

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)



Trade name : PUR-Härter 5790, farblos (5790.-.0400)
Revision date : 07.10.2020
Print date : 07.10.2020

Version (Revision) : 17.0.0 (16.0.1)

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

1.1 Product identifier

PUR-Härter 5790, farblos (5790.-.0400)

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

Hardener for 2C-PUR-paints

Relevant identified uses

Products Category [PC]

Coatings and paints, thinners, paint removers

Remark

The product is intended for professional use. It is not suitable for use in do-it-yourself applications.

1.3 Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor)

Brillux GmbH & Co. KG, Industrielack
www.brillux-industrielack.de

Street : Otto-Hahn-Straße 14

Postal code/city : D-59423 Unna

Telephone : +49 2303 8805-0

Telefax : +49 2303 8805-119

Information contact : E-mail address of the competent person for safety data sheets: sdb@brillux-industrielack.de

1.4 Emergency telephone number

Giftinformationszentrum-Nord (poisons centre), consultation in german and english
Telephone: +49 551 19 24 0

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]

Acute Tox. 4 ; H332 - Acute toxicity (inhalative) : Category 4 ; Harmful if inhaled.

Skin Sens. 1 ; H317 - Skin sensitisation : Category 1 ; May cause an allergic skin reaction.

STOT SE 3 ; H335 - STOT-single exposure : Category 3 ; May cause respiratory irritation.

Aquatic Chronic 3 ; H412 - Hazardous to the aquatic environment : Chronic 3 ; Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms



Exclamation mark (GHS07)

Signal word

Warning

Hazard components for labelling

Hydrophilic, aliphatic polyisocyanate ; CAS No. : 160994-68-3

Hexamethylene diisocyanate, oligomers ; CAS No. : 28182-81-2

4-ISOCYANATOSULPHONYLTOLUENE ; CAS No. : 4083-64-1

HEXAMETHYLENE-DI-ISOCYANATE ; CAS No. : 822-06-0

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Hazard statements

H332 Harmful if inhaled.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P312 Call a POISON CENTER or a doctor if you feel unwell.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.

Special rules for supplemental label elements for certain mixtures

EUH204 Contains isocyanates. May produce an allergic reaction.

2.3 Other hazards

None

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous ingredients

Hydrophilic, aliphatic polyisocyanate ; CAS No. : 160994-68-3

Weight fraction : $\geq 45 - < 50$ %

Classification 1272/2008 [CLP] : Acute Tox. 4 ; H332 Skin Sens. 1B ; H317 STOT SE 3 ; H335 Aquatic Chronic 3 ; H412

Hexamethylene diisocyanate, oligomers ; REACH No. : 01-2119485796-17 ; EC No. : 931-274-8 ; CAS No. : 28182-81-2

Weight fraction : $\geq 30 - < 35$ %

Classification 1272/2008 [CLP] : Acute Tox. 4 ; H332 Skin Sens. 1 ; H317 STOT SE 3 ; H335

Hydrocarbons, C10, aromatics, < 1 % naphthalene ; REACH No. : 01-2119463583-34 ; EC No. : 918-811-1 ; CAS No. : 64742-94-5

Weight fraction : $\geq 10 - < 15$ %

Classification 1272/2008 [CLP] : Asp. Tox. 1 ; H304 STOT SE 3 ; H336 Aquatic Chronic 2 ; H411

4-ISOCYANATOSULPHONYLTOLUENE ; REACH No. : 01-2119980050-47 ; EC No. : 223-810-8 ; CAS No. : 4083-64-1

Weight fraction : $\geq 0,5 - < 1$ %

Classification 1272/2008 [CLP] : Resp. Sens. 1 ; H334 Skin Irrit. 2 ; H315 Eye Irrit. 2 ; H319 STOT SE 3 ; H335

Specific Conc. Limits : Eye Irrit. 2 ; H319: C ≥ 5 % • Skin Irrit. 2 ; H315: C ≥ 5 % • STOT SE 3 ; H335: C ≥ 5 %

HEXAMETHYLENE-DI-ISOCYANATE ; REACH No. : 01-2119457571-37 ; EC No. : 212-485-8 ; CAS No. : 822-06-0

Weight fraction : $\geq 0,05 - < 0,5$ %

Classification 1272/2008 [CLP] : Acute Tox. 3 ; H331 Resp. Sens. 1 ; H334 Skin Irrit. 2 ; H315 Skin Sens. 1 ; H317 Eye Irrit. 2 ; H319 STOT SE 3 ; H335

Specific Conc. Limits : Resp. Sens. 1 ; H334: C $\geq 0,5$ % • Skin Sens. 1 ; H317: C $\geq 0,5$ %

Additional information

Full text of H- and EUH-phrases: see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

Change contaminated, saturated clothing. When in doubt or if symptoms are observed, get medical advice. If unconscious place in recovery position and seek medical advice.

