomeres und homologues	
Registration number (REACH)	—
Index	—
EINECS, ELINCS, NLP	—

continued on page 4

CAS	**9016-87-9**
content %	**25<50**
Classification according to CLP	**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**
4,4´-methylendiphenyldiisocyanate	
Registration number (REACH)	**01-2119457014-47-XXXX**
Index	**615-005-00-9**
EINECS, ELINCS, NLP	**202-966-0**
CAS	**101-68-8**
content %	**1-10**
Classification according to CLP	**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**
o-(p-isocyanatobenzyl)phenyl isocyanate	
Registration number (REACH)	**01-2119480143-45-XXXX**
Index	**615-005-00-9**
EINECS, ELINCS, NLP	**227-534-9**
CAS	**5873-54-1**
content %	**1-5**
Classification according to CLP	**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**
Propylene carbonate	
Registration number (REACH)	**01-2119537232-48-XXXX**
Index	**607-194-00-1**
EINECS, ELINCS, NLP	**203-572-1**

continued on page 5

CAS	108-32-7
content %	1-5
Classification according to CLP	Eye Irrit. 2, H319
2,2´-methylendiphenyldiisocyanate	
Registration number (REACH)	01-2119927323-43-XXXX
Index	615-005-00-9
EINECS, ELINCS, NLP	219-799-4
CAS	2536-05-2
content %	0,01 - < 1
Classification according to CLP	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

Additional information: 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.

4 First aid measures

4.1 Description of first aid measures

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 position and consult a doctor. Respiratory arrest – Artificial respiration apparatus necessary.

Skin contact: Wipe off residual product carefully with a soft, dry cloth. Remove polluted, soaked clothing immediately, wash thoroughly with plenty of water and soap, in case of irritation of the skin (flare), consult a doctor. Dab away with polyethylene glycol 400.

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Eye contact:	**Remove contact lenses. Wash thoroughly for several minutes using copious water – call doctor immediately, have Data Sheet available.**
Ingestion:	**Rinse the mouth thoroughly with water. Do not induce vomitting – give copious water to drink. Consult doctor immediately. Never pour anything into the mouth of an unconcious person.**

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:
Dermatitis (skin inflammation) Drying of the skin.
Allergic contact eczema Discoloration of the skin
Irritant to mucosa of the nose and throat
Coughing
Headaches
Effect on the central nervous system
Asthmatic symptoms
In case of sensitivity, concentrations below the limit value may already result in asthmatic symptoms. Respiratory distress
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

In case of irritation of the lungs, perform first-aid with controlled-dosage aerosol dexamethasone. Medical supervision necessary due to possibility of delayed reaction.

5 Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media: CO_2, extinction powder, foam, water jet spray.

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 nitrogen

Oxides of carbon

continued on page 7

Isocyanates

Hydrocyanic acid

5.3 Advice for firefighters

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

Protective respirator with independent air supply

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

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. Prevent from entering drainage system.
Resolve leaks if this possible without risk.
Prevent surface and ground water infiltration, as well as ground penetration.

6.3 Methods and material for containment and cleaning up

Soak up with absorbent material (universal binding agent, sand, saw-dust). Provide enough ventilation. Do not close packing drum.

6.4 Reference to other sections

For safe handling see Section 7. For personal protective equipment see Section 8 and for disposal instructions see Section 13.

7 Handling and storage

continued on page 8

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

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

7.2. Conditions for safe storage, including any incompatibilities

Keep out of access to unauthorised individuals. Note to be stored in gangways or stair wells. Store product closed and only in original packing. Keep protected from direct sunlight and temperatures over 50°C. Only store at temperatures from 15°C to 25°C.

