

# Safety Data Sheet

according to UK REACH Regulation

**Hardener W 300**

Revision date: 12.02.2022

Product code: 100149

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

Hardener W 300

Substance name: Polyetherdiamine  
REACH Registration Number: 01-2119557899-12-XXXX  
CAS No: 9046-10-0  
EC No: 618-561-0

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

Hardener

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

Company name: R&G Faserverbundwerkstoffe GmbH  
Composite Technology  
Street: Im Meißel 7 - 13  
Place: D-71111 Waldenbuch  
Post-office box: 1145  
D-71107 Waldenbuch  
Telephone: +49 (0)7157 5304-60  
e-mail: info@r-g.de  
Internet: www.r-g.de  
Responsible Department: Management  
Telefax: +49 (0)7157 5304-70

**1.4. Emergency telephone number:** Vergiftungs-Informationen-Zentrale Freiburg  
Tel: +49 (0)761 19240

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****GB CLP Regulation**

Hazard categories:  
Skin corrosion/irritation: Skin Corr. 1C  
Hazardous to the aquatic environment: Aquatic Chronic 3  
Hazard Statements:  
Causes severe skin burns and eye damage.  
Harmful to aquatic life with long lasting effects.

**2.2. Label elements****GB CLP Regulation****Hazard components for labelling**

Polyetherdiamine

**Signal word:** Danger**Pictograms:****Hazard statements**

H314 Causes severe skin burns and eye damage.  
H412 Harmful to aquatic life with long lasting effects.

**Precautionary statements**

P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.  
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/doctor.  
P405 Store locked up.

**2.3. Other hazards**

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

**SECTION 3: Composition/information on ingredients****3.1. Substances**

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**Hazardous components**

CAS No	Chemical name	Quantity
	EC No	Index No
	REACH No	
	GHS Classification	
9046-10-0	Polyetherdiamine	100 %
	618-561-0	01-2119557899-12-XXXX
	Skin Corr. 1C, Aquatic Chronic 3; H314 H412	

Full text of H and EUH statements: see section 16.

**Specific Conc. Limits, M-factors and ATE**

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
9046-10-0	618-561-0	Polyetherdiamine	100 %
	dermal: LD50 = 2980 mg/kg; oral: LD50 = 2885 mg/kg		

**SECTION 4: First aid measures****4.1. Description of first aid measures****General information**

Move victim out of the area.

**After inhalation**

Provide fresh air. @5 If unconscious, storage and transport in stable lateral position 007!0402.B040021 Medical treatment necessary.

**After contact with skin**

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. In case of skin reactions, consult a physician.

**After contact with eyes**

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately. Remove contact lenses, if present and easy to do. Continue rinsing.

**After ingestion**

Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person or a person with cramps. Call a physician immediately.

**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**

Treat symptomatically.

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**Carbon dioxide (CO2), Extinguishing powder, Water spray jet.  
In case of major fire and large quantities: Water spray jet.  
Co-ordinate fire-fighting measures to the fire surroundings.**5.2. Special hazards arising from the substance or mixture**Non-flammable.  
In case of fire may be liberated: Pyrolysis products, toxic .**5.3. Advice for firefighters**

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

**Additional information**

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. Dispose of waste according to applicable legislation.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**Remove persons to safety. Evacuate area. Für ausreichende Lüftung sorgen. Gas/Rauch/Dampf/Aerosol nicht einatmen.  
Avoid contact with skin, eyes and clothes.**6.2. Environmental precautions**

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

**6.3. Methods and material for containment and cleaning up**

Clean contaminated articles and floor according to the environmental legislation.

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**6.4. Reference to other sections**

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

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

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

**Advice on protection against fire and explosion**

Usual measures for fire prevention.

**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

Keep/Store only in original container. Keep container tightly closed and in a well-ventilated place. Keep locked up. Provide for retaining containers, e.g. floor pan without outflow.

**Hints on joint storage**

Do not store together with: Acids, Food and feedingstuffs

**7.3. Specific end use(s)**

Hardener

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****DNEL/DMEL values**

CAS No	Substance	Exposure route	Effect	Value
9046-10-0	Polyetherdiamine			
Worker DNEL, long-term		dermal	systemic	2,5 mg/kg bw/day
Worker DNEL, long-term		inhalation	systemic	1,36 mg/m <sup>3</sup>

**PNEC values**

CAS No	Substance	Value
9046-10-0	Polyetherdiamine	
Freshwater		0,015 mg/l
Freshwater (intermittent releases)		0,15 mg/l
Marine water		0,0142 mg/l
Freshwater sediment		0,132 mg/l
Marine sediment		0,125 mg/l
Secondary poisoning		6,93 mg/l
Micro-organisms in sewage treatment plants (STP)		7,5 mg/l
Soil		0,0176 mg/l

**8.2. Exposure controls****Appropriate engineering controls**

Provide adequate ventilation as well as local exhaust at critical locations.

