

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product form : Mixture
Trade name : Härter (280.05.0050 / 280.05.0004)
Product code : 280.05.0050 (Teil des Produktes 280.02 FIBROLIT-ZWO Werkzeug-Gießharz); 280.05.0004 (Teil des Produktes 280.08 FIBROFIX-SECHS Werkzeug-Gießharz)

1.2. Relevant identified uses of the substance or mixture and uses advised against**1.2.1. Relevant identified uses**

Use of the substance/mixture : Hardener (Crosslinker)

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet**Supplier**

FIBRO GmbH Geschäftsbereich Normalien
August-Läpple-Weg
P.O. Box 1120
74855 Hassmersheim - Deutschland
T +49 6266-73-0 - F +49 6266-73-237
info@fibro.de

Safety Data Sheet

info@ubsplus.de

1.4. Emergency telephone number

Emergency number : +49 761 19240
(VIZ Freiburg, 24 h, German & English)

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Acute Tox. 2 (Inhalation:dust,mist)	H330
Skin Corr. 1B	H314
Eye Dam. 1	H318
Skin Sens. 1	H317
Repr. 2	H361f
STOT SE 3	H335
Aquatic Chronic 3	H412

Full text of H statements : see section 16

2.2. Label elements**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

Hazard pictograms (CLP) :



GHS05

GHS06

GHS08

Signal word (CLP) : Danger

Hazardous ingredients : Formaldehyde, oligomeric reaction products with 4,4'-isopropylidenediphenol and diethylenetriamine; 2,2'-iminodiethylamine, diethylenetriamine; bisphenol A, 4,4'-isopropylidenediphenol

Hazard statements (CLP) : H314 - Causes severe skin burns and eye damage.
H317 - May cause an allergic skin reaction.
H330 - Fatal if inhaled.
H335 - May cause respiratory irritation.
H361f - Suspected of damaging fertility.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements (CLP) : P260 - Do not breathe spray, vapours, gas.
P280 - Wear eye protection, protective gloves, protective clothing.
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.
P310 - Immediately call a POISON CENTER, a doctor.
P405 - Store locked up.

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Formaldehyde, oligomeric reaction products with 4,4'-isopropylidenediphenol and diethylenetriamine	(CAS-No.) 77138-45-5 (EC-No.) 500-263-6	50 - 75	Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317
2,2'-iminodiethylamine, diethylenetriamine	(CAS-No.) 111-40-0 (EC-No.) 203-865-4 (EC Index-No.) 612-058-00-X	25 - 35	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 2 (Inhalation:dust,mist), H330 Skin Corr. 1B, H314 Skin Sens. 1, H317 STOT SE 3, H335
bisphenol A, 4,4'-isopropylidenediphenol substance listed as REACH Candidate (4,4'-isopropylidenediphenol (bisphenol A; BPA))	(CAS-No.) 80-05-7 (EC-No.) 201-245-8 (EC Index-No.) 604-030-00-0 (REACH-no) 01-2119457856-23	5 - 10	Eye Dam. 1, H318 Skin Sens. 1, H317 Repr. 2, H361f STOT SE 3, H335 Aquatic Chronic 2, H411

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Move the affected person away from the contaminated area. Fresh air, rest. Prevent cooling by covering the victim (no warming up). If unconscious place in recovery position and seek medical advice. Do not give an unconscious person anything to drink. Remove soiled clothing promptly.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. If you feel unwell, seek medical advice.

First-aid measures after skin contact : Immediately remove contaminated clothing or footwear. Rinse and then wash skin thoroughly with water and soap. If skin irritation or rash occurs: Get medical advice/attention.

First-aid measures after eye contact : Wash with plenty of water (during 20 minutes minimum) with eyes wide open after taking off soft contact lenses and immediately take medical advice.

First-aid measures after ingestion : Rinse mouth. Do not give an unconscious person anything to drink. Do not induce vomiting. Immediately call a POISON CENTER/doctor.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after skin contact : Erythema. Irritation. May cause an allergic skin reaction.

Symptoms/effects after eye contact : redness, itching, tears. Causes serious eye damage.

Symptoms/effects after ingestion : Gastrointestinal pain.

Chronic symptoms : Possible risk of impaired fertility.

4.3. Indication of any immediate medical attention and special treatment needed

In the event of inhalation of decomposition products : Symptoms may be delayed. Keep under medical supervision for at least 48 hours.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : water, carbon dioxide (CO₂), powder and foam.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Heating may cause a fire or explosion.
Explosion hazard	: Risk of explosion if heated under confinement.
Hazardous decomposition products in case of fire	: Carbon monoxide. Carbon dioxide. Nitrogen oxides.