7.3 Specific end use(s)

Adhesive

8 Exposure controls/personal protection

8.1 Control parameters

	Chemical Name	Diphenylmethanediisocyanate, isomeres and homologues	Content %:25 ≤ 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 urinary diamine/mol creatinine in urine (Isocyanate, post task)	Other information: Sen (Isocyanates, all (as -NCO))		

continued on page 9

GB

Chemical Name	4,4'-methylenediphenyl diisocyanate	Content %:1-10

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-methoxyphenylpiperazine and - liquid chromatography) - 2001 MDHS 25/3 (Organic isocyanates in air – Laboratory method using sampling either onto 2-(1- methoxyphenylpiperazine coated glass fibre filters followed by solvent desorption or into impingers and analysis using high performance liquid chromatography) - 1999 - - EU project BC/CEN/ENTR/000/2002-16 card 7-4 (2004)		
BMGV: 1 µmol urinary diamine/mol creatinine in urine (Isocyanate, post task)	Other information: Sen (Isocyanates, all (as -NCO))	

GB

Chemical Name	o-(p-isocyanatobenzyl)phenyl isocyanate	Content %:1-5

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 urinary diamine/mol creatinine in urine (Isocyanate, post task)	Other information: Sen (Isocyanates, all (as -NCO))	

GB

Chemical Name	2,2'-methylenediphenyl diisocyanate	Content %: 0,01 ≤ 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 urinary diamine/mol creatinine in urine (Isocyanate, post task)	Other information: Sen (Isocyanates, all (as -NCO))	

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). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period)

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.

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

8.2 Exposure controls

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	

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Consumer	Human - inhalation	Short term, systemic effects	DNEL	0,05	mg/m3	
Consumer	Human - inhalation	Long term, local effects	DNEL	0,025	mg/m3	
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

continued on page 11

	Environment - freshwater		PNEC	1	mg/l	
	Environment - marine		PNEC	0,1	mg/l	
	Environment - soil		PNEC	1	mg/kg dry weight	
	Environment - sewage treatment plant		PNEC	1	mg/l	
	Human - dermal	Long term, local effects	DNEL	0	mg/kg	
Consumer	Human - inhalation	Long term, local effects	DNEL	0,025	mg/m3	
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 - dermal	Short term, local effects	DNEL	0,05	mg/m3	
Consumer	Human - dermal	Long term, systemic effects	DNEL	0	mg/kg	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	0,025	mg/m3	
Consumer	Human - oral	Long term, systemic effects	DNEL	0	mg/kg	
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 - dermal	Long term, systemic effects	DNEL	0	mg/kg	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	0,05	mg/m3	
Workers / employees	Human - dermal	Long term, local effects	DNEL	0	mg/kg	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	0,05	mg/m3	

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	

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Workers / employees	Human - dermal	Short term, systemic effects	DNEL	50	mg/kg	
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 - dermal	Long term, systemic effects	DNEL	0	mg/kg	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	0,05	mg/m3	
Workers / employees	Human - dermal	Long term, local effects	DNEL	0	mg/kg	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	0,05	mg/m3	

Propylene carbonate

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - sporadic (intermittent) release		PNEC	9	mg/l	
	Environment - marine		PNEC	0,09	mg/l	
	Environment - sediment, marine		PNEC	0,083	mg/l	
	Environment - soil		PNEC	0,81	mg/l	
	Environment - freshwater		PNEC	0,9	mg/l	
	Environment - sediment, freshwater		PNEC	0,83	mg/l	
	Environment - sewage treatment plant		PNEC	7400	mg/l	
Consumer	Human - oral	Long term, systemic effects	DNEL	25	mg/kg	
Consumer	Human - dermal	Long term, systemic effects	DNEL	25	mg/kg	
Consumer	Human - inhalation	Long term, local effects	DNEL	10	mg/m3	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	43,5	mg/m3	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	176	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	50	mg/kg	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	20	mg/m3	

8.2.1 Appropiate 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 meth-

continued on page 13

ods 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 with chemicals are applicable. Keep away from food, drink and feedingstuff. Remove contaminated chlothing. Wash hands before breaks and at the end of work.

Eye/face protection	Tight fitting protective goggles with side protection (EN 166).
Skin protection – Hand protection	Chemical resistant protective gloves (EN 374). Protective nitrile gloves (EN 374), minimum layer thickness ≥ 0,35 mm, permeation time ≥ 480 min. Protective hand cream recommended. The exact breakthrough time of the glove material can be obtained directly at the producer.
Skin protection - Other	Protective working garments.
Respiratory protection	Normally not necessary. If OES or MEL is exceeded: use Filter A2 P2 EN(14387).
Thermal hazards	Not applicable.

8.2.3 Environmental exposure controls

No information available at present.

