

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 24.11.2022

Version number 6 (replaces version 5)

Revision: 24.11.2022

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

1.1 Product identifier

Trade name **Aqua H-480 Härter**

Article number: 3806

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

No further relevant information available.

Application of the substance / the mixture Hardening agent/ Curing agent

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Remmers GmbH

Bernhard-Remmers-Str. 13
D-49624 Lönigen / Germany

Tel.: +49(0)5432/83-0

Fax: +49(0)5432/3985

Remmers (UK) Limited
Unit 4 , Lloyds Court
Manor Royal, Crawley – West Sussex RH10 9QU
fon +44 (0) 1293 594 010
fax +44 (0) 1293 594 037

Information department:

Product Safety department: Phone: +44 (0) 1293 594 010

Email: sales@remmers.co.ukk

1.4 Emergency telephone number:

National Poisons Information Service (NPIS):

In England and Wales: NHS 111 - dial 111

In Scotland: NHS 24 - dial 111

24h-Transport Emergency Contact Phone Number:

within USA and Canada: 1-800-424-9300

outside USA and Canada: 001-703-527-3887

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Flam. Liq. 3	H226 Flammable liquid and vapour.
Skin Irrit. 2	H315 Causes skin irritation.
Eye Dam. 1	H318 Causes serious eye damage.
Skin Sens. 1	H317 May cause an allergic skin reaction.
STOT SE 3	H335 May cause respiratory irritation.
Aquatic Chronic 3	H412 Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the GB CLP regulation.

Hazard pictograms



GHS02 GHS05 GHS07

Signal word Danger

Hazard-determining components of labelling:

hexamethylene diisocyanate, oligomers
polyoxyethylene tridecyl ether phosphate

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 24.11.2022

Version number 6 (replaces version 5)

Revision: 24.11.2022

Trade name **Aqua H-480 Härter**

(Contd. of page 1)

isophorondiisocyanate Homopolymer
 cyclohexyldimethylamine
 3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate
 hexamethylene-di-isocyanate

Hazard statements

H226 Flammable liquid and vapour.
 H315 Causes skin irritation.
 H318 Causes serious eye damage.
 H317 May cause an allergic skin reaction.
 H335 May cause respiratory irritation.
 H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
 No smoking.
 P260 Do not breathe dust/fume/gas/mist/vapours/spray.
 P273 Avoid release to the environment.
 P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
 P302+P352 IF ON SKIN: Wash with plenty of soap and water.
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P312 Call a POISON CENTER/doctor if you feel unwell.
 P403+P235 Store in a well-ventilated place. Keep cool.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional information:

EUH204 Contains isocyanates. May produce an allergic reaction.
 As from 24 August 2023 adequate training is required before industrial or professional use.

2.3 Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

* SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description: Mixture of the substances listed below with harmless additions.

Dangerous components [% w/w]:		
CAS: 28182-81-2 NLP: 500-060-2 Reg.nr.: 01-2119485796-17-XXXX 01-2119970543-34-XXXX	hexamethylene diisocyanate, oligomers Acute Tox. 4, H332; Skin Sens. 1, H317; STOT SE 3, H335, EUH204	≥20-<40%
CAS: 108-65-6 EINECS: 203-603-9 Index number: 607-195-00-7 Reg.nr.: 01-2119475791-29-XXXX	2-methoxy-1-methylethyl acetate Flam. Liq. 3, H226; STOT SE 3, H336	≥10-<20%
CAS: 53880-05-0 NLP: 500-125-5 Reg.nr.: 01-2119488734-24-XXXX	isophorondiisocyanate Homopolymer Skin Sens. 1, H317; STOT SE 3, H335	≥10-<20%
CAS: 9046-01-9	polyoxyethylene tridecyl ether phosphate Eye Dam. 1, H318; Aquatic Chronic 2, H411; Skin Irrit. 2, H315	≥3-<5%
CAS: 98-94-2 EINECS: 202-715-5 Reg.nr.: 01-2119533030-60-XXXX	cyclohexyldimethylamine Flam. Liq. 3, H226; Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; Skin Corr. 1B, H314; Aquatic Chronic 2, H411	≥1-<2.5%

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 24.11.2022

Version number 6 (replaces version 5)

