

Safety Data Sheet

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



Trade name : 2K-PUR-Acryl Hardener 5770
2K-PUR-Acryl Härter 5770

Revision date : 27.08.2020

Print date : 27.08.2020

Version (Revision) : 25.0.0 (24.0.0)

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

1.1 Product identifier

2K-PUR-Acryl Hardener 5770
2K-PUR-Acryl Härter 5770

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

Relevant identified uses

Products Category [PC]

PC9 - Coatings and paints, fillers, putties, thinners

Uses advised against

The 2K-PUR products (2K-PUR-Acryl High Gloss Enamel 5740 incl. 2K-PUR-Acryl Hardener 5770 and 2K-PUR-Acryl Silk Matt Enamel 5741 incl. 2K-PUR-Acryl Hardener 5770) may be used only in industrial and professional applications. A use in Do-it Yourself applications is warning.

The main component of the 2K-PUR-Acryl Hardener 5770 were registered for the splashing and spraying application in accordance with the REACH regulations.

1.3 Details of the supplier of the safety data sheet

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

Brillux GmbH & Co KG
www.brillux.de

Street : Weseler Straße 401

Postal code/city : D - 48163 Münster

Telephone : +49 (0)251-7188-0

Telefax : +49 (0)251-7188-280

Information contact :

Electronic mail address of the well-informed person for safety data sheets:sdb@brillux.de

1.4 Emergency telephone number

Outside the business hours (9 a.m. to 5 p.m.):

(Giftinformationszentrum-Nord, Göttingen, consultation in german or english language)

Telephone: +49 (0)551-19240.

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.

Eye Irrit. 2 ; H319 - Serious eye damage/eye irritation : Category 2 ; Causes serious eye irritation.

Skin Irrit. 2 ; H315 - Skin corrosion/irritation : Category 2 ; Causes skin irritation.

Flam. Liq. 3 ; H226 - Flammable liquids : Category 3 ; Flammable liquid and vapour.

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.

STOT RE 2 ; H373 - STOT-repeated exposure : Category 2 ; May cause damage to organs through prolonged or repeated exposure.

2.2 Label elements

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

Hazard pictograms

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Flame (GHS02) · Health hazard (GHS08) · Exclamation mark (GHS07)

Signal word

Warning

Hazard components for labelling

HEXAMETHYLENE-DI-ISOCYANATE HOMOPOLYMER ; CAS No. : 28182-81-2

XYLENE ; CAS No. : 1330-20-7

ETHYLBENZENE ; CAS No. : 100-41-4

Hazard statements

- H226 Flammable liquid and vapour.
H373 May cause damage to organs through prolonged or repeated exposure.
H332 Harmful if inhaled.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

Precautionary statements

- P260 Do not breathe vapours.
P501 Dispose of contents/container to approved disposal company or local collection.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P271 Use only outdoors or in a well-ventilated area.
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.
P337+P313 If eye irritation persists: Get medical advice/attention.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

Special rules for supplemental label elements for certain mixtures

- EUH204 Contains isocyanates. May produce an allergic reaction.
EUH208 Contains HEXAMETHYLENE-DI-ISOCYANATE. May produce an allergic reaction.

2.3 Other hazards

Adverse environmental effects

The product does not contain any substances, which fulfil the criteria for PBT or vPvB in accordance with the Annex XIII of the Regulation (EC) No 1907/2006 (REACH-Regulation).

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description

Hardener based on aliphatic Polyisocyanates, aromatic hydrocarbons and ester.

Hazardous ingredients

HEXAMETHYLENE-DI-ISOCYANATE HOMOPOLYMER ; CAS No. : 28182-81-2

Weight fraction : $\geq 70 - < 80$ %

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

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XYLENE ; REACH No. : 01-2119488216-32 ; EC No. : 215-535-7; CAS No. : 1330-20-7

Weight fraction : $\geq 10 - < 12,5 \%$

Classification 1272/2008 [CLP] : Flam. Liq. 3 ; H226 Asp. Tox. 1 ; H304 STOT RE 2 ; H373 Acute Tox. 4 ; H312 Acute Tox. 4 ; H332 Skin Irrit. 2 ; H315 Eye Irrit. 2 ; H319 STOT SE 3 ; H335

2-METHOXY-1-METHYLETHYL ACETATE ; REACH No. : 01-2119475791-29 ; EC No. : 203-603-9; CAS No. : 108-65-6

Weight fraction : $\geq 1 - < 3 \%$

Classification 1272/2008 [CLP] : Flam. Liq. 3 ; H226 STOT SE 3 ; H336
Substance with a common (EC) occupational exposure limit value.