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9 Physical and chemical properties

Physical state:	**Vicous**
Colour:	**Amber**
Odour:	**Characteristic**
Odour threshold:	**Not determined**
ph-value:	**Not determined**
Melting point / freezing point:	**Not determined**
Initial boiling point and boling range:	**240 °C**
Flash point:	**111 °C**
Evaporation rate:	**Not determined**
Flammability (solid, gas):	**Not determined**
Lower / upper limit:	**Not determined**
Vapour pressure / density:	**Not determined**
Density:	**1,12 – 1,16 g/cm³ (20°C)**
Viscocity	**~ 6000 mPas**
Decomposition temperature:	**Not determined**
Auto-ignition temperature:	**Not determined**
Explosive properties:	**Product is not explosive.**
Water solubility:	**Insoluble**
Partition coefficient (n-Octanol/Wasser):	**Not determined**

10 Stability and reactivity

10.1 Reactivity	**Reacts with water.**
10.2 Chemical stability	**Stable with proper storage and handling.**
10.3 Possibility of hazardous reactions	
Exothermic reaction possible with:	**Alcohols, amines, bases, acids, water.**
Development of:	**Carbon dioxide.**
10.4 Conditions to avoid	**Protect from humidity, polymerisation due to high heat is possible. See also section 7.**

continued on page 15

10.5 Incompatible materials — Acids, bases, alcohols, amines, water. See also section 7.

10.6 Hazardous decomposition products — See section 5.2. No decomposition when used as directed.

11 Toxicological information

11.1 Information on toxicological effects

NORIT-TE-Klebstoff

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	>20	mg/l/4h			calculated value, Vapours
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 org an 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.
Other information:						Classification according to calculation procedure

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

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Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	Sensitising (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:	NOAE L	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, oedema of the lungs, chemical pneumonitis (condition similar to pneumonia), abdominal pain, diarrhoea
Specific target organ toxicity - single exposure (STOT-SE), inhalative:						Target organ(s): respiratory organs, May cause respiratory irritation

4,4'-methylenediphenyl diisocyanate

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>2000	mg/kg	Rat		
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	0,368	mg/l/4h	Rat	OECD 403 (Acute Inhalation Toxicity)	Does not conform with EU classification
Acute toxicity, by inhalation:	LC50	>2,24	mg/l/4h	Rat	OECD 403 (Acute Inhalation Toxicity)	Aerosol
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
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	Negative

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

o-(p-isocyanatobenzyl)phenyl isocyanate

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

Propylene carbonate

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>5000	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Irritant

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Respiratory or skin sensitisation:				Human being		No (skin contac)
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Germ cell mutagenicity:					OECD 474 (Mammalian Erythrocyte Micronucleus Test)	Negative
Germ cell mutagenicity:					OECD 482 (Gen. Tox. - DNA Damage and Repair, Unscheduled DNA Synthesis in Mammalian Cells In Vitro)	Negative
Carcinogenicity:				Mouse	OECD 451 (Carcinogenicity Studies)	Negative
Reproductive toxicity:	NOAE L	5000	mg/kg	Rat	OECD 414 (Prenatal Developmental Toxicity Study)	No indications of such an effect
Reproductive toxicity:	NOAE L	1000	mg/kg	Rat	OECD 414 (Prenatal Developmental Toxicity Study)	Negative
Specific target organ toxicity - single exposure (STOT-SE):						No
Specific target organ toxicity - repeated exposure (STOT-RE):						No
Aspiration hazard:						No
Symptoms:						breathing difficulties, headaches, gastrointestinal disturbances, dizziness, nausea
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOEL	>5000	mg/kg		OECD 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)	
Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	NOEC	100	mg/m3		OECD 413 (Subchronic Inhalation Toxicity - 90-Day Study)	Dust, Mist

2,2'-methylenediphenyl diisocyanate

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50BB95:H111	mg/l/B95:H1111h	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:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	Yes (skin contact)
Respiratory or skin sensitisation:				Guinea pig		Yes (inhalation), Analogous conclusion
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

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Reproductive toxicity:	NOAE L	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

