

Safety Data Sheet

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



Trade name : 2K-Aqua Matt enamel 2390
2K-Aqua Mattlack 2390
Revision date : 27.04.2023
Print date : 27.04.2023

Version (Revision) : 6.0.0 (5.0.0)

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

1.1 Product identifier

2K-Aqua Matt enamel 2390
2K-Aqua Mattlack 2390

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

Relevant identified uses

Products Category [PC]

PC 9 - Coatings and paints, fillers, putties, thinners.

Uses advised against

The 2K-PUR product may be used only in industrial and professional applications. A use in Do-it Yourself applications is warning.

The main component of the Hardener was 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

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]

None

Additional information

This product is not dangerous according to the regulation (EC) No. 1272/2008 (CLP).

2.2 Label elements

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

Special rules for supplemental label elements for certain mixtures

EUH208

Contains MIXTURE OF α -3-(3-(2H-BENZOTRIAZOL-2-YL)-5-TERT-BUTYL-4-HYDR OXYPHENYL)-1-OXOPROPYL- ω -HYDROXY POLY(OXYETHYLENE) AND α -3-(3-2H-BENZOTRIAZOL-2-YL)-5-TERT-BUTYL-4-HYDROXY PHENYL)- 1-OXOPROPYL- ω -3-(2H-BENZOTRIAZOL-2-YL)-5-TERT-BUTYL- 4-HYDROXYPHENYL)-1-OXOPROPOXY POLY(OXYETHYLENE) ; 1,2-BENZISOTHIAZOL-3(2H)-ONE.May produce an allergic reaction.

EUH210

Safety data sheet available on request.

2.3 Other hazards

The product does not contain any substances with endocrine-disrupting properties according to Article 59 Paragraph 1 or substances with endocrine-disrupting properties according to Regulations (EU) 2017/2100 or (EU) 2018/605.

The product does not contain any substances, which fulfil the criteria for PBT or vPvB in accordance with the Annex XIII

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of the Regulation (EC) No 1907/2006 (REACH-Regulation).

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description

Paint based on Acrylic resins;

Composition:

Acrylic resin, titanium dioxide, inorganic/organic coloured pigments (depending on the shade), polymer-extender, water, glycol ether, additives and preservatives (benzisothiazolinone and sodium pyrithione).

Hazardous ingredients

MIXTURE OF α -3-(3-(2H-BENZOTRIAZOL-2-YL)-5-TERT-BUTYL-4-HYDROXYPHENYL)-1-OXOPROPYL- ω -HYDROXY POLY(OXYETHYLENE) AND α -3-(3-(2H-BENZOTRIAZOL-2-YL)-5-TERT-BUTYL-4-HYDROXY PHENYL)-1-OXOPROPYL- ω -3-(3-(2H-BENZOTRIAZOL-2-YL)-5-TERT-BUTYL-4-HYDROXYPHENYL)-1-OXOPROPOXY POLY(OXYETHYLENE); EC No. : 400-830-7

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

Classification 1272/2008 [CLP] : Skin Sens. 1 ; H317 Aquatic Chronic 2 ; H411

1,2-BENZISOTHIAZOL-3(2H)-ONE ; REACH No. : 01-2120761540-60 ; EC No. : 220-120-9; CAS No. : 2634-33-5

Weight fraction : $\geq 0,005 - < 0,05$ %

Classification 1272/2008 [CLP] : Acute Tox. 2 ; H330 Eye Dam. 1 ; H318 Acute Tox. 4 ; H302 Skin Irrit. 2 ; H315 Skin Sens. 1 ; H317 Aquatic Acute 1 ; H400 Aquatic Chronic 2 ; H411

Specific Conc. Limits : Skin Sens. 1 ; H317: C $\geq 0,05$ % • (M Acute=1)

Additional information

For full text of Hazard- and EU Hazard-statements: 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. If unconscious no administration by mouth, storage in recovery position and seek medical advice. 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.

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.