5.3. Advice for firefighters

Precautionary measures fire	: Making extinguishing agents environment-friendly. Evacuate area.
Firefighting instructions	: Do not allow run-off from fire fighting to enter drains or water courses. Do not contaminate ground and surface water.
Protection during firefighting	: Extra personal protection: complete protective clothing including self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Avoid exposure. Do not breathe gas/vapour/aerosol. Wear personal protective equipment. Mark the danger area. Evacuate the danger area. Keep public away from danger area.
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6.1.1. For non-emergency personnel

Protective equipment	: Wear personal protective equipment.
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6.1.2. For emergency responders

Protective equipment	: Wear personal protective equipment. Breathing apparatus.
Emergency procedures	: Ventilate spillage area. Stop leak if safe to do so.

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

For containment	: Dike and contain spill. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Place in a suitable container for disposal in accordance with the waste regulations (see Section 13).
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6.4. Reference to other sections

Fire fighting measures. SECTION 5. Personal protective equipment. SECTION 8. Disposal considerations. SECTION 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Read label before use. Use personal protective equipment as required. Do not breathe vapours. Avoid contact with skin and eyes. Keep in original containers.
Hygiene measures	: Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with soap and water before leaving work. Apply emollient cream.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Take precautionary measures against static discharge.
Storage conditions	: Store in a dry, cool and well-ventilated place. Protect from sunlight.
Incompatible products	: Oxidizing agent. Strong bases. Strong acids.
Heat and ignition sources	: Store away from direct sunlight or other heat sources. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharge.
Information on mixed storage	: Keep away from food, drink and animal feeding stuffs.
Special rules on packaging	: Keep in original containers.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

bisphenol A, 4,4'-isopropylidenediphenol (80-05-7)		
EU	Local name	Bisphenol A (inhalable dust)
EU	IOELV TWA (mg/m ³)	10 mg/m ³
United Kingdom	Local name	Bisphenol A : inhalable dust
United Kingdom	WEL TWA (mg/m ³)	10 mg/m ³

bisphenol A, 4,4'-isopropylidenediphenol (80-05-7)	
DNEL/DMEL (Workers)	
Acute - systemic effects, dermal	1.4 mg/kg bw
Acute - systemic effects, inhalation	10 mg/m ³
Long-term - systemic effects, dermal	1.4 mg/kg bw/d
Long-term - systemic effects, inhalation	10 mg/m ³
DNEL/DMEL (General population)	
Acute - systemic effects, dermal	0.7 mg/kg bw/d
Acute - systemic effects, inhalation	5 mg/m ³
Acute - systemic effects, oral	0.05 mg/kg bw
Acute - local effects, inhalation	5 mg/m ³
Long-term - systemic effects, oral	0.05 mg/kg bw/d
Long-term - systemic effects, inhalation	0.25 mg/m ³
Long-term - systemic effects, dermal	0.7 mg/kg bw/d
Long-term - local effects, inhalation	5 mg/m ³
PNEC (Water)	
PNEC aqua (freshwater)	18 µg/L
PNEC aqua (marine water)	16 µg/L
PNEC (Sediment)	
PNEC sediment (freshwater)	2.2 mg/kg dwt
PNEC (Soil)	
PNEC soil	3.7 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	320 mg/l

8.2. Exposure controls

Appropriate engineering controls	: Ensure good ventilation of the work station.
Materials for protective clothing	: Wear proper protective equipment
Hand protection	: Chemically resistant protective gloves. Choosing the proper glove is a decision that depends not only on the type of material, but also on other quality features, which differ for each manufacturer. . Penetration time of glove material : >480 min (EN 374). Material : Nitrile rubber (0,7 mm)
Eye protection	: Sealed safety goggles. (EN 166).
Respiratory protection	: Not necessary with sufficient ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Breathing apparatus with filter. Filter type: A. Appropriate self-contained breathing apparatus may be required


SECTION 9: Physical and chemical properties
9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Yellow-brown
Odour	: Amine-like
Odour threshold	: Not determined
pH	: 10.5 (20 g/L, 20°C, ISO 8975)
Relative evaporation rate (butylacetate=1)	: Not determined
Melting point	: Not determined
Freezing point	: Not determined
Boiling point	: > 200 °C (DIN 53171)
Flash point	: ≈ 100 °C (ISO 2719)
Auto-ignition temperature	: > 325 °C (DIN 51794)
Decomposition temperature	: Not determined
Flammability (solid, gas)	: Not applicable.
Vapour pressure	: Not determined

Relative vapour density at 20 °C	: Not determined
Relative density	: Not determined
Density	: Not determined
Solubility	: Soluble in water with difficulty.
Log Pow	: Not determined
Viscosity, kinematic	: Not determined
Viscosity, dynamic	: 900 - 1500 mPa.s (ISO 9371)
Explosive properties	: Not known.
Oxidising properties	: Not known.
Explosive limits	: Not determined

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity
10.1. Reactivity

Reacts with : oxidising compounds. reducing materials. Epoxydic components. Polymerization.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Polymerization.