12 Ecological information:

NORIT-TE-Klebstoff

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:							With water at the interface, transforms slowly with formation of CO2 into a firm, insoluble reaction product with a high melting point (poly-carba mide). According to experience available to date, polycarbamide is inert and non-degradable
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	>100	mg/l	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	24h	>100	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisati-on Test)	
12.1. Toxicity to daphnia:	NOEC/N OEL	21d	>10	mg/l	Daphnia magna	OECD 211 (Daphnia magna Reproduction Test)	
12.1. Toxicity to algae:	EC50	72h	>16	mg/l	Scenedesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	0	%		OECD 301 C (Ready Biodegradab ility - Modified MITI Test (I))	Not biodegrada ble
12.3. Bioaccumulative potential:	BCF	42d	<14		Cyprinus caprio	OECD 305 (Bio-concentr ation - Flow-Through Fish Test)	A notable biological accumulati on potential is not to be expected (LogPow 1-3)
12.5. Results of PBT and vPvB assessment							No PBT substance

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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))	
Other organisms:	NOEC/N OEL	14d	>100	mg/k g	Eisenia foetida	OECD 207 (Earthworm, Acute Toxicity Tests)	
Other information:							Does not contain any organically bound halogens which can contribute to the AOX value in waste water
Other information:	BOD	28d	<10	%		OECD 302 C (Inherent Biodegradab ility - Modified MITI Test (II))	

4,4'-methylenediphenyl diisocyanate

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC0	96h	>100	mg/l	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity Test)	Analogous conclusion
12.1. Toxicity to fish:	LC50	96h	>100	mg/l	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	24h	>100	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisati- on 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	Desmodesm us subspicatus	OECD 201 (Alga, Growth Inhibition Test)	Analogous conclusion
12.1. Toxicity to algae:	NOEC/N OEL	72h	1640	mg/l	Desmodesm us subspicatus	OECD 201 (Alga, Growth Inhibition Test)	Analogous conclusion
12.2. Persistence and degradability:		28d	0	%		OECD 302 C (Inherent Biodegradab ility - Modified MITI Test (II))	With water at the interface, transforms slowly with formation of CO2 into a firm, insoluble reaction product with a high melting point (poly- carba mide). According to experience available to date, polycarbamide is inert and non- degradable
12.2. Persistence and degradability:	BOD	28d	0	%		OECD 302 C (Inherent Biodegradab ility - Modified MITI Test (II))	With water at the interface, transforms slowly with formation of CO2 into a firm, insoluble reaction product with a high melting point (poly- carba mide). According to experience available to date, polycarbamide is inert and non- degradable
12.3. Bioaccumulative potential:	BCF	28d	200		Cyprinus caprio	OECD 305 (Bio- concentr ation - Flow- Through Fish Test)	A notable biological accumulati on potential has to be expected (LogPow >3)
12.3. Bioaccumulative potential:	Log Pow		5,22				A notable biological accumulati on 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	>100	mg/kg	Eisenia foetida	OECD 207 (Earthworm, Acute Toxicity Test)	

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	>100	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisati-on Test)	Analogous conclusion
12.1. Toxicity to daphnia:	NOEC/N OEL	21d	>10	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisati-on Test)	Analogous conclusion
12.1. Toxicity to algae:	ErC50	72h	>1640	mg/l	Scenedesm us subspicatus	OECD 201 (Alga, Growth Inhibition Test)	Analogous conclusion
12.2. Persistence and degradability:		28d	0	%		OECD 302 C (Inherent Biodegradab ility - Modified MITI Test (II))	With water at the interface, transforms slowly with formation of CO2 into a firm, insoluble reaction product with a high melting point (poly-carba mide)., Analo-gous conclusion
12.3. Bioaccumulative potential:	BCF	28d	200		Cyprinus caprio	OECD 305 (Biocon-centr ation - 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/N OEL	14d	>100		Lumbricus terrestris	OECD 207 (Earthworm, Acute Toxicity Test)	Analogous conclusion

Propylene carbonate

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	>100	mg/l	Cyprinus caprio	92/69/EC	
12.1. Toxicity to daphnia:	EC50	48h	>100	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisati-on Test)	
12.1. Toxicity to algae:	EC50	72h	>900	mg/l	Desmodesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:			83,5-87-7	%		OECD 301 B (Ready Biodegradab ility - Co2 Evolution Test)	Readily biodegrada ble29d
12.3. Bioaccumulative potential:	Log Pow		-0,48				Bioaccumul ation is unlikely (LogPow < 1)., calculated value
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EC10	16h	25619	mg/l	Pseudomonas putida	DIN 38412 T.8	