Following 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

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

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Suitable extinguishing media

This product is not flammable. In case of a fire extinguish surroundings as indicated.

Unsuitable extinguishing media

None known.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard.

5.3 Advice for firefighters

Special protective equipment for firefighters

When extinguishing fires, use breathing apparatus with an independent source of air.

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. The product produced in combination with water slippery surfaces.

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). Remove residue by rinsing thoroughly with water. Thoroughly clean contaminated objects and floors and observe environmental regulations.

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

No special measures necessary in the case of regulation storage and handling. Ensure a good ventilation in room and working area. For personal protection see Section 8. Keep out of reach of children. Read label before use.

Measures to prevent fire

This product is not flammable. Cool endangered containers with water.

Advices on general occupational hygiene

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

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly in a dry, cool and good ventilated place. Do not store the product in lounge room. Keep only in the original container. Protect against frost. Keep out of the reach of children.

Hints on joint storage

Store away from foodstuffs.

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Storage class (TRGS 510) : 12

Further information on storage conditions

Keep container tightly sealed. Store at 5°-35°C. Containers should be kept dry and sealed.

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): PU30.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values

SODIUM PYRITHIONE ; CAS No. : 3811-73-2

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

Limit value : 1 mg/m³

Peak limitation : 4

Remark : H,Y

Version : 01.03.2002

DNEL-/PNEC-values

DNEL/DMEL

1,2-BENZISOTHIAZOL-3(2H)-ONE ; CAS No. : 2634-33-5

Limit value type : DNEL Consumer (systemic)

Exposure route : Inhalation

Exposure frequency : Long-term

Limit value : 1,2 mg/m³

Limit value type : DNEL Consumer (systemic)

Exposure route : Dermal

Exposure frequency : Long-term

Limit value : 345 µg/kg bw/day

Limit value type : DMEL worker (systemic)

Exposure route : Inhalation

Exposure frequency : Long-term

Limit value : 6,81 mg/m³

Limit value type : DMEL worker (systemic)

Exposure route : Dermal

Exposure frequency : Long-term

Limit value : 966 µg/kg bw/day

PNEC

1,2-BENZISOTHIAZOL-3(2H)-ONE ; CAS No. : 2634-33-5

Limit value type : PNEC (Aquatic, freshwater)

Exposure route : Water (Including sewage plant)

Exposure time : Short-term

Limit value : 4,03 µg/l

Limit value type : PNEC (Aquatic, intermittent release)

Exposure route : Water (Including sewage plant)

Exposure time : Short-term

Limit value : 1,1 µg/l

Limit value type : PNEC (Aquatic, marine water)

Exposure route : Water (Including sewage plant)

Exposure time : Short-term

Limit value : 403 ng/L

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Limit value type : PNEC (Aquatic, marine water)
Exposure route : Water (Including sewage plant)
Exposure time : Long-term
Limit value : 110 ng/L
Limit value type : PNEC Soil, Freshwater
Exposure route : Soil
Exposure time : Short-term
Limit value : 49,9 µg/kg dry weight
Limit value type : PNEC (Soil)
Exposure route : Soil
Exposure time : Short-term
Limit value : 3 mg/kg dry weight
Limit value type : PNEC Soil, Marine water
Exposure route : Soil
Exposure time : Short-term
Limit value : 4,99 µg/kg dry weight
Limit value type : PNEC (Sewage treatment plant)
Exposure route : Water (Including sewage plant)
Exposure time : Short-term
Limit value : 1,03 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.
Observe data available of section 7.

Personal protection equipment

Eye/face protection

Use protection glasses in case of spattering.

Skin protection

Hand protection

Use protective gloves. For a short-term contact protective gloves made of nitrile rubber are suitable with a material thickness of 0.38 mm.
For longer or repeated contact protective gloves made of butyl rubber are used with a material thickness of $\geq 0,7$ mm. Penetration time ≥ 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 be sprayed, use a disposable protective suit.