ETHYLBENZENE ; EC No. : 202-849-4; CAS No. : 100-41-4

Weight fraction : $\geq 1 - < 3 \%$

Classification 1272/2008 [CLP] : Flam. Liq. 2 ; H225 Asp. Tox. 1 ; H304 STOT RE 2 ; H373 Acute Tox. 4 ; H332

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

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

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

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

In all cases of doubt, or when symptoms persist, seek medical attention. Immediately remove all contaminated clothing. In case of unconsciousness: lay on side - call a doctor. Never give anything by mouth to an unconscious person. If medical advice is needed, have product container or label at hand.

Following inhalation

When symptoms persists, take the casualty into the fresh air and keep warm. Irregular breathing/no breathing: artificial respiration. Call a doctor and tell him the exactly substance.

In case of skin contact

Take off immediately all contaminated clothes. Wash away with soap and water and rinse. Do NOT use solvents or thinners. If skin irritation continues, consult a doctor.

After eye contact

Remove contact lenses, keep eyelids open. Rinse open eye immediately with plenty of running water. Seek medical advice if complaint continues.

After ingestion

Drink water in small draught. Keep at rest. Do not induce vomiting. When swallowed immediately consult and show packing or label to physician.

4.2 Most important symptoms and effects, both acute and delayed

Potential symptoms: Headache, dizziness, giddiness, skin irritation, eye irritation and irritation to respiratory tract are possible. Allergic symptoms.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

In case of fire: Use alcohol resistant foam, CO₂, powders or water spray for extinction.

Unsuitable extinguishing media

In case of fire: Do not use waterjet for extinction.

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5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

Formation of toxic gases is possible during heating or in case of fire: Carbon monoxide (CO.), nitrogen oxide (NOx), vapour of isocyanate and traces of hydrogen cyanide (HCN). Steams form an explosive mixture together with air.

5.3 Advice for firefighters

Special protective equipment for firefighters

At a fire caused by the product a breathing apparatus with an independent source of air is to have ready and to use if necessary for the firefighting. Personnel should wear protective clothings.

5.4 Additional information

Cool endangered containers with water in case of fire. 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

Refer to protective measures listed in sections 7 and 8. Keep away from ignition sources on account of the organic solvent content and air room well. Do not inhale vapours. Avoid contact with eyes and skin. Noticing wind direction in the outside area. Holding persons with the back in the outside area against the wind and remote from the danger spot. Fencing off contaminated area with labelling and preventing access of unauthorized persons. Putting leaking containers so to prevent phasedown, that the leak is above.

6.2 Environmental precautions

Do not empty into drains. If the product contaminates lakes, rivers or sewages, inform appropriate authorities in accordance with local regulations. Holding polluted washing water back and disposing of duly.

6.3 Methods and material for containment and cleaning up

For cleaning up

Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in container for disposal according to local regulations (see section 13). The areas concerned cleaning with a customary water based cleaning agent, not using organic solvents if possible.

When cleaning avoid contact with quarrelsome substances, see section 10 of the safety data sheet. Using a non-sparking equipment when cleaning.

6.4 Reference to other sections

See Section 7 for information on safe handling.

You find information about the safety equipment of persons in the section 8, information about the refuse disposal in section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures

Ensure a good ventilation in room and working area. Prevent the creation of inflammable or explosive concentrations of vapour in air and avoid vapour concentrations higher than the OEL (=Occupational Exposure Limit). Only use the material in places where open light, fire and other flammable sources can be kept away. For personal protection see Section 8. Avoid contact with skin and eyes. Read label before use.

Measures to prevent fire

Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air.

Avoid concentrations which form ignitable or explosive vapour and air mixtures. Likewise, avoid any concentration of vapour above the MAC-valve. Keep away from ignition sources - No smoking. Ground/bond container and receiving equipment. Use explosion-proof pipes, electrical, ventilating and lighting equipment. Use only non-sparking tools.

Take precautionary measures against static discharge.

Measures to prevent aerosol and dust generation

Do not breathe gas or spray.