Following inhalation

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Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration. In case of respiratory tract irritation, consult a physician.

In case of skin contact

Wash immediately with: Water and soap Do not wash with: Solvents/Thinner

After eye contact

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately. Protect uninjured eye.

After ingestion

If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Keep at rest. Do NOT induce vomiting. No direct artificial respiration to be given by first aider.

4.2 Most important symptoms and effects, both acute and delayed

No information available.

4.3 Indication of any immediate medical attention and special treatment needed

None

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Extinguishing powder, alcohol resistant foam, carbon dioxide (CO₂), water spray.

Unsuitable extinguishing media

Full water jet

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

In case of fire may be liberated: Nitrogen oxides (NO_x), carbon monoxide (CO), carbon dioxide (CO₂) and pyrolysis products, toxic. Isocyanate vapors and traces of hydrogen cyanide.

5.3 Advice for firefighters

Special protective equipment for firefighters

Use suitable breathing apparatus.

5.4 Additional information

Burning produces heavy smoke. Use water spray jet to protect personnel and to cool endangered containers. Do not allow run-off from fire-fighting to enter drains or water courses.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation. See protective measures under point 7 and 8.

6.2 Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

6.3 Methods and material for containment and cleaning up

Remove mechanically; cover the remainder with wet, absorbent material (e.g. sawdust, chemical binder based on calcium silicate hydrate, sand). After approx. one hour transfer to waste container and do not seal (evolution of CO₂!). Keep damp in a safe ventilated area for several days. Treat the recovered material as prescribed in the section on waste disposal. Clean with detergents. Avoid solvent cleaners.

6.4 Reference to other sections

None

SECTION 7: Handling and storage

7.1 Precautions for safe handling

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Protective measures

The threshold limit values noted in Chapter 8 must be monitored. Avoid: Inhalation of vapours or spray/mists, Skin contact, Eye contact. If handled uncovered, arrangements with local exhaust ventilation should be used if possible. If local exhaust ventilation is not possible or not sufficient, the entire working area must be ventilated by technical means. The air should be drawn away from the personnel handling the product. Never use pressure to empty container. Only allow access to authorised staff.

Measures to prevent fire

Keep away from sources of ignition - No smoking. Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours are heavier than air, spread along floors and form explosive mixtures with air. Take precautionary measures against static discharges. Wear anti-static footwear and clothing Use only antistatically equipped (spark-free) tools.

Advices on general occupational hygiene

Wear personal protection equipment (refer to section 8). Keep working clothes separately. Take off all contaminated clothing immediately. When using do not eat, drink, smoke, sniff. Always close containers tightly after the removal of product.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Use explosion-proof machinery, apparatus, ventilation facilities, tools etc. Floors should be impervious, resistant to liquids and easy to clean. Provide adequate ventilation as well as local exhaustion at critical locations. Keep container tightly closed. In case of air intake: Danger of polymerisation.

Hints on joint storage

Storage class (TRGS 510) : 10

Do not store together with

Strong acid, strong alkali, oxidising agent, food and feedingstuffs.

Further information on storage conditions

Keep only in the original container in a cool, well-ventilated place.

Protect against : Heat. Humidity.

7.3 Specific end use(s)

Hardener for 2C-PUR-paints

Industrial sector specific solutions

Note DGVU-Rule 100-500, section 2.29 (processing coating materials).

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values

Hydrocarbons, C10, aromatics, < 1 % naphthalene ; CAS No. : 64742-94-5

Limit value type (country of origin) : TRGS 900 (D)

Limit value : 50 mg/m³ / 10 ppm

Peak limitation : 2(II)

Remark : AGS

Version : 01.12.2007

HEXAMETHYLENE-DI-ISOCYANATE ; CAS No. : 822-06-0

Limit value type (country of origin) : TRGS 900 (D)

Limit value : 0,005 ppm / 0,035 mg/m³

Peak limitation : 1/=2=(I)

Remark : Sa

Version : 29.03.2019

Biological limit values

HEXAMETHYLENE-DI-ISOCYANATE ; CAS No. : 822-06-0

Limit value type (country of origin) : TRGS 903 (D)