Respiratory protection

Breathing protection equipment is not necessary by brush or roll application of the Product in good ventilated rooms. A respiratory protection (combination filter A2-P2) is required by inadequate ventilation and by spray application of the 2K-Product. 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.

Environmental exposure controls

The product should not reach waters and the ground. If the product contaminates lakes, rivers or sewages, inform appropriate authorities in accordance with local regulations.

SECTION 9: Physical and chemical properties

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9.1 Information on basic physical and chemical properties

Appearance

Physical state : Liquid.

Colour : conformable to product designation.

Odour

characteristic

Safety characteristics

Melting point/freezing point :	(1013 hPa)	No data available
Initial boiling point and boiling range :	(1013 hPa)	> 100 °C
Decomposition temperature :	(1013 hPa)	No data available
Flash point :		not applicable
Auto-ignition temperature :		not applicable
Lower explosion limit :		not applicable
Upper explosion limit :		not applicable
Vapour pressure :	(50 °C)	No data available
Density :	(20 °C)	1,05 - 1,3 g/cm ³
Solvent separation test :	(20 °C)	not applicable
Water solubility :	(20 °C)	mixable
pH :		8 - 9
log P O/W :		No data available
Flow time :	(20 °C)	No data available
Viscosity :	(20 °C)	No data available
Kinematic viscosity :	(40 °C)	No data available
Relative vapour density :	(20 °C)	No data available
VOC-value :		max. 100 g/l
Flammable liquids :	The product is not ignitable.	
Particle Characteristics :	not applicable	

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

No dangerous reactions are known if stored and handled the product correctly.

10.4 Conditions to avoid

Keep away from frost, heat and direct sunlight.

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

SECTION 11: Toxicological information

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11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Acute toxicity:

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

Acute oral toxicity

Parameter : ATEmix calculated
Exposure route : Oral
Effective dose : not relevant
Parameter : LD50 (1,2-BENZISOTHIAZOL-3(2H)-ONE ; CAS No. : 2634-33-5)
Exposure route : Oral
Species : Rat
Effective dose : 597 mg/kg

Acute dermal toxicity

Parameter : ATEmix calculated
Exposure route : Dermal
Effective dose : not relevant
Parameter : LD50 (1,2-BENZISOTHIAZOL-3(2H)-ONE ; CAS No. : 2634-33-5)
Exposure route : Dermal
Species : Rat
Effective dose : > 2000 mg/kg

Acute inhalation toxicity

Parameter : ATEmix calculated
Exposure route : Inhalation (vapour)
Effective dose : not relevant

Corrosion

- To the skin: Not expecting any damage or irritancy.
- At the eye: Not expecting any damage or irritancy.

Respiratory or skin sensitisation

The product contains sensitizing substances, which may produce an allergic reaction (see section 2 and 3).

Skin sensitisation

Parameter : Skin sensitisation (1,2-BENZISOTHIAZOL-3(2H)-ONE ; CAS No. : 2634-33-5)
Species : Mouse
Result : Sensitising.
Method : OECD 429

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

No risk expected.

STOT-repeated exposure

No risk expected.

Aspiration hazard

No risk expected.

11.2 Information on other hazards

Endocrine disrupting properties

The product does not contain any substances with endocrine-disrupting properties according to Article 59 Paragraph 1 or substances with endocrine-disrupting properties according to Regulations (EU) 2017/2100 or (EU) 2018/605.