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Other information:	AOX		0	%			Does not contain any organically bound halogens which can contribute to the AOX value in waste water

2,2'-methylenediphenyl diisocyanate

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	>100	mg/l	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity Test)	Analogous conclusion
12.1. Toxicity to daphnia:	EC50	24h	>100	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	Analogous conclusion
12.1. Toxicity to algae:	EC50	72h	>1640	mg/l	Scenedesm us 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 CO2 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/N OEL	14d	>100	mg/kg	Eisenia foetida	OECD 207 (Earthworm, Acute Toxicity Test)	Analogous conclusion

13 Disposal considerations

13.1 Waste treatment methods

For the substance/mixture/residual amounts:

EC disposal code no.:
08 04 09 waste adhesives and sealants containing organic solvents or other hazardous substances.

08 05 01 waste isocyanates.

(The waste codes are recommendations based on the scheduled use of this point. Owing to the user´s specific conditions for use and disposal, other waste

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	codes may be allocated under certain circumstances 2014/955/EU)
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. 15 01 10 packaging containing residues of or contaminated by hazardous substances.
Recommendation	Dispose not down the sewer.

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	
Classification group:	n.a.
LQ:	n.a.
14.5 Environmental hazards:	Not applicable.
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.

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14.5 Environmental hazards: **Not applicable**

Special precautions for user

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

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

Non-dangerous material according to Transport Regulations.

15 Regulatory information

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

Observe restrictions:
Regulation (EC) No 1907/2006, Annex XVII
Diphenylmethandiphenyldiisocyanate, isomeres and homologues
4,4`-methylendiphenyldiisocyanate
o-(p-isocyanatobenzyl)phenyl isocyanate
2,2´-methylendiphenyldiisocyanat
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.

16 Other information

This safety data sheet replaces all previous versions. The information is based on the current state of our knowledge, but they do not constitute an assurance of product properties and do not establish a contractual relationship. All industrially customary precautions concerning health

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protection and safe handling apply. The recommendations should be reviewed in the context oft he intended application an applied where necessary.

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 calssification of the mixture in accordance with the ordinance (EG) 1272/2008 (CLP):

Classification in accordance to CLP	Evaluation method used
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
STOT RE 2, H373	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) oft he product and the constituents (specified in Section 2 and 3).

H315	Causes skin irritations.
H317	May cause an allergic reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.

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H334	**May cause allergy or asthma symptoms or breathing difficulties if inhaled**
H335	**May cause respiratory irritation**
H373	**May cause damage to organs through prolonged or repeated exposure by inhalation (respiratory system).**
H351	**Suspected of causing cancer.**

Eye Irrit. 2	**—**	**Eye irritation.**
STOT SE 3	**—**	**Specific target organ toxicity single exposure respiration tract irritation**
Skin Irrit. 2	**—**	**Skin irritation**
Resp. Sens.	**—**	**Respiratory sensitization**
Skin Sens.	**—**	**Skin sensitization**
STOT RE	**—**	**Specific target organ toxicity repeated exposure**
Carc.	**—**	**Carcinogenicity**
Acute Tox.	**—**	**Acute toxicity - inhalation**

Any abbreviations and acronyms used in this document:

AC	Article Categories
acc.,	acc. to according, according to
ACGIH	American Conference of Governmental Industrial Hygienists
ADR	Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)
AOEL	Acceptable Operator Exposure Level
AOX	Adsorbable organic halogen compounds
approx.	approximately
Art., Art. no.	Article number
ATE	Acute Toxicity Estimate according to Regulation (EC) 1272/2008 (CLP)
BAM	Bundesanstalt für Materialforschung und -prüfung (Federal Institute for Materials Research and Testing, Germany)
BAuA	Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)
BCF	Bioconcentration factor
BGV	Berufsgenossenschaftliche Vorschrift (= Accident Prevention Regulation) BHT Butylhydroxytoluol (= 2,6-Di-t-butyl-4-methyl-phenol)
BMGV	Biological monitoring guidance value (EH40, UK)
BOD	Biochemical oxygen demand
BSEF	Bromine Science and Environmental Forum
bw	body weight
CAS	Chemical Abstracts Service
CEC	Coordinating European Council for the Development of Performance Tests for Fuels, Lubricants and Other Fluids
CESIO	Comité Européen des Agents de Surface et de leurs Intermédiaires Organiques
CIPAC	Collaborative International Pesticides Analytical Council
CLP	Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)
CMR	carcinogenic, mutagenic, reproductive toxic
COD	Chemical oxygen demand
CTFA	Cosmetic, Toiletry, and Fragrance Association
DMEL	Derived Minimum Effect Level
DNEL	Derived No Effect Level
DOC	Dissolved organic carbon
DT50	Dwell Time - 50% reduction of start concentration
DVS	Deutscher Verband für Schweißen und verwandte Verfahren e.V. (= German Association for Welding and Allied Processes)
dw	dry weight
e.g.	for example (abbreviation of Latin 'exempli gratia'), for instance
EC	European Community
ECHA	European Chemicals Agency
EEA	European Economic Area
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)
ERC	Environmental Release Categories

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ES	Exposure scenario
etc.	et cetera
EU	European Union
EWC	European Waste Catalogue
gen.	general
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
GWP	Global warming potential
HET-CAM	Hen's Egg Test - Chorionallantoic Membrane
HGWP	Halocarbon Global Warming Potential
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IBC	Intermediate Bulk Container
IBC (Code)	International Bulk Chemical (Code)
IC	Inhibitory concentration
IMDG-code	International Maritime Code for Dangerous Goods
incl.	including, inclusive
IUCLID	International Uniform ChemicaL Information Database
LC	lethal concentration
LC50	lethal concentration 50 percent kill
LCLo	lowest published lethal concentration
LD	Lethal Dose of a chemical
LD50	Lethal Dose, 50% kill
LDLo	Lethal Dose Low
LOAEL	Lowest Observed Adverse Effect Level
LOEC	Lowest Observed Effect Concentration
LOEL	Lowest Observed Effect Level
LQ	Limited Quantities
MARPOL	International Convention for the Prevention of Marine Pollution from Ships
n.a.	not applicable
n.av.	not available
n.c.	not checked
n.d.a.	no data available
NIOSH	National Institute of Occupational Safety and Health (United States of America)
NOAEC	No Observed Adverse Effective Concentration
NOAEL	No Observed Adverse Effect Level
NOEC	No Observed Effect Concentration
NOEL	No Observed Effect Level
ODP	Ozone Depletion Potential
OECD	Organisation for Economic Co-operation and Development
org.	organic
PAH	polycyclic aromatic hydrocarbon
PBT	persistent, bioaccumulative and toxic
PC	Chemical product category
PE	Polyethylene
PNEC	Predicted No Effect Concentration
POCP	Photochemical ozone creation potential
ppm	parts per million
PROC	Process category
PTFE	Polytetrafluorethylene
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)
SADT	Self-Accelerating Decomposition Temperature
UN RTDG	United Nations Recommendations on the Transport of Dangerous Goods
SAR	Structure Activity Relationship
SU	Sector of use
SVHC	Substances of Very High Concern
Tel.	Telephone
ThOD	Theoretical oxygen demand
TOC	Total organic carbon
TRGS	Technische Regeln für Gefahrstoffe (=Technical Regulations for Hazardous Substances) UN RTDG United Nations Recommendations on the Transport of Dangerous Goods
VbF	Verordnung über brennbare Flüssigkeiten (= Regulation for flammable liquids (Austria))
VOC	Volatile organic compounds
vPvB	very persistent and very bioaccumulative
WEL-TWA, WEL-STEL	WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period), WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period) (EH40, UK).
WHO	World Health Organization
wwt	wet weight

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Exclusion of liability

This information applies only to the specified product and is not valid for use with any other materials or in other applications. The information is correct and reliable to the best of our knowledge and belief at the time of preparation. A guarantee of accuracy, reliability and completeness is not granted. It is the responsibility of the user, even to his satisfaction, to check this information for suitability for its application.