Parameter : hexamethylenediamine / Urine (U) / End of exposure or end of shift

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Limit value : 0,15 mg/g Kr
Version : 29.03.2019

DNEL-/PNEC-values

DNEL/DMEL

Hexamethylene diisocyanate, oligomers ; CAS No. : 28182-81-2

Limit value type : DNEL/DMEL (Industrial)

Exposure route : Inhalation

Exposure frequency : Short-term

Limit value : 1 mg/m³

Limit value type : DNEL/DMEL (Industrial)

Exposure route : Inhalation

Exposure frequency : Long-term

Limit value : 0,5 mg/m³

Hydrocarbons, C10, aromatics, < 1 % naphthalene ; CAS No. : 64742-94-5

Limit value type : DNEL worker (local)

Exposure route : Dermal

Exposure frequency : Long-term

Limit value : 12,5 mg/kg

Limit value type : DNEL worker (local)

Exposure route : Inhalation

Exposure frequency : Long-term

Limit value : 151 mg/m³

HEXAMETHYLENE-DI-ISOCYANATE ; CAS No. : 822-06-0

Limit value type : DNEL/DMEL (Industrial)

Exposure route : Dermal

Exposure frequency : Short-term

Limit value type : DNEL/DMEL (Industrial)

Exposure route : Inhalation

Exposure frequency : Short-term

Limit value : 0,07 mg/m³

Limit value type : DNEL/DMEL (Industrial)

Exposure route : Inhalation

Exposure frequency : Long-term

Limit value : 0,035 mg/m³

PNEC

Hexamethylene diisocyanate, oligomers ; CAS No. : 28182-81-2

Limit value type : PNEC (Aquatic, freshwater)

Exposure time : Long-term

Limit value : 127 µg/l

Limit value type : PNEC (Aquatic, intermittent release)

Limit value : 1270 µg/l

Limit value type : PNEC (Aquatic, marine water)

Exposure time : Long-term

Limit value : 12,7 µg/l

Limit value type : PNEC (Sediment, freshwater)

Limit value : 266,7 g/kg

Limit value type : PNEC soil

Limit value : 53,2 g/kg

Limit value type : PNEC (Sewage treatment plant)

Limit value : 38,28 mg/l

8.2 Exposure controls

Personal protection equipment

Eye/face protection

Suitable eye protection

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goggles

Recommended eye protection articles

DIN EN 166

Remark

Note DGUV-Rule 112-192.

Skin protection

Hand protection

At use as agreed a protective gloves from nitrile rubber with a material thickness 0,38 mm has to be used. Notes of the manufacturer have to be taken into account. Penetration time of the glove material: > = 60 min.

By longer or repeated contact the penetration times can be considerably shorter. The protective gloves should be replaced after the first wear out or a damage of the gloves.

Remark : After washing hands replace lost skin fat by fat containing skin creams. Note DGUV-Rule 112-195. Note TRGS 401.

Body protection

Required properties : Antistatic, non-melting.

Recommended material : Natural fibres (e.g. cotton), heat-resistant synthetic fibres.

Remark : Note DGUV-Rule 112-189. Note TRGS 401.

Respiratory protection

Respiratory protection necessary at: Insufficient ventilation, insufficient exhaust or spray application.

Suitable respiratory protection apparatus

Combination filter mask A2-P2 for short-term work.

European Committee for Standardization (CEN) standards EN 136, 140 and 405 provide respirator masks and EN 149 and 143 provide filter recommendations.

Remark

Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190). Note TRGS 402.

Other protection measures

Technical measures and the application of suitable work processes have priority over personal protection equipment.

8.3 Additional information

In case of hypersensitivity of the respiratory tract and skin (e.g. asthmatics and those who suffer from chronic bronchitis and chronic skin complaint) it is inadvisable to work with the product.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Liquid

Colour : According to product identification.

Odour

Like solvent.