Other adverse effects

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

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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

Aquatic toxicity

Chronic (long-term) fish toxicity

Parameter : NOEC (1,2-BENZISOTHIAZOL-3(2H)-ONE ; CAS No. : 2634-33-5)
Species : Oncorhynchus mykiss (Rainbow trout)
Evaluation parameter : Chronic (long-term) fish toxicity
Effective dose : 0,21 mg/l
Exposure time : 28 D
Method : OECD 215

Chronic (long-term) toxicity to aquatic invertebrate

Parameter : NOEC (1,2-BENZISOTHIAZOL-3(2H)-ONE ; CAS No. : 2634-33-5)
Species : Daphnia magna (Big water flea)
Evaluation parameter : Chronic (long-term) daphnia toxicity
Effective dose : 1,2 mg/l
Exposure time : 21 D
Method : OECD 211

Toxicity to other aquatic plants/organisms

Parameter : NOEC (1,2-BENZISOTHIAZOL-3(2H)-ONE ; CAS No. : 2634-33-5)
Species : Selenastrum capricornutum
Evaluation parameter : Acute (short-term) algae toxicity
Effective dose : 0,04 mg/l
Exposure time : 72 h

Sewage treatment plant

Parameter : EC20 (1,2-BENZISOTHIAZOL-3(2H)-ONE ; CAS No. : 2634-33-5)
Inoculum : Activated sludge
Evaluation parameter : Effects in sewage plants
Effective dose : 3,3 mg/l
Exposure time : 3 h
Parameter : EC50 (1,2-BENZISOTHIAZOL-3(2H)-ONE ; CAS No. : 2634-33-5)
Inoculum : Activated sludge
Evaluation parameter : Effects in sewage plants
Effective dose : 13 mg/l
Exposure time : 3 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 (1,2-BENZISOTHIAZOL-3(2H)-ONE ; CAS No. : 2634-33-5)
Inoculum : Degree of elimination
Degradation rate : approx. 90 %
Evaluation : Biodegradable.
Method : OECD 302B
Parameter : Biodegradation (1,2-BENZISOTHIAZOL-3(2H)-ONE ; CAS No. : 2634-33-5)
Inoculum : Degree of elimination
Degradation rate : > 70 %
Evaluation : Biodegradable.

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Method : OECD 303A

12.3 Bioaccumulative potential

Parameter : Bioconcentration factor (BCF) (1,2-BENZISOTHIAZOL-3(2H)-ONE ; CAS No. : 2634-33-5)
Value : 6,95
Method : OECD 305

These are not data available about the bio accumulation potential of the product.

12.4 Mobility in soil

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

Adsorption

Parameter : Log KOW (1,2-BENZISOTHIAZOL-3(2H)-ONE ; CAS No. : 2634-33-5)
Effective dose : 0,7
Evaluation : HPLC method
Method : OECD 117

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 Endocrine disrupting properties

The product does not contain any substances with endocrine-disrupting properties according to Article 59 Paragraph 1 or substances with endocrine-disrupting properties according to Regulations (EU) 2017/2100 or (EU) 2018/605.

12.7 Other adverse effects

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

12.8 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

Directive 2008/98/EC (Waste Framework Directive)

Before intended use

Dispose of contents/container to approved disposal company or local collection according to the local regulations. Packaging with not dry uped residues have to droped at official collecting sites. Packaging with dry uped residues can be disposed together with household garbage or building site garbage. Do not empty into waters or drains.

Waste codes/waste designations according to EWC/AVV

For the product:

Disposal-definition No.: 08 01 12 - Paint and varnish waste with the exception of the ones who come under 08 01 11 *.

After intended use

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

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.

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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

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.

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

Regulation (EC) No. 1907/2006 (REACH), Annex XVII (restrictions):

Use restriction according to REACH annex XVII, no. : 40, 55, 75

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 WB;

VOC limiting value of the category for 2010: 140 g/l.

This product contains max. 100 g/l VOC.

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

National regulations

Water hazard class

Classification according to AwSV - Class : 1 (Slightly hazardous to water)

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.

Maternity regulations and Young Persons Employment Act are to take into account.

15.2 Chemical Safety Assessment

A chemical safety assessments was not carried out.

SECTION 16: Other information

16.1 Indication of changes

15. Water hazard class

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

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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%
LOAEL: Lowest Observed Adverse Effect Level
LOEL: Lowest observable effect level
MAK: Threshold 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 Weighted 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)

H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

16.6 Training advice

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



Trade name : 2K-Aqua Matt enamel 2390
2K-Aqua Mattlack 2390
Revision date : 27.04.2023
Print date : 27.04.2023

Version (Revision) : 6.0.0 (5.0.0)

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.