Advices on general occupational hygiene

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While working do not eat, drink or smoke. Immediately remove all contaminated clothing. Wash hands and face before breaks and after work and take a shower if necessary.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Electrical equipment should be protected to the appropriate standard. Floors should be of the conducting type. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Never use pressure to empty: container is not a pressure vessel. No smoking. Prevent unauthorized access. Do not store the product in lounge room. Keep only in the original container. Keep out of the reach of children. Store in a well-ventilated place. Keep cool.

Hints on joint storage

Keep away from oxidizing agents, from strongly alkaline and strongly acid materials. Store away from foodstuffs. Avoid contact / reaction with moisture or water: CO₂ formation in closed containers causes pressure.

Storage class (TRGS 510) : 3

Further information on storage conditions

Keep container tightly sealed. Always keep in containers of same material as the original one. See also instructions on the label. Avoid heating and direct sunlight. Store at 5°-35°C. Containers should be kept dry and sealed. Suitable packing: Coated steel.

7.3 Specific end use(s)

For using the product observe the information in the Technical data sheet of the product.

Industrial sector specific solutions

GISCODE : Product code in accordance to GISBAU (hazardous materials information system of the German professional associations of the building and construction industry): PU 50.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values

2-METHOXY-1-METHYLETHYL ACETATE ; CAS No. : 108-65-6

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

Limit value : 50 ppm / 270 mg/m³

Peak limitation : 1(I)

Remark : Y

Version : 29.03.2019

XYLENE ; CAS No. : 1330-20-7

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

Limit value : 100 ppm / 440 mg/m³

Peak limitation : 4

Version : 01.10.1993

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

Parameter : Group limit for the calculation of the occupational exposure limit for hydrocarbon mixtures (see section 2.9 of Technical Rule 900).

Limit value : 200 mg/m³

Version : 01.10.1993

ETHYLBENZENE ; CAS No. : 100-41-4

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

Limit value : 20 ppm / 88 mg/m³

Peak limitation : 2(II)

Remark : H, Y, DFG

Version : 02.07.2009

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)

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Remark : Sa
Version : 29.03.2019

Remark

Taking into account the details mentioned in the TRGS 900 for the supervision of AGW.

Biological limit values

XYLENE ; CAS No. : 1330-20-7

Limit value type (country of origin) : TRGS 903 (D)
Parameter : Methylhippuric acid / Urine (U) / End of exposure or end of shift
Limit value : 2000 mg/l
Version : 01.10.1993

ETHYLBENZENE ; CAS No. : 100-41-4

Limit value type (country of origin) : TRGS 903 (D)
Parameter : Mandelic acid + Phenylglyoxyl acid / Urine (U) / End of exposure or end of shift
Limit value : 250 mg/g Kr
Version : 31.03.2004

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

DNEL-/PNEC-values

DNEL/DMEL

Limit value type : DNEL/DMEL (Consumer) (XYLENE ; CAS No. : 1330-20-7)
Exposure route : Inhalation
Exposure frequency : Short-term
Limit value : 174 mg/m³
Limit value type : DNEL/DMEL (Consumer) (XYLENE ; CAS No. : 1330-20-7)
Exposure route : Inhalation
Exposure frequency : Long-term
Limit value : 14,8 mg/m³
Limit value type : DNEL/DMEL (Consumer) (XYLENE ; CAS No. : 1330-20-7)
Exposure route : Oral
Exposure frequency : Long-term
Limit value : 1,6 mg/kg
Safety factor : 1 D
Limit value type : DNEL/DMEL (Consumer) (XYLENE ; CAS No. : 1330-20-7)
Exposure route : Dermal
Exposure frequency : Long-term
Limit value : 108 mg/kg
Safety factor : 1 D
Limit value type : DNEL/DMEL (Professional) (XYLENE ; CAS No. : 1330-20-7)
Exposure route : Inhalation
Exposure frequency : Short-term
Limit value : 289 mg/m³
Limit value type : DNEL/DMEL (Professional) (XYLENE ; CAS No. : 1330-20-7)
Exposure route : Dermal
Exposure frequency : Short-term
Limit value : 174 mg/m³
Limit value type : DNEL/DMEL (Professional) (XYLENE ; CAS No. : 1330-20-7)
Exposure route : Inhalation
Exposure frequency : Long-term
Limit value : 77 mg/m³
Limit value type : DNEL/DMEL (Consumer) (2-METHOXY-1-METHYLETHYL ACETATE ; CAS No. : 108-65-6)