Revision: 24.11.2022

Trade name **Aqua H-480 Härter**

		(Contd. of page 2)
CAS: 4098-71-9 EINECS: 223-861-6 Index number: 615-008-00-5 Reg.nr.: 01-2119490408-31-XXXX	3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate Acute Tox. 1, H330; Resp. Sens. 1, H334; Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335, EUH204 Specific concentration limits: Resp. Sens. 1; H334: C ≥ 0.5 % Skin Sens. 1; H317: C ≥ 0.5 %	≥0.25-<0.5%
CAS: 822-06-0 EINECS: 212-485-8 Index number: 615-011-00-1 Reg.nr.: 01-2119457571-37-XXXX	hexamethylene-di-isocyanate Acute Tox. 2, H330; Resp. Sens. 1, H334; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335, EUH204 Specific concentration limits: Resp. Sens. 1; H334: C ≥ 0.5 % Skin Sens. 1; H317: C ≥ 0.5 %	≥0.1-<0.5%

Additional information For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

If symptoms occur or in case of doubt, seek medical attention. In case of unconsciousness, do not administer anything orally.

After inhalation

Take affected persons into the open air and position comfortably
 Supply fresh air and call for doctor for safety reasons.

In case of unconsciousness bring patient into stable side position for transport.

After skin contact

Remove contaminated clothing.

Wash immediately with water and soap and rinse thoroughly.

After eye contact Rinse opened eye for several minutes under running water. Then consult doctor.

After swallowing Seek immediate medical advice.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

symptomatic treatment

SECTION 5: Firefighting measures

5.2 Special hazards arising from the substance or mixture

Thick black smoke forms in fires. Inhalation of dangerous decomposition products may cause serious damage to your health.

Formation of poisonous gases during heating or in fires.

Vapours are heavier than air and spread out over the ground. Ignition over greater distances is possible.

5.3 Advice for firefighters

Protective equipment:

Wear self-contained breathing apparatus.

Wear full protective suit.

Put on breathing apparatus.

Additional information

Cool endangered containers with water spray jet.

Collect contaminated fire fighting water separately. It must not enter drains.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Keep away from ignition sources

Ensure adequate ventilation

Put on breathing apparatus.

Wear protective equipment. Keep unprotected persons away.

6.2 Environmental precautions:

Do not allow to enter the ground/soil.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 24.11.2022

Version number 6 (replaces version 5)

Revision: 24.11.2022

Trade name **Aqua H-480 Härter**

(Contd. of page 3)

Do not allow product to reach sewage system or water bodies.
Inform responsible authorities in case product reaches bodies of water or sewage system.
Dilute with plenty of water.

6.3 Methods and material for containment and cleaning up:

Send for recovery or disposal in suitable containers.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralising agent.
Dispose of contaminated material as waste according to item 13.
Ensure adequate ventilation.

6.4 Reference to other sections

See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

SECTION 7: Handling and storage**7.1 Precautions for safe handling**

Use only in well ventilated areas.
Ensure good ventilation, if necessary extract air in work places.
Ensure good ventilation/exhaust in workplaces.
Avoid the formation of aerosols.

Information about protection against explosions and fires:

Fumes can combine with air to form an explosive mixture.
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Keep breathing equipment ready.

7.2 Conditions for safe storage, including any incompatibilities**Storage**

Requirements to be met by storerooms and containers: No special requirements.

Further information about storage conditions: Keep container tightly closed.

SECTION 8: Exposure controls/personal protection**8.1 Control parameters**

Components with limit values that require monitoring at the workplace:	
CAS: 108-65-6 2-methoxy-1-methylethyl acetate	
WEL	Short-term value: 548 mg/m ³ , 100 ppm Long-term value: 274 mg/m ³ , 50 ppm Sk
CAS: 4098-71-9 3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate	
WEL	Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO
CAS: 822-06-0 hexamethylene-di-isocyanate	
WEL	Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO
Ingredients with biological limit values:	
CAS: 4098-71-9 3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate	
BMGV	1 µmol creatinine/mol Medium: urine Sampling time: At the end of the period od exposure Parameter: isocyanate-derived diamine
CAS: 822-06-0 hexamethylene-di-isocyanate	
BMGV	1 µmol creatinine/mol Medium: urine Sampling time: At the end of the period od exposure Parameter: isocyanate-derived diamine

Additional information: The lists that were valid during compilation were used as a basis.

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 24.11.2022

Version number 6 (replaces version 5)

Revision: 24.11.2022

Trade name **Aqua H-480 Härter**

(Contd. of page 4)

8.2 Exposure controls**Appropriate engineering controls** No further data; see item 7.**Individual protection measures, such as personal protective equipment****General protective and hygienic measures**

Do not eat, drink or smoke while working.