Safety characteristics

Melting point/freezing point :			not applicable
Initial boiling point and boiling range :	(1013 hPa)	>	150 °C
Decomposition temperature :			No data available
Flash point :		>	60 °C
Auto-ignition temperature :		>	400 °C
Lower explosion limit :		approx.	0,6 Vol-%
Upper explosion limit :		approx.	9 Vol-%
Vapour pressure :	(50 °C)	<	50 hPa
Density :	(20 °C)		1 - 1,2 g/cm ³

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Solvent separation test :	(20 °C)	<	3	%
Water solubility :	(20 °C)		Not or little soluble	
pH :			No data available	
log P O/W :			No data available	
Flow time :	(20 °C)		40 - 70	s DIN-cup 4 mm
Viscosity :	(23 °C)		No data available	
Cinematic viscosity :	(40 °C)	>	20,5	mm ² /s
Solid content :			75 - 85	Wt %
Odour threshold :			No data available	
Relative vapour density :	(20 °C)		No data available	
Vapourisation rate :			No data available	
Oxidising liquids :	Not oxidising.			

9.2 Other information

The physical specifications are approximate values and refer to the used safety relevant component(s).

SECTION 10: Stability and reactivity

10.1 Reactivity

No information available.

10.2 Chemical stability

CO₂ formation by penetration of the container with moisture.

10.3 Possibility of hazardous reactions

Exothermic reaction with alcohols and amines. With water gradual CO₂ separation. Build-up of pressure in closed containers: Danger that they might burst.

10.4 Conditions to avoid

In case of air intake: Danger of polymerisation.

10.5 Incompatible materials

No information available.

10.6 Hazardous decomposition products

When exposed to high temperatures (> 200 °C) or in case of fire hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen may produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity

Parameter :	ATEmix calculated
Exposure route :	Oral
Effective dose :	not relevant
Parameter :	LD50 (Hydrophilic, aliphatic polyisocyanate ; CAS No. : 160994-68-3)
Exposure route :	Oral
Species :	Rat
Effective dose :	> 2000 mg/kg
Parameter :	LD50 (Hexamethylene diisocyanate, oligomers ; CAS No. : 28182-81-2)
Exposure route :	Oral
Species :	Rat
Effective dose :	> 2500 mg/kg
Parameter :	LD50 (Hydrocarbons, C10, aromatics, < 1 % naphthalene ; CAS No. : 64742-94-5)
Exposure route :	Oral
Species :	Rat
Effective dose :	> 5000 mg/kg
Parameter :	LD50 (4-ISOCYANATOSULPHONYLTOLUENE ; CAS No. : 4083-64-1)

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Exposure route : Oral
Species : Rat
Effective dose : 2330 mg/kg
Parameter : LD50 (HEXAMETHYLENE-DI-ISOCYANATE ; CAS No. : 822-06-0)
Exposure route : Oral
Species : Rat
Effective dose : 710 mg/kg

Acute dermal toxicity

Parameter : ATEmix calculated
Exposure route : Dermal
Effective dose : not relevant
Parameter : LD50 (Hexamethylene diisocyanate, oligomers ; CAS No. : 28182-81-2)
Exposure route : Dermal
Species : Rat
Effective dose : > 2000 mg/kg
Parameter : LD50 (Hydrocarbons, C10, aromatics, < 1 % naphthalene ; CAS No. : 64742-94-5)
Exposure route : Dermal
Species : Rabbit
Effective dose : > 2000 mg/kg
Parameter : LD50 (4-ISOCYANATOSULPHONYLTOLUENE ; CAS No. : 4083-64-1)
Exposure route : Dermal
Species : Rat
Effective dose : > 2000 mg/kg
Parameter : LD50 (HEXAMETHYLENE-DI-ISOCYANATE ; CAS No. : 822-06-0)
Exposure route : Dermal
Species : Rabbit
Effective dose : 570 mg/kg

Acute inhalation toxicity

Parameter : ATEmix calculated
Exposure route : Inhalation (vapour)
Effective dose : 13,7 mg/l
Parameter : LC50 (Hydrophilic, aliphatic polyisocyanate ; CAS No. : 160994-68-3)
Exposure route : Inhalation
Species : Rat
Effective dose : 0,39 mg/l
Exposure time : 4 h
Method : OECD 403
Parameter : LC50 (Hexamethylene diisocyanate, oligomers ; CAS No. : 28182-81-2)
Exposure route : Inhalation
Species : Rat
Effective dose : 0,39 mg/l
Exposure time : 4 h
Parameter : LC50 (Hydrocarbons, C10, aromatics, < 1 % naphthalene ; CAS No. : 64742-94-5)
Exposure route : Inhalation
Species : Rat
Effective dose : > 4688 mg/m³
Parameter : LC50 (4-ISOCYANATOSULPHONYLTOLUENE ; CAS No. : 4083-64-1)
Exposure route : Inhalation
Parameter : LC50 (HEXAMETHYLENE-DI-ISOCYANATE ; CAS No. : 822-06-0)
Exposure route : Inhalation
Species : Rat
Effective dose : 0,124 mg/l
Exposure time : 4 h
Parameter : LC50 (HEXAMETHYLENE-DI-ISOCYANATE ; CAS No. : 822-06-0)
Exposure route : Inhalation

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Species : Mouse
Effective dose : 1,57 mg/l

Corrosion

Irritation to respiratory tract

May cause respiratory irritation.