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Exposure route : Dermal
Exposure frequency : Long-term
Limit value : 54,8 mg/kg
Limit value type : DNEL/DMEL (Consumer) (2-METHOXY-1-METHYLETHYL ACETATE ; CAS No. : 108-65-6)

Exposure route : Inhalation
Exposure frequency : Long-term
Limit value : 33 mg/m³
Limit value type : DNEL/DMEL (Consumer) (2-METHOXY-1-METHYLETHYL ACETATE ; CAS No. : 108-65-6)

Exposure route : Oral
Exposure frequency : Long-term
Limit value : 1,67 mg/kg
Limit value type : DNEL/DMEL (Industrial) (2-METHOXY-1-METHYLETHYL ACETATE ; CAS No. : 108-65-6)

Exposure route : Inhalation
Exposure frequency : Long-term
Limit value : 275 mg/m³
Limit value type : DNEL/DMEL (Industrial) (ETHYLBENZENE ; CAS No. : 100-41-4)

Exposure route : Inhalation
Exposure frequency : Short-term
Limit value : 289 mg/m³
Limit value type : DNEL/DMEL (Industrial) (2-METHOXY-1-METHYLETHYL ACETATE ; CAS No. : 108-65-6)

Exposure route : Dermal
Exposure frequency : Long-term
Limit value : 153,5 mg/kg
Limit value type : DNEL/DMEL (Industrial) (ETHYLBENZENE ; CAS No. : 100-41-4)

Exposure route : Inhalation
Exposure frequency : Long-term
Limit value : 77 mg/m³
Limit value type : DNEL/DMEL (Industrial) (ETHYLBENZENE ; CAS No. : 100-41-4)

Exposure route : Dermal
Exposure frequency : Long-term
Limit value : 180 mg/kg
Limit value type : DNEL/DMEL (Industrial) (HEXAMETHYLENE-DI-ISOCYANATE ; CAS No. : 822-06-0)

Exposure route : Dermal
Exposure frequency : Short-term
Limit value type : DNEL/DMEL (Industrial) (HEXAMETHYLENE-DI-ISOCYANATE ; CAS No. : 822-06-0)

Exposure route : Inhalation
Exposure frequency : Short-term
Limit value : 0,07 mg/m³
Limit value type : DNEL/DMEL (Industrial) (HEXAMETHYLENE-DI-ISOCYANATE ; CAS No. : 822-06-0)

Exposure route : Inhalation
Exposure frequency : Long-term
Limit value : 0,035 mg/m³

PNEC

Limit value type : PNEC (Aquatic, freshwater) (XYLENE ; CAS No. : 1330-20-7)
Exposure route : Water (Including sewage plant)
Limit value : 0,327 mg/l

Limit value type : PNEC (Sediment, freshwater) (XYLENE ; CAS No. : 1330-20-7)
Exposure route : Water (Including sewage plant)
Limit value : 12,46 mg/kg

Limit value type : PNEC soil (XYLENE ; CAS No. : 1330-20-7)
Exposure route : Soil
Limit value : 2,31 mg/kg

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Limit value type :	PNEC (Sewage treatment plant) (XYLENE ; CAS No. : 1330-20-7)
Exposure route :	Water (Including sewage plant)
Limit value :	6,58 mg/l
Limit value type :	PNEC (Aquatic, freshwater) (2-METHOXY-1-METHYLETHYL ACETATE ; CAS No. : 108-65-6)
Exposure route :	Water (Including sewage plant)
Limit value :	0,635 mg/l
Limit value type :	PNEC (Aquatic, marine water) (2-METHOXY-1-METHYLETHYL ACETATE ; CAS No. : 108-65-6)
Exposure route :	Water (Including sewage plant)
Limit value :	0,0635 mg/l
Limit value type :	PNEC (Sediment, freshwater) (2-METHOXY-1-METHYLETHYL ACETATE ; CAS No. : 108-65-6)
Exposure route :	Soil
Limit value :	3,29 mg/kg
Limit value type :	PNEC (Sediment, marine water) (2-METHOXY-1-METHYLETHYL ACETATE ; CAS No. : 108-65-6)
Exposure route :	Soil
Limit value :	0,329 mg/kg
Limit value type :	PNEC soil (2-METHOXY-1-METHYLETHYL ACETATE ; CAS No. : 108-65-6)
Exposure route :	Soil
Limit value :	29 mg/kg
Limit value type :	PNEC (Sewage treatment plant) (2-METHOXY-1-METHYLETHYL ACETATE ; CAS No. : 108-65-6)
Exposure route :	Water (Including sewage plant)
Limit value :	100 mg/l

8.2 Exposure controls

Appropriate engineering controls

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL (=Occupational Exposure Limit), suitable respiratory protection must be worn. Observe data available of section 7. Making sure that lights and electrical equipment do not represent any igniting sources.