Safety Data Sheet

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



Trade name : 2K-Aqua Hardener 2380
2K-Aqua Härter 2380
Revision date : 27.04.2023
Print date : 27.04.2023

Version (Revision) : 5.0.0 (4.0.0)

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

1.1 Product identifier

2K-Aqua Hardener 2380
2K-Aqua Härter 2380

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

Relevant identified uses

Products Category [PC]

PC 9 - Coatings and paints, fillers, putties, thinners.

Uses advised against

The 2K-PUR product may be used only in industrial and professional applications. A use in Do-it Yourself applications is warning.

The main component of the Hardener was 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

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.

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

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Print date : 27.04.2023

Version (Revision) : 5.0.0 (4.0.0)

Hazard components for labelling

ALIPHATIC POLYISOCYANATE ; CAS No. : 666723-27-9
HEXAMETHYLENE-1,6-DIISOCYANATE, HOMOPOLYMER ; CAS No. : 28182-81-2
HEXAMETHYLENE-DI-ISOCYANATE ; CAS No. : 822-06-0

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

P102 Keep out of reach of children.
P261 Avoid breathing vapours.
P271 Use only outdoors or in a well-ventilated area.
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.
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].
P501 Dispose of contents/container to approved disposal company or local collection.

Special rules for supplemental label elements for certain mixtures

EUH204 Contains isocyanates. May produce an allergic reaction.

2.3 Other hazards

The product does not contain any substances with endocrine-disrupting properties according to Article 59 Paragraph 1 or substances with endocrine-disrupting properties according to Regulations (EU) 2017/2100 or (EU) 2018/605. 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

Aliphatic polyisocyanates.

Hazardous ingredients

ALIPHATIC POLYISOCYANATE ; CAS No. : 666723-27-9

Weight fraction : $\geq 40 - < 45$ %
Classification 1272/2008 [CLP] : Acute Tox. 4 ; H332 Skin Sens. 1B ; H317 STOT SE 3 ; H335 Aquatic Chronic 3 ; H412 EUH204

HEXAMETHYLENE-1,6-DIISOCYANATE, HOMOPOLYMER ; REACH No. : 01-2119488934-20 ; EC No. : 500-060-2; CAS No. : 28182-81-2

Weight fraction : $\geq 35 - < 40$ %
Classification 1272/2008 [CLP] : Acute Tox. 4 ; H332 Skin Sens. 1 ; H317 STOT SE 3 ; H335 EUH204

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

Weight fraction : $< 0,1$ %
Classification 1272/2008 [CLP] : Acute Tox. 2 ; H330 Resp. Sens. 1 ; H334 Acute Tox. 4 ; H302 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

For full text of Hazard- and EU Hazard-statements: see SECTION 16.

SECTION 4: First aid measures

Safety Data Sheet

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



Trade name : 2K-Aqua Hardener 2380
2K-Aqua Härter 2380
Revision date : 27.04.2023
Print date : 27.04.2023

Version (Revision) : 5.0.0 (4.0.0)

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. In case of unconsciousness place patient stably in side position for transportation.

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.

Following ingestion

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. Fight larger fires with water jet or alcohol-resistant foam.

Unsuitable extinguishing media

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

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

In case of fire carbon monoxide, oxides of nitrogen, isocyanide and hydrogen cyanide may be formed.

5.3 Advice for firefighters

Special protective equipment for firefighters

When extinguishing fires, use breathing apparatus with an independent source of air.

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 no protective persons away, personal should wear protective clothings. Avoid contact with eyes and skin.

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.