Keep away from food, beverages and animal feed.

Immediately remove soiled, saturated clothing.

Wash hands before pauses and after work.

Avoid contact with eyes and skin.

The following indication regarding the personal protective equipment are to be considered as suggestions. The selection of the necessary personal protective equipment is to be evaluated by the employer depending on the types of operations and the local circumstances. If a risk assessment on-site shows that there is no risk for employees, the personal protective equipment is not required or the amount of the PPE can be adapted accordingly.

Respiratory equipment:

Filter A (brown)

In case of brief exposure or low pollution load, use respiratory protection equipment with filter. In case of intensive or longer exposure, use self-contained respiratory protection equipment.

Hand protection

Impervious gloves

Protective gloves.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

Nitrile rubber, NBR

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The determined penetration times according to EN 16523-1:2015 are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye/face protection Tightly sealed safety glasses.**Body protection:** Protective work clothing.

* SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties**General Information****Physical state**

Fluid

Colour:

clear

Odour:

Solvent-like

Odour threshold:

Not determined.

Melting point/freezing point:

Not determined

Boiling point or initial boiling point and boiling range

145.8 °C (CAS: 108-65-6 2-methoxy-1-methylethyl acetate)

Flammability

Flammable.

Lower and upper explosion limit**Lower:**

1.5 Vol %

Upper:

10.8 Vol %

Flash point:

45 °C

Ignition temperature:

not applicable

Decomposition temperature:

Not determined.

pH

Not determined.

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 24.11.2022

Version number 6 (replaces version 5)

Revision: 24.11.2022

Trade name **Aqua H-480 Härter**

(Contd. of page 5)

Viscosity:	
Kinematic viscosity at 20 °C	50 s (DIN 53211/4)
dynamic:	Not determined.
Solubility	
Water:	Partially soluble
Partition coefficient n-octanol/water (log value)	Not determined.
Vapour pressure at 20 °C:	3.4 hPa
Density and/or relative density	
Density at 20 °C:	1.103 g/cm ³
Relative density	Not determined.
Vapour density	Not determined.
9.2 Other information	
Appearance:	
Form:	Fluid
Important information on protection of health and environment, and on safety.	
Explosive properties:	Product is not explosive. However, formation of dangerous explosive vapour/air mixtures is possible.
Solvent separation test	< 3 %
Organic solvents:	15.8 %
VOC EU	174.3 g/l
Solid content:	68.3 %
Change in condition	
Evaporation rate	Not determined.
Information with regard to physical hazard classes	
Explosives	Void
Flammable gases	Void
Aerosols	Void
Oxidising gases	Void
Gases under pressure	Void
Flammable liquids	Flammable liquid and vapour.
Flammable solids	Void
Self-reactive substances and mixtures	Void
Pyrophoric liquids	Void
Pyrophoric solids	Void
Self-heating substances and mixtures	Void
Substances and mixtures, which emit flammable gases in contact with water	Void
Oxidising liquids	Void
Oxidising solids	Void
Organic peroxides	Void
Corrosive to metals	Void
Desensitised explosives	Void

SECTION 10: Stability and reactivity

10.1 Reactivity No further relevant information available.

10.2 Chemical stability

Thermal decomposition / conditions to be avoided:

No decomposition if handled and stored according to specifications.

10.3 Possibility of hazardous reactions Reacts with acids, alkalis and oxidising agents

10.4 Conditions to avoid No further relevant information available.

10.5 Incompatible materials: No further relevant information available.

10.6 Hazardous decomposition products:

At high temperatures, the following may occur:

Carbon monoxide and carbon dioxide

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 24.11.2022

Version number 6 (replaces version 5)

Revision: 24.11.2022

Trade name **Aqua H-480 Härter**

(Contd. of page 6)

Nitrogen oxides (NOx)

SECTION 11: Toxicological information

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

Acute toxicity: Based on available data, the classification criteria are not met.

LD/LC50 values that are relevant for classification:		
CAS: 28182-81-2 hexamethylene diisocyanate, oligomers		
Oral	LD50	>2,500 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)
CAS: 108-65-6 2-methoxy-1-methylethyl acetate		
Oral	LD50	8,500 mg/kg (rat)

Skin corrosion/irritation: Causes skin irritation.

Serious eye damage/irritation: Causes serious eye damage.

Sensitisation: May cause an allergic skin reaction.

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Based on available data, the classification criteria are not met.

STOT-single exposure: May cause respiratory irritation.

STOT-repeated exposure: Based on available data, the classification criteria are not met.