Personal protection equipment

Eye/face protection

Use protection glasses in case of spattering. Having eye rinsing bottle at work ready.

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. Gloves of cotton should be used under the gloves of polychloropren or nitrile rubber. After washing hands replace lost skin fat by fat containing skin creams.

Body protection

Using protective clothing. If the product must sprayed, use a disposable protective suit.

Respiratory protection

Breathing protection equipment is not required in good ventilated places. A respiratory protection (combination filter A2-P3) is required by inadequate ventilation and by spray application. Do not breathe gas or spray.

General information

Avoid contact with eyes and skin. Immediately remove all contaminated clothing. Do not eat or drink during work - no smoking. Wash hands before breaks and after work. Ensure a good ventilation in room and working area. Do not breathe gas or spray. Dealing with the product is warned against at oversensitivity of the respiratory tract and the skin (asthma, chronic bronchitis or skin suffering).

Environmental exposure controls

The product should not reach waters and the ground. If the product contaminates lakes, rivers or sewages, inform

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appropriate authorities in accordance with local regulations.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Liquid.

Colour : conformable to product designation.

Odour

Like aromatic hydrocarbons.

Safety characteristics

Melting point/freezing point :	(1013 hPa)		No data available
Initial boiling point and boiling range :	(1013 hPa)		145 °C
Flash point :			38 °C
Auto-ignition temperature :			460 °C
Lower explosion limit :			1,5 Vol-%
Upper explosion limit :			7,5 Vol-%
Vapour pressure :	(50 °C)		No data available
Density :	(20 °C)	approx.	1,07 g/cm ³
Solvent separation test :	(20 °C)	<	3 %
Water solubility :	(20 °C)		not applicable
Viscosity :	(20 °C)		225 mPa*s
VOC-value :		max.	500 g/l

9.2 Other information

Other physical and chemical data have not been determined.

The mentioned VOC value refers to the mixture of the product, incl. harder, ready for use.

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangers connected by a possible reactivity of the product are known to proper handling and storage.

10.2 Chemical stability

Stable under recommended storage and handling conditions (see section 7).

10.3 Possibility of hazardous reactions

Vapours can form explosive mixtures with air.

10.4 Conditions to avoid

To avoid formation of ignitable vapour and air mixtures ensure good ventilation (inter alia extraction system). Keep away from frost, heat and direct sunlight.

Cleaning cloths saturated with solvent can ignite themselves. Therefore ensure safe disposal of waste.

10.5 Incompatible materials

No dangerous reaction known. Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

10.6 Hazardous decomposition products

No dangerous decomposition product are known if stored and handled correctly. Formation of toxic gases is possible during heating or in case of fire: Carbon monoxide (CO.), nitrogen oxide (NOx), vapour of isocyanate and traces of hydrogen cyanide (HCN).

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

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Acute toxicity:

- Acute oral toxicity: No data available;
- Acute dermal toxicity: No data available;
- Acute inhalation toxicity: No data available.

Acute oral toxicity

Parameter : LD50 (HEXAMETHYLENE-DI-ISOCYANATE HOMOPOLYMER ; CAS No. : 28182-81-2)
Exposure route : Oral
Species : Rat
Effective dose : > 5000 mg/kg
Parameter : LD50 (XYLENE ; CAS No. : 1330-20-7)
Exposure route : Oral
Species : Rat
Effective dose : 4300 mg/kg
Parameter : LD50 (ETHYLBENZENE ; CAS No. : 100-41-4)
Exposure route : Oral
Species : Rat
Effective dose : 3500 mg/kg
Parameter : LD50 (2-METHOXY-1-METHYLETHYL ACETATE ; CAS No. : 108-65-6)
Exposure route : Oral
Species : Rat
Effective dose : 8500 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 : LD50 (HEXAMETHYLENE-DI-ISOCYANATE HOMOPOLYMER ; CAS No. : 28182-81-2)
Exposure route : Dermal
Species : Rabbit
Effective dose : > 2000 mg/kg
Parameter : LD50 (XYLENE ; CAS No. : 1330-20-7)
Exposure route : Dermal
Species : Rabbit
Effective dose : 2000 mg/kg
Parameter : LD50 (2-METHOXY-1-METHYLETHYL ACETATE ; CAS No. : 108-65-6)
Exposure route : Dermal
Species : Rat
Effective dose : > 5000 mg/kg
Parameter : LD50 (ETHYLBENZENE ; CAS No. : 100-41-4)
Exposure route : Dermal
Species : Rabbit
Effective dose : 5000 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 : LC50 (HEXAMETHYLENE-DI-ISOCYANATE HOMOPOLYMER ; CAS No. : 28182-81-2)
Exposure route : Inhalation
Species : Rat
Effective dose : 0,554 mg/l
Exposure time : 4 h
Parameter : LC50 (XYLENE ; CAS No. : 1330-20-7)
Exposure route : Inhalation
Species : Rat