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Trade name : 2K-Aqua Hardener 2380
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Print date : 27.04.2023

Version (Revision) : 5.0.0 (4.0.0)

6.3 Methods and material for containment and cleaning up

For cleaning up

Ensure adequate ventilation. Absorb with liquid binding material (i.e. sand, kieselgur, universal binder or sawdust). After approx. 1 hour put in waste container but do not close (CO₂ development). Subsequently put in the waste container. Do not seal (CO₂ may be given off). Keep damp and leave several days in a container in a secure area. The areas concerned cleaning with a customary water based cleaning agent, not using organic solvents if possible.

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

No special measures necessary in the case of regulation storage and handling. 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

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

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. in a well-ventilated place. Keep container tightly closed.

Hints on joint storage

Store away from foodstuffs. Avoid moisture.

Storage class (TRGS 510) : 10

Further information on storage conditions

Keep container tightly sealed. Store at 5°-35°C. Containers should be kept dry and sealed.

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): PU30.

SECTION 8: Exposure controls/personal protection

Trade name : 2K-Aqua Hardener 2380
2K-Aqua Härter 2380
Revision date : 27.04.2023
Print date : 27.04.2023

Version (Revision) : 5.0.0 (4.0.0)

8.1 Control parameters

Occupational exposure limit values

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 : 02.07.2021

Remark

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

Biological limit values

HEXAMETHYLENE-DI-ISOCYANATE ; CAS No. : 822-06-0
Limit value type (country of origin) : TRGS 903 (D)
Parameter : Hexamethylenediamine (after hydrolysis) / Urine (U) / End of exposure or end of shift
Limit value : 0,15 mg/g Creatinine
Version : 04.05.2021

DNEL-/PNEC-values

DNEL/DMEL

HEXAMETHYLENE-1,6-DIISOCYANATE, HOMOPOLYMER ; CAS No. : 28182-81-2

Limit value type : DNEL/DMEL (Worker)

Exposure route : Inhalation

Exposure frequency : Short-term

Limit value : 0,7 mg/m³

Limit value type : DNEL/DMEL (Worker)

Exposure route : Inhalation

Exposure frequency : Long-term

Limit value : 0,35 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-1,6-DIISOCYANATE, HOMOPOLYMER ; CAS No. : 28182-81-2

Limit value type : PNEC (Aquatic, freshwater)

Exposure route : Water (Including sewage plant)

Limit value : 0,1 mg/l

Limit value type : PNEC Intermittierende Einleitung

Exposure route : Water (Including sewage plant)

Limit value : 1 mg/l

Limit value type : PNEC (Aquatic, marine water)

Exposure route : Water (Including sewage plant)

Limit value : 0,01 mg/l

Limit value type : PNEC (Sediment, freshwater)

Exposure route : Soil

Limit value : 2530 mg/kg

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Limit value type : PNEC (Sediment, marine water)
Exposure route : Soil
Limit value : 253 mg/kg
Limit value type : PNEC soil
Exposure route : Soil
Limit value : 505 mg/kg
Limit value type : PNEC (Sewage treatment plant)
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.

Personal protection equipment

Eye/face protection

Use protection glasses in case of spattering.

Skin protection

Hand protection

Use protective gloves. For a short-term contact protective gloves made of nitrile rubber are suitable with a material thickness of 0.38 mm.

For longer or repeated contact protective gloves made of butyl rubber are used with a material thickness of $\geq 0,7$ mm. Penetration time ≥ 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 be sprayed, use a disposable protective suit.

Respiratory protection

Breathing protection equipment is not required in good ventilated places. A respiratory protection (combination filter A2-P2) is required by inadequate ventilation and by spray application of the 2K-Product. Do not breathe gas or spray.

General information

Avoid contact with eyes and skin. Immediately remove all contaminated clothing. Keep away from food, drink and animal feeding stuff. Do not eat or drink during work - no smoking. Keep working clothes separately. 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 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

Poor, characteristic.