Aspiration hazard: Based on available data, the classification criteria are not met.

11.2 Information on other hazards

Endocrine disrupting properties
None of the ingredients is listed.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity: No further relevant information available.

12.2 Persistence and degradability No further relevant information available.

12.3 Bioaccumulative potential No further relevant information available.

12.4 Mobility in soil No further relevant information available.

12.5 Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

12.6 Endocrine disrupting properties

The product does not contain substances with endocrine disrupting properties.

12.7 Other adverse effects

Remark: Harmful to fish

Additional ecological information:

General notes:

Do not allow product to reach ground water, bodies of water or sewage system.

Harmful to aquatic organisms

SECTION 13: Disposal considerations

Recommendation

Can be disposed of or incinerated together with household garbage after consulting with the waste disposal facility and the responsible authorities, observing necessary technical rules.

Do not dispose of together with household garbage. Do not allow product to reach sewage system.

The given refuse codes are recommendations based upon the intended use of the product. Because of special use and disposal conditions at the user's, other codes may apply under other conditions.

European waste catalogue
08 01 11* waste paint and varnish containing organic solvents or other hazardous substances

Uncleaned packaging:

Recommendation:

Packaging can be reused or recycled after cleaning.

Disposal must be made according to official regulations.

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 24.11.2022



Version number 6 (replaces version 5)

Revision: 24.11.2022

Trade name **Aqua H-480 Härter**

(Contd. of page 7)

Recommended cleaning agent: Water, if necessary with cleaning agent.

SECTION 14: Transport information	
14.1 UN number or ID number ADR, IMDG, IATA	UN1263
14.2 UN proper shipping name ADR IMDG, IATA	1263 PAINT RELATED MATERIAL PAINT RELATED MATERIAL
14.3 Transport hazard class(es) ADR	
	
Class	3 (F1) Flammable liquids.
Label	3
IMDG, IATA	
	
Class	3 Flammable liquids.
Label	3
14.4 Packing group ADR, IMDG, IATA	III
14.5 Environmental hazards: Marine pollutant:	No
14.6 Special precautions for user hazard identification number: EMS Number: Stowage Category	Warning: Flammable liquids. 30 F-E, <u>S</u> -E A
14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
Transport/Additional information:	
ADR	
Limited quantities (LQ)	5L
Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
Transport category	3
Tunnel restriction code	D/E
IMDG	
Limited quantities (LQ)	5L
Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
UN "Model Regulation":	UN 1263 PAINT RELATED MATERIAL, 3, III

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 24.11.2022

Version number 6 (replaces version 5)

Revision: 24.11.2022

Trade name **Aqua H-480 Härter**

(Contd. of page 8)

* SECTION 15: Regulatory information

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

Directive 2012/18/EU

Named dangerous substances - ANNEX I None of the ingredients is listed.

Seveso category P5c FLAMMABLE LIQUIDS

Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t

Qualifying quantity (tonnes) for the application of upper-tier requirements 50,000 t

REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 74

DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients is listed.

REGULATION (EU) 2019/1148

Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients is listed.

Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This data is based on our present state of knowledge. However, it does not constitute a guarantee for any specific product features and does not establish a legally valid contractual relationship. Delivery specifications are found in the respective Technical Information Sheets.

Relevant phrases

- H226 Flammable liquid and vapour.
- H301 Toxic if swallowed.
- H311 Toxic in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H330 Fatal if inhaled.
- H331 Toxic if inhaled.
- H332 Harmful if inhaled.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H335 May cause respiratory irritation.
- H336 May cause drowsiness or dizziness.
- H411 Toxic to aquatic life with long lasting effects.

EUH204 Contains isocyanates. May produce an allergic reaction.

Classification according to Regulation (EC) No 1272/2008 Calculation method

Department issuing data specification sheet: Product Safety department / EHS

Date of previous version: 06.11.2019

Version number of previous version: 5

Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 3: Flammable liquids – Category 3

Acute Tox. 3: Acute toxicity – Category 3

(Contd. on page 10)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 24.11.2022

Version number 6 (replaces version 5)

Revision: 24.11.2022

Trade name Aqua H-480 Härter

(Contd. of page 9)

Acute Tox. 1: Acute toxicity – Category 1

Acute Tox. 2: Acute toxicity – Category 2

Acute Tox. 4: Acute toxicity – Category 4

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Resp. Sens. 1: Respiratory sensitisation – Category 1

Skin Sens. 1: Skin sensitisation – Category 1

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3