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Effective dose : 22 mg/l
Exposure time : 4 h
Parameter : LC50 (2-METHOXY-1-METHYLETHYL ACETATE ; CAS No. : 108-65-6)
Exposure route : Inhalation
Species : Rat
Effective dose : 35,7 mg/l
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
Species : Mouse
Effective dose : 1,57 mg/l

Corrosion

Irritation:

- Skin contact: Irritating to skin and mucous membranes.
- Eye contact: Causes serious eye irritation.

Respiratory or skin sensitisation

The product is labeled as skin and respiratory sensitizing.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

The product is not classified as human germ cell mutagenic, carcinogenic or human reproductive toxic (CMR effects).

STOT-single exposure

Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation, kidneys and liver damages, as well as leading the impairment of the central nervous system.

Symptoms and signs include headache: dizziness, fatigue, muscular weakness, drowsiness and in extreme cases loss of consciousness.

The liquid splashed in the eyes may cause irritation and reversible damage.

STOT-repeated exposure

May causes damage to the organs through prolonged or repeated exposure.

Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin.

Aspiration hazard

The product contains substances, which are classified as aspiration toxicity, category 1, in accordance to the Regulation (EC) No. 1272/2008 (CLP-Regulation) in their pure form.

The product is not classified as aspiration toxicity, category 1, because of the higher viscosity (> 20,5 mm²/s at 40°C) and the used concentration of the substances.

11.4 Other adverse effects

Other observations

This product is unlikely to harm health, given normal and proper handling and hygienic precautions.

11.5 Additional information

The product is classified in toxicological terms on the basis of the results of the calculation procedure outlined within the Regulation (EC) No 1272/2008 (CLP-Regulation), listed in sections 2 and 3.

At proper dealing and use as agreed the product does not cause any effects bad for health after our experiences and the information submitted to us.

SECTION 12: Ecological information

12.1 Toxicity

Acute or chronic damages to water organisms by the product in the aquatic environment are not expected.

Aquatic toxicity

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Acute (short-term) fish toxicity

Parameter : LC50 (HEXAMETHYLENE-DI-ISOCYANATE HOMOPOLYMER ; CAS No. : 28182-81-2)
Species : Brachydanio rerio (zebra-fish)
Effective dose : > 100 mg/l
Exposure time : 96 h
Parameter : LC50 (XYLENE ; CAS No. : 1330-20-7)
Species : Oncorhynchus mykiss (Rainbow trout)
Effective dose : 2,6 mg/l
Exposure time : 96 h
Parameter : LC50 (2-METHOXY-1-METHYLETHYL ACETATE ; CAS No. : 108-65-6)
Species : Oryzias latipes (Ricefish)
Effective dose : > 100 mg/l
Exposure time : 96 h
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 (2-METHOXY-1-METHYLETHYL ACETATE ; CAS No. : 108-65-6)
Species : Oryzias latipes (Ricefish)
Effective dose : 47,5 mg/l
Exposure time : 14 D

Acute (short-term) toxicity to crustacea

Parameter : EC50 (HEXAMETHYLENE-DI-ISOCYANATE HOMOPOLYMER ; CAS No. : 28182-81-2)
Species : Daphnia magna (Big water flea)
Effective dose : > 100 mg/l
Exposure time : 48 h
Parameter : EC50 (XYLENE ; CAS No. : 1330-20-7)
Species : Daphnia magna (Big water flea)
Effective dose : 1 - 10 mg/l
Exposure time : 48 h
Parameter : EC50 (2-METHOXY-1-METHYLETHYL ACETATE ; CAS No. : 108-65-6)
Species : Daphnia magna (Big water flea)
Effective dose : > 500 mg/l
Exposure time : 48 h