Safety characteristics

Melting point/freezing point : (1013 hPa) No data available

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Version (Revision) : 5.0.0 (4.0.0)

Initial boiling point and boiling range :	(1013 hPa)	No data available
Decomposition temperature :	(1013 hPa)	No data available
Flash point :	>	61 °C
Auto-ignition temperature :		431 °C
Lower explosion limit :		No data available
Upper explosion limit :		No data available
Vapour pressure :	(50 °C)	No data available
Density :	(20 °C) approx.	1,09 - 1,13 g/cm ³
Solvent separation test :	(20 °C)	not applicable
Water solubility :	(20 °C)	practically insoluble
pH :		not applicable
log P O/W :		No data available
Flow time :	(20 °C)	No data available
Viscosity :	(20 °C)	No data available
Kinematic viscosity :	(40 °C)	No data available
Relative vapour density :	(20 °C)	No data available
VOC-value :	max.	100 g/l
Flammable liquids :	The product is ignitable.	
Particle Characteristics :	not applicable	

9.2 Other information

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

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. Product is hardening with moisture.

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.
Avoid moisture.

10.5 Incompatible materials

No dangerous reaction known. Exothermic reaction with amines and alcohols. Reaction with water separate CO₂. Build-up of pressure in closed containers. Danger that they might burst.

10.6 Hazardous decomposition products

No dangerous decomposition product are known if stored and handled correctly. When exposed to high temperatures may produce hazardous decomposition products such as carbon dioxide, carbon monoxide, smoke, nitric oxides or thick, black smoke.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Acute toxicity:

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

Acute oral toxicity

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Revision date : 27.04.2023

Print date : 27.04.2023

Version (Revision) : 5.0.0 (4.0.0)

Parameter : ATEmix calculated
Exposure route : Oral
Effective dose : not relevant

Parameter : LD50 (ALIPHATIC POLYISOCYANATE ; CAS No. : 666723-27-9)
Exposure route : Oral
Species : Rat
Effective dose : > 5000 mg/kg

Parameter : LD50 (HEXAMETHYLENE-1,6-DIISOCYANATE, HOMOPOLYMER ; CAS No. : 28182-81-2)
Exposure route : Oral
Species : Rat
Effective dose : > 5665 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-1,6-DIISOCYANATE, HOMOPOLYMER ; CAS No. : 28182-81-2)
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 : 13,8 mg/l

Parameter : LC50 (ALIPHATIC POLYISOCYANATE ; CAS No. : 666723-27-9)
Exposure route : Inhalation
Species : Rat
Effective dose : 1,5 mg/l

Parameter : ATEmix calculated (HEXAMETHYLENE-1,6-DIISOCYANATE, HOMOPOLYMER ; CAS No. : 28182-81-2)
Exposure route : Inhalation (dust/mist)
Effective dose : 1,5 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

Assessment/classification

Harmful by inhalation.

Corrosion

Irritation:
- To the skin: Repeated exposure may cause skin dryness or cracking.

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- At the eye: May cause mild, short-lasting discomfort to eyes.
- Respiratory tract: May cause respiratory Irritation.

Respiratory or skin sensitisation

The product is labeled as skin 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

No risk expected.

STOT-repeated exposure

No risk expected.

Aspiration hazard

No risk expected.

11.2 Information on other hazards

Endocrine disrupting properties

The product does not contain any substances with endocrine-disrupting properties according to Article 59 Paragraph 1 or substances with endocrine-disrupting properties according to Regulations (EU) 2017/2100 or (EU) 2018/605.

Other adverse effects

This product is unlikely to harm health, given normal and proper handling and hygienic precautions. In the case of over-exposure, especially during spraying without taking protective measures: Danger of irritation to eyes, nose, throat and the air passages. Delayed appearance of the complaints and development of an oversensitivity (respiratory troubles, cough, asthma) possible. With oversensitive persons reactions can already be triggered at very low isocyanate concentration also below the MAK-value. Tanning and stimulus effects are possible at a longer touch with the skin.