10.4. Conditions to avoid

Direct sunlight. Moisture. Ignition sources.

10.5. Incompatible materials

Water. Acids. Bases. Oxidizing agent.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information
11.1. Information on toxicological effects

 Acute toxicity : Inhalation:dust,mist: Fatal if inhaled.
 Calculation method

ATE CLP (dust,mist)	0.2 mg/l/4h
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2,2'-iminodiethylamine, diethylenetriamine (111-40-0)	
LD50 oral rat	1080 mg/kg
LD50 dermal rabbit	1054 mg/kg
LC50 inhalation rat (Dust/Mist - mg/l/4h)	0.07 mg/l/4h (NOEL)

bisphenol A, 4,4'-isopropylidenediphenol (80-05-7)	
LD50 oral rat	3250 mg/kg
LD50 dermal rabbit	3000 mg/kg

Skin corrosion/irritation	: Causes severe skin burns and eye damage. Calculation method pH: 10.5 (20 g/L, 20°C, ISO 8975)
Serious eye damage/irritation	: Causes serious eye damage. Calculation method pH: 10.5 (20 g/L, 20°C, ISO 8975)
Respiratory or skin sensitisation	: May cause an allergic skin reaction. Calculation method
Germ cell mutagenicity	: Not classified (No data available)
Carcinogenicity	: Not classified (No data available)
Reproductive toxicity	: Suspected of damaging fertility. Calculation method
STOT-single exposure	: May cause respiratory irritation. (No data available)
STOT-repeated exposure	: Not classified (No data available)
Aspiration hazard	: Not classified (No data available)

SECTION 12: Ecological information
12.1. Toxicity

Ecology - water : Harmful to aquatic life with long lasting effects.

bisphenol A, 4,4'-isopropylidenediphenol (80-05-7)	
LC50 fish 1	4.6 mg/l
EC50 Daphnia 1	7.75 mg/l

12.2. Persistence and degradability

Härter (280.05.0050 / 280.05.0004)	
Persistence and degradability	Not determined.

bisphenol A, 4,4'-isopropylidenediphenol (80-05-7)	
Persistence and degradability	Readily biodegradable.

12.3. Bioaccumulative potential

Härter (280.05.0050 / 280.05.0004)	
Log Pow	Not determined
Bioaccumulative potential	Bioaccumulation unlikely.

bisphenol A, 4,4'-isopropylidenediphenol (80-05-7)	
BCF fish 2	73 l/kg
Log Pow	3.4 (21,5 °C)
Bioaccumulative potential	Low bioaccumulation potential.

12.4. Mobility in soil

Härter (280.05.0050 / 280.05.0004)	
Ecology - soil	No data available.

12.5. Results of PBT and vPvB assessment

Härter (280.05.0050 / 280.05.0004)	
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII	
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII	
Component	
bisphenol A, 4,4'-isopropylidenediphenol (80-05-7)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations
13.1. Waste treatment methods

Regional legislation (waste) : This material and its container must be disposed of in a safe way, and as per local legislation.

Sewage disposal recommendations : Do not allow to enter drains or water courses.






Product/Packaging disposal recommendations : Do not dispose of with domestic waste.

Additional information : Handle uncleaned empty containers as full ones.

SECTION 14: Transport information



In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
2922	2922	2922	2922	2922
14.2. UN proper shipping name				
CORROSIVE LIQUID, TOXIC, N.O.S. (DIETHYLENTRIAMIN, MISCHUNG)	CORROSIVE LIQUID, TOXIC, N.O.S. (DIETHYLENTRIAMIN, MISCHUNG)	Corrosive liquid, toxic, n.o.s. (DIETHYLENTRIAMIN, MISCHUNG)	CORROSIVE LIQUID, TOXIC, N.O.S. (DIETHYLENTRIAMIN, MISCHUNG)	CORROSIVE LIQUID, TOXIC, N.O.S. (DIETHYLENTRIAMIN, MISCHUNG)
Transport document description				
UN 2922 CORROSIVE LIQUID, TOXIC, N.O.S. (DIETHYLENTRIAMIN, MISCHUNG), 8 (6.1), II, (E)	UN 2922 CORROSIVE LIQUID, TOXIC, N.O.S. (DIETHYLENTRIAMIN, MISCHUNG), 8 (6.1), II	UN 2922 Corrosive liquid, toxic, n.o.s. (DIETHYLENTRIAMIN, MISCHUNG), 8 (6.1), II	UN 2922 CORROSIVE LIQUID, TOXIC, N.O.S. (DIETHYLENTRIAMIN, MISCHUNG), 8 (6.1), II	UN 2922 CORROSIVE LIQUID, TOXIC, N.O.S. (DIETHYLENTRIAMIN, MISCHUNG), 8 (6.1), II