STOT-single exposure

STOT SE 3

Narcotic effects

Vapours may cause drowsiness and dizziness.

11.3 Symptoms related to the physical, chemical and toxicological characteristics

In case of skin contact

Repeated exposure may cause skin dryness or cracking.

11.5 Additional information

Special properties/effects: Over-exposure entails the risk of concentration-dependent irritating effects on eyes, nose throat, and respiratory tract. Delayed appearance of the complaints and development of hypersensitivity (difficult breathing, coughing, asthma) are possible. Hypersensitive persons may suffer from these effects even at low isocyanate concentrations, including concentrations below the UK Workplace Exposure Limit (WEL). Prolonged contact with the skin may cause tanning and irritant effects.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity

Acute (short-term) fish toxicity

Parameter : LC50 (Hydrophilic, aliphatic polyisocyanate ; CAS No. : 160994-68-3)
Species : Ictalurus punctatus (Channel Catfish)
Effective dose : 28,3 mg/l
Exposure time : 96 h
Method : OECD 203
Parameter : LC50 (Hexamethylene diisocyanate, oligomers ; CAS No. : 28182-81-2)
Species : Brachydanio rerio (zebra-fish)
Effective dose : 8,9 mg/l
Parameter : LC50 (Hydrocarbons, C10, aromatics, < 1 % naphthalene ; CAS No. : 64742-94-5)
Species : Oncorhynchus mykiss (Rainbow trout)
Effective dose : 2 - 5 mg/l
Exposure time : 96 h
Method : OECD 203
Parameter : LC50 (HEXAMETHYLENE-DI-ISOCYANATE ; CAS No. : 822-06-0)
Species : Brachydanio rerio (zebra-fish)
Effective dose : 22 mg/l
Exposure time : 96 h

Chronic (long-term) fish toxicity

Parameter : NOEC (Hydrocarbons, C10, aromatics, < 1 % naphthalene ; CAS No. : 64742-94-5)
Species : Oncorhynchus mykiss (Rainbow trout)
Effective dose : 0,441 mg/l
Exposure time : 28 D

Acute (short-term) toxicity to crustacea

Parameter : EC50 (Hydrophilic, aliphatic polyisocyanate ; CAS No. : 160994-68-3)
Species : Daphnia magna (Big water flea)
Effective dose : > 100 mg/l
Exposure time : 48 h
Method : OECD 202
Parameter : EC50 (Hexamethylene diisocyanate, oligomers ; CAS No. : 28182-81-2)

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Effective dose : 127 mg/l
Exposure time : 48 h
Parameter : EC50 (Hydrocarbons, C10, aromatics, < 1 % naphthalene ; CAS No. : 64742-94-5)
Species : Daphnia magna (Big water flea)
Effective dose : 3 - 10 mg/l
Exposure time : 48 h
Method : OECD 202

Chronic (long-term) toxicity to crustacea

Parameter : NOEC (Hydrocarbons, C10, aromatics, < 1 % naphthalene ; CAS No. : 64742-94-5)
Species : Daphnia magna (Big water flea)
Effective dose : 0,771 mg/l
Exposure time : 21 D

Acute (short-term) toxicity to aquatic algae and cyanobacteria

Parameter : ErC50 (Hydrophilic, aliphatic polyisocyanate ; CAS No. : 160994-68-3)
Species : Scenedesmus subspicatus
Effective dose : > 100 mg/l
Exposure time : 72 h
Method : OECD 201

Parameter : EC50 (Hexamethylene diisocyanate, oligomers ; CAS No. : 28182-81-2)
Species : Scenedesmus subspicatus
Effective dose : > 1000 mg/l
Exposure time : 72 h

Parameter : ErC50 (Hexamethylene diisocyanate, oligomers ; CAS No. : 28182-81-2)
Species : Desmodesmus subspicatus
Effective dose : > 1000 mg/l
Exposure time : 72 h