Chronic (long-term) toxicity to crustacea

Parameter : NOEC (2-METHOXY-1-METHYLETHYL ACETATE ; CAS No. : 108-65-6)
Species : Daphnia magna (Big water flea)
Effective dose : > 100 mg/l
Exposure time : 21 D

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

Parameter : ErC50 (HEXAMETHYLENE-DI-ISOCYANATE HOMOPOLYMER ; CAS No. : 28182-81-2)
Species : Scenedesmus subspicatus
Effective dose : > 100 mg/l
Exposure time : 72 h
Parameter : IC50 (XYLENE ; CAS No. : 1330-20-7)
Species : Scenedesmus subspicatus
Effective dose : 2,2 mg/l
Parameter : ErC50 (2-METHOXY-1-METHYLETHYL ACETATE ; CAS No. : 108-65-6)
Species : Pseudokirchneriella subcapitata
Effective dose : > 1000 mg/l
Exposure time : 3 h

Toxicity to microorganisms

Parameter : EC50 (HEXAMETHYLENE-DI-ISOCYANATE HOMOPOLYMER ; CAS No. : 28182-81-2)
Species : Mysisopsis bahia

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Effective dose : > 100 mg/l
Exposure time : 3 h
Parameter : EC50 (XYLENE ; CAS No. : 1330-20-7)
Species : Bacteria toxicity
Effective dose : 96 mg/l
Exposure time : 24 h
Parameter : EC50 (2-METHOXY-1-METHYLETHYL ACETATE ; CAS No. : 108-65-6)
Species : Mysidopsis bahia
Effective dose : > 1000 mg/l
Exposure time : 0,5 h

12.2 Persistence and degradability

These are not data available about the potential of the product concerning his persistency and degradability.

Biodegradation

Parameter : Biodegradation (HEXAMETHYLENE-DI-ISOCYANATE HOMOPOLYMER ; CAS No. : 28182-81-2)
Inoculum : Biodegradation
Effective dose : 1 %
Exposure time : 28 D
Parameter : Biodegradation (XYLENE ; CAS No. : 1330-20-7)
Inoculum : Biodegradation
Effective dose : > 60 %
Exposure time : 28 D
Parameter : Biodegradation (2-METHOXY-1-METHYLETHYL ACETATE ; CAS No. : 108-65-6)
Inoculum : Biodegradation
Effective dose : 100 %
Exposure time : 8 D
Parameter : Biodegradation (2-METHOXY-1-METHYLETHYL ACETATE ; CAS No. : 108-65-6)
Inoculum : Biodegradation
Effective dose : > 90 %
Exposure time : 28 D

12.3 Bioaccumulative potential

These are not data available about the bio accumulation potential of the product.
No information about the individual components is available either.

12.4 Mobility in soil

These are not datas available about the potential of the product concerning his mobility in the ground.
A penetrating into soil, waters and sewage system should be prevented.

12.5 Results of PBT and vPvB assessment

This product does not contain any relevant substances which were classified as a PBT or vPvB-substance.

12.6 Other adverse effects

No information available.

12.7 Additional ecotoxicological information

Avoid exposing into ground, waterways and drainage.
The classification of the product is based on summation of classified components according to the Regulation (EC) No 1272/2008 (CLP-Regulation). See details in sections 2 and 3.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV

Waste code product

Disposal-definition No. (AVV-Code): 08 01 11* Paint and varnish waste which contains organic solvents or other dangerous substances.

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Waste code packaging

Disposal-definition No. (AVV-Code):
15 01 10 * packings which contain dangerous substances or are polluted by dangerous substances.

Waste treatment options

Appropriate disposal / Product

Dispose of contents/container to approved disposal company or local collection according to the local regulations.
Do not dispose together with household garbage. Do not empty into waters or drains.

Appropriate disposal / Package

Only empty packaging can be transferred to recycling. Uncleaned packaging must be disposed of in the same manner as the medium.