ADR	IMDG	IATA	ADN	RID
14.3. Transport hazard class(es)				
8 (6.1)	8 (6.1)	8 (6.1)	8 (6.1)	8 (6.1)
				
14.4. Packing group				
II	II	II	II	II
14.5. Environmental hazards				
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No
No supplementary information available				

14.6. Special precautions for user

- Overland transport

Classification code (ADR)	: CT1
Special provisions (ADR)	: 274
Limited quantities (ADR)	: 11
Excepted quantities (ADR)	: E2
Packing instructions (ADR)	: P001, IBC02
Mixed packing provisions (ADR)	: MP15
Portable tank and bulk container instructions (ADR)	: T7
Portable tank and bulk container special provisions (ADR)	: TP2
Tank code (ADR)	: L4BN
Vehicle for tank carriage	: AT
Transport category (ADR)	: 2
Special provisions for carriage - Loading, unloading and handling (ADR)	: CV13, CV28
Hazard identification number (Kemler No.)	: 86
Orange plates	:  
Tunnel restriction code (ADR)	: E
EAC code	: 2X
APP code	: B

- Transport by sea

Special provisions (IMDG)	: 274
Packing instructions (IMDG)	: P001
IBC packing instructions (IMDG)	: IBC02
Tank instructions (IMDG)	: T7
Tank special provisions (IMDG)	: TP2
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-B
Stowage category (IMDG)	: B
Stowage and handling (IMDG)	: SW2
Properties and observations (IMDG)	: Causes burns to skin, eyes and mucous membranes. Toxic if swallowed, by skin contact or by inhalation.

- Air transport

PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Y840
PCA limited quantity max net quantity (IATA)	: 0.5L
PCA packing instructions (IATA)	: 851

PCA max net quantity (IATA)	: 1L
CAO packing instructions (IATA)	: 855
CAO max net quantity (IATA)	: 30L
Special provisions (IATA)	: A3
ERG code (IATA)	: 8P
- Inland waterway transport	
Classification code (ADN)	: CT1
Special provisions (ADN)	: 274, 802
Limited quantities (ADN)	: 1 L
Excepted quantities (ADN)	: E2
Carriage permitted (ADN)	: T
Equipment required (ADN)	: PP, EP, TOX, A
Ventilation (ADN)	: VE02
Number of blue cones/lights (ADN)	: 2

- Rail transport

Classification code (RID)	: CT1
Special provisions (RID)	: 274
Limited quantities (RID)	: 1L
Excepted quantities (RID)	: E2
Packing instructions (RID)	: P001, IBC02
Mixed packing provisions (RID)	: MP15
Portable tank and bulk container instructions (RID)	: T7
Portable tank and bulk container special provisions (RID)	: TP2
Tank codes for RID tanks (RID)	: L4BN
Transport category (RID)	: 2
Special provisions for carriage - Loading, unloading and handling (RID)	: CW13, CW28
Colis express (express parcels) (RID)	: CE6
Hazard identification number (RID)	: 86

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
SECTION 15: Regulatory information
15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains a substance on the REACH candidate list in concentration $\geq 0.1\%$ or with a lower specific limit: 4,4'-isopropylidenediphenol (bisphenol A; BPA) (EC 201-245-8, CAS 80-05-7)

Contains no REACH Annex XIV substances

Other information, restriction and prohibition regulations : Ozone layer depleting substances: Not subject to Regulation (EC) No 1005/2009. Persistent organic pollutants (POPs): Not subject to Regulation (EC) No 850/2004. Export and import of dangerous chemicals: Not subject to Regulation (EC) No 649/2012. Control of major-accident hazards (COMAH, Seveso III): Subject to Directive 2012/18/EC.

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

Not applicable
Mixtures

SECTION 16: Other information

Indication of changes:

7	Storage class (LGK)	Modified	
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14	Transport regulations	Modified	
15	Regulatory information	Modified	

Full text of H- and EUH-statements:	
Acute Tox. 2 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 2
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Repr. 2	Reproductive toxicity, Category 2
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
Skin Sens. 1	Skin sensitisation, Category 1
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H335	May cause respiratory irritation.
H361f	Suspected of damaging fertility.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Acute Tox. 2 (Inhalation:dust,mist)	H330	Calculation method
Skin Corr. 1B	H314	Calculation method
Eye Dam. 1	H318	Calculation method
Skin Sens. 1	H317	Calculation method
Repr. 2	H361f	Expert judgment
STOT SE 3	H335	Calculation method
Aquatic Chronic 3	H412	Calculation method

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product