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

Aquatic toxicity

Acute (short-term) fish toxicity

Parameter :	LC50 (ALIPHATIC POLYISOCYANATE ; CAS No. : 666723-27-9)
Species :	Danio rerio (zebrafish)
Effective dose :	35,2 mg/l
Exposure time :	96 h
Parameter :	LC50 (HEXAMETHYLENE-1,6-DIISOCYANATE, HOMOPOLYMER ; CAS No. : 28182-81-2)
Species :	Danio rerio (zebrafish)
Effective dose :	> 100 mg/l
Exposure time :	96 h
Parameter :	LC50 (HEXAMETHYLENE-DI-ISOCYANATE ; CAS No. : 822-06-0)
Species :	Danio rerio (zebrafish)
Effective dose :	22 mg/l
Exposure time :	96 h

Acute (short-term) toxicity to crustacea

Parameter :	EC50 (ALIPHATIC POLYISOCYANATE ; CAS No. : 666723-27-9)
Species :	Daphnia magna (Big water flea)
Effective dose :	> 100 mg/l
Exposure time :	48 h

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Parameter : EC50 (HEXAMETHYLENE-1,6-DIISOCYANATE, HOMOPOLYMER ; CAS No. : 28182-81-2)
Species : Daphnia magna (Big water flea)
Effective dose : > 100 mg/l
Exposure time : 48 h

Acute (short-term) toxicity to algae and cyanobacteria

Parameter : ErC50 (ALIPHATIC POLYISOCYANATE ; CAS No. : 666723-27-9)
Species : Desmodesmus subspicatus
Effective dose : 72 mg/l
Exposure time : 72 h

Parameter : EC50 (HEXAMETHYLENE-1,6-DIISOCYANATE, HOMOPOLYMER ; CAS No. : 28182-81-2)
Species : Scenedesmus subspicatus
Effective dose : 50 - 100 mg/l
Exposure time : 72 h

Toxicity to microorganisms

Parameter : EC50 (ALIPHATIC POLYISOCYANATE ; CAS No. : 666723-27-9)
Species : Mysisopsis bahia
Effective dose : > 10000 mg/l

Parameter : EC50 (HEXAMETHYLENE-1,6-DIISOCYANATE, HOMOPOLYMER ; CAS No. : 28182-81-2)
Species : Mysisopsis bahia
Effective dose : 5560 mg/l

12.2 Persistence and degradability

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

12.3 Bioaccumulative potential

These are not data available about the bio accumulation potential of the product.

12.4 Mobility in soil

These are not data 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

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

12.6 Endocrine disrupting properties

The product does not contain any substances with endocrine-disrupting properties according to Article 59 Paragraph 1 or substances with endocrine-disrupting properties according to Regulations (EU) 2017/2100 or (EU) 2018/605.

12.7 Other adverse effects

Harmful to aquatic life, may cause long-term adverse effects in the aquatic environment.

12.8 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

Directive 2008/98/EC (Waste Framework Directive)

Before intended use

Dispose of contents/container to approved disposal company or local collection according to the local regulations.

Packaging with not dry uped residues have to dropped at official collecting sites. Packaging with dry uped residues can be disposed together with household garbage or building site garbage. Do not empty into waters or drains.

Waste codes/waste designations according to EWC/AVV

For the product:

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



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

After intended use

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

Waste codes/waste designations according to EWC/AVV

For the uncleaned packaging:
Disposal-definition No.: 15 01 10* - packaging containing residues of or contaminated by hazardous substances.

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

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.

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

Regulation (EC) No. 1907/2006 (REACH), Annex XVII (restrictions):

Use restriction according to REACH annex XVII, no. : 3, 74, 75

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 WB;

VOC limiting value of the category for 2010: 140 g/l.

This product contains max. 100 g/l VOC.

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

National regulations

Water hazard class

Classification according to AwSV - Class : 1 (Slightly hazardous to water)

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.

Maternity regulations and Young Persons Employment Act are to take into account.

15.2 Chemical Safety Assessment

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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%
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

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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)

H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H412	Harmful to aquatic life with long lasting effects.

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.