SECTION 14: Transport information

14.1 UN number

UN 1866

14.2 UN proper shipping name

Land transport (ADR/RID)

RESIN SOLUTION

Sea transport (IMDG)

RESIN SOLUTION

Air transport (ICAO-TI / IATA-DGR)

RESIN SOLUTION

14.3 Transport hazard class(es)

Land transport (ADR/RID)

Class(es) : 3
Classification code : F1
Hazard identification number (Kemler No.) : 30
Tunnel restriction code : D/E
Special provisions : 640H · LQ 5 I · E 1
Hazard label(s) : 3

Sea transport (IMDG)

Class(es) : 3
EmS-No. : F-E / S-E
Special provisions : LQ 5 I · E 1
Hazard label(s) : 3

Air transport (ICAO-TI / IATA-DGR)

Class(es) : 3
Special provisions : E 1
Hazard label(s) : 3

14.4 Packing group

III

14.5 Environmental hazards

Land transport (ADR/RID) : No

Sea transport (IMDG) : No

Air transport (ICAO-TI / IATA-DGR) : No

14.6 Special precautions for user

None

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

Not relevant because the product in type of delivery does not transport in bulks according to the International Maritime Organization (IMO) instruments.

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SECTION 15: Regulatory information

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

EU legislation

Other regulations (EU)

Directive 2004/42/EC on the limitation of emissions of volatile organic compounds

Product sub-category and VOC limiting values in accordance with appendix II, letter A of the guideline:

Category j, type Lb;

VOC limiting value of the category for 2010: 500 g/l.

This product contains max. 500 g/l VOC.

The mentioned VOC value refers to the mixture of the product ready for use of tribe varnish and harder.

National regulations

Technische Anleitung Luft (TA-Luft)

Weight fraction (Number 5.2.5. I) : 0,1 - 0,5 %

Water hazard class (WGK)

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

Additional information

The product is not classified as a solid substance according to the criteria of the Penetrometer test (ADR, part 2, section 2.3.4) and also fulfils not the criteria for solid substances according to the TRwS 779 number 2.1.1.

15.2 Chemical safety assessment

A chemical safety assessments was not carried out.

SECTION 16: Other information

16.1 Indication of changes

None

16.2 Abbreviations and acronyms

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)

ADR: European agreement concerning the international carriage of dangerous goods by road (Accord européen relatif transport des marchandises dangereuses par route)

AGW: Occupational threshold limit value (Arbeitsplatzgrenzwert – Germany) AOX: Adsorbable Organic halogen compounds

ATEmix: Calculated acute toxicity estimate of mixture

BCF: Bio-Concentration Factor

CAS: Chemical Abstract Service

CLP: Classification, Labelling and Packaging

CMR: Substances classified as Carcinogenic, Mutagenic or toxic for Reproduction

CSR: Chemical Safety Report

DNEL: Derived No Effect Level

EC: European Commission

EC50: Effective Concentration 50%

ECHA: European Chemical Agency

EEC: European Economic Community

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

EWC: European Waste Catalogue

GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals

IATA: International Air Transport Association

ICAO: International Civil Aviation Organization

IC50: Inhibition Concentration 50%

IMDG Code: International Maritime Dangerous Goods Code

IMO: International Maritime Organization

LC50: Lethal concentration 50%

LD50: Lethal Dose 50%

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LOAEL: Lowest Observed Adverse Effect Level
LOEL: Lowest observable effect level
MAK: Treshold limit values Germany (Maximale Arbeitsplatzkonzentration - DFG)
MARPOL: Convention for the Prevention of Marine Pollution from Ships
MVZ: molar ratio
n.a.: Not applicable
n.d.: Not determined
n.r.: Not relevant
NLP: No Longer Polymers
NOAEC: No Observed Adverse Effect Concentration
NOAEL: No Observed Adverse Effect Level
NOEC: No Observed Effect Concentration
NOEL: No Observed Effect Level
OEL: Occupational Exposure Limit
PBT: Persistent, bioaccumulative, toxic
PNEC: Predicted No Effect Concentration
RCP: Reciprocal calculation procedure
REACH: Registration, Evaluation and Authorization of Chemical)
RID: Regulations concerning the international carriage of dangerous goods by rail (Règlement International concernant le transport de marchandises dangereuses par chemin de fer)
STEL: Short-term Exposure Limit
SVHC: Substance of Very High Concern
TLV - TWA: Threshold Limit Value - Time Weighed Average
VOC: Volatile Organic Compounds
vPvB: Very persistent, very bioaccumulative.

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]

The evaluation of hazard information of the product was carried out in accordance to Annex I of the REGULATION (EC) No 1272/2008 (CLP Regulation).

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

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
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.
H373	May cause damage to organs through prolonged or repeated exposure.

16.6 Training advice

None

16.7 Additional information

None

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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