Parameter : EC50 (Hydrocarbons, C10, aromatics, < 1 % naphthalene ; CAS No. : 64742-94-5)
Species : Pseudokirchneriella subcapitata
Effective dose : 1 - 3 mg/l
Exposure time : 72 h
Method : OECD 201

Toxicity to microorganisms

Parameter : EC50 (Hydrophilic, aliphatic polyisocyanate ; CAS No. : 160994-68-3)
Species : Mysisopsis bahia
Effective dose : > 10000 mg/l

Parameter : EC50 (Hexamethylene diisocyanate, oligomers ; CAS No. : 28182-81-2)
Species : Bacteria toxicity
Effective dose : 3828 mg/l
Exposure time : 3 h

12.2 Persistence and degradability

Is converted in connection with water in a solid, insoluble and inert polyurea, liberating CO₂.

Biodegradation

The solvent is biodegradable. In accordance with the required stability the product is poorly biodegradable.

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6 Other adverse effects

No information available.

12.7 Additional ecotoxicological information

Additional information

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Do not allow uncontrolled discharge of product into the environment.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process. Dispose of waste according to applicable legislation.

Directive 2008/98/EC (Waste Framework Directive)

Before intended use

Waste codes/waste designations according to EWC/AVV

08 05 01* (Waste isocyanates)

After intended use

Waste codes/waste designations according to EWC/AVV

Uncleaned packaging: 15 01 10* (Packaging containing residues of or contaminated by dangerous substances) Cleaned packaging: 15 01 04 (Metallic packaging)

Other disposal recommendations

Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

13.2 Additional information

Note sections 7 and 8.

SECTION 14: Transport information

14.1 UN number

No dangerous good in sense of these transport regulations.

14.2 UN proper shipping name

No dangerous good in sense of these transport regulations.

14.3 Transport hazard class(es)

No dangerous good in sense of these transport regulations.

14.4 Packing group

No dangerous good in sense of these transport regulations.

14.5 Environmental hazards

No dangerous good in sense of these transport regulations.

14.6 Special precautions for user

None

SECTION 15: Regulatory information

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

EU legislation

Authorisations and/or restrictions on use

Restrictions on use

Use restriction according to REACH annex XVII, no. : 3

Restrictions of occupation

Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).
Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

National regulations

Technische Anleitung Luft (TA-Luft)

Weight fraction (Number 5.2.5. I) : 0,5 - 0,99 %

Water hazard class (WGK)

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according to Regulation (EC) No. 1907/2006 (REACH)



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Classification according to AwSV - Class : 2 (Obviously hazardous to water)

Other regulations, restrictions and prohibition regulations

Note TRGS 001. Note TRGS 400. Note TRGS 430 - isocyanate. Note BG RCI M 044 (BGI 524) "Polyurethan-production and processing / Isocyanate" and M 017 (BGI 621) "Solvents".

15.2 Chemical safety assessment

A chemical safety assessment has not been carried out.

15.3 Additional information

The European Committee of Paint, Printing Ink and Artists' Colours Manufacturers' Associations (CEPE) provides the following information on coatings containing isocyanates: Ready-to-use paints containing isocyanates may have an irritant effect on mucous membranes - especially on breathing organs - and cause hypersensitivity reactions. Inhalation of vapor or spray mist may cause sensitisation. When handling paints containing isocyanates all precautions required for solvent-containing paints must be followed. Vapor and spray mist in particular should not be inhaled. Allergics and asthmatics as well as people prone to respiratory ailments should not work with isocyanate containing paints.

SECTION 16: Other information

16.1 Indication of changes

02. Labelling according to Regulation (EC) No. 1272/2008 [CLP] - Hazard components for labelling · 15. Restrictions on use

16.2 Abbreviations and acronyms

AwSV: Ordinance on plants for the handling of substances hazardous to water. BGR(I): Rule (Information) from the German employers liability insurance association. DGUV: German Statutory Accident Insurance. EWC: European Waste Catalogue. TRGS: German Technical Rule for Hazardous Substances. VCI: German chemical industry association.

16.3 Key literature references and sources for data

None

16.4 Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

Calculation method.

16.5 Relevant H- and EUH-phrases (Number and full text)

H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

16.6 Training advice

None

16.7 Additional information

The product is used mainly as a hardener in coating materials. The handling of coating materials containing reactive polyisocyanates and residual monomeric HDI requires appropriate protective measures referred to in this safety data sheet. These products may therefore be used only in industrial or trade applications. They are not suitable for use in homemaker (DIY) applications.

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

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