**Protective and hygiene measures**

Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff.

**Eye/face protection**

Tightly sealed safety glasses. (DIN EN 166)

**Hand protection**

Wear suitable gloves. (EN374)

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When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Draw up and observe skin protection programme.

Recommended material: PVC (polyvinyl chloride)

**Skin protection**

Wear suitable protective clothing.

**Respiratory protection**

In case of inadequate ventilation wear respiratory protection.

**Environmental exposure controls**

Avoid release to the environment.

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

Physical state:	Liquid	
Colour:	colourless	
Odour:	like: Ammonia (NH <sub>3</sub> )	
Odour threshold:	not determined	
pH-Value:		not determined

**Changes in the physical state**

Melting point/freezing point:	-88 °C
Boiling point or initial boiling point and boiling range:	260 °C
Flash point:	121 °C

**Flammability**

Solid:	not applicable
Gas:	not applicable

**Explosive properties**

The product is not explosive.

Lower explosion limits:	not determined
Upper explosion limits:	not determined
Auto-ignition temperature:	230 °C

**Self-ignition temperature**

Solid:	not applicable
Gas:	not applicable

Decomposition temperature:	not determined
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**Oxidizing properties**

Not oxidising.

Vapour pressure: (at 20 °C)	1 hPa
Density (at 20 °C):	0,948 g/cm <sup>3</sup>
Water solubility:	miscible

**Solubility in other solvents**

not determined

Partition coefficient n-octanol/water:	not determined
Viscosity / dynamic:	not determined
Viscosity / kinematic:	not determined
Relative vapour density:	not determined
Evaporation rate:	not determined

**9.2. Other information**

No information available.

**SECTION 10: Stability and reactivity****10.1. Reactivity**

No information available.

**10.2. Chemical stability**

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The product is stable under storage at normal ambient temperatures.

**10.3. Possibility of hazardous reactions**

Exothermic reaction with: Acid.

**10.4. Conditions to avoid**

No further relevant information available.

**10.5. Incompatible materials**

Acid.

**10.6. Hazardous decomposition products**

In case of fire may be liberated: Pyrolysis products, toxic .

**SECTION 11: Toxicological information****11.1. Information on toxicological effects****Acute toxicity**

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

CAS No	Chemical name					
	Exposure route	Dose	Species	Source	Method	
9046-10-0	Polyetherdiamine					
	oral	LD50 mg/kg	2885	rat	Manufacturer	
	dermal	LD50 mg/kg	2980	rabbit	Manufacturer	

**Irritation and corrosivity**

Causes severe skin burns and eye damage.

Causes serious eye damage.

**Sensitising effects**

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

**Carcinogenic/mutagenic/toxic effects for reproduction**

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

**STOT-single exposure**

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

**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.

**Other observations**

No information available.

**SECTION 12: Ecological information****12.1. Toxicity**

Harmful to aquatic life with long lasting effects.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
9046-10-0	Polyetherdiamine					
	Acute fish toxicity	LC50	15 mg/l	96 h	Leuciscus idus	Manufacturer
	Acute crustacea toxicity	EC50	80 mg/l	48 h	Daphnia sp.	Manufacturer

**12.2. Persistence and degradability**

The product has not been tested.

**12.3. Bioaccumulative potential**

The product has not been tested.

**12.4. Mobility in soil**

The product has not been tested.

**12.5. Results of PBT and vPvB assessment**

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

**12.6. Other adverse effects**

No information available.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods**

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**Disposal recommendations**

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation. Collect the waste separately.

**List of Wastes Code - residues/unused products**


080299 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU of other coatings (including ceramic materials); wastes not otherwise specified

**Contaminated packaging**

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

**SECTION 14: Transport information****Land transport (ADR/RID)**


**14.1. UN number:** UN 2735  
**14.2. UN proper shipping name:** AMINES, LIQUID, CORROSIVE, N.O.S. (POLYETHERDIAMIN)  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** II  
 Hazard label: 8



Limited quantity: 1 L  
 Excepted quantity: E2  
 Transport category: 2  
 Hazard No: 80  
 Tunnel restriction code: E

**Marine transport (IMDG)**


**14.1. UN number:** UN 2735  
**14.2. UN proper shipping name:** AMINES, LIQUID, CORROSIVE, N.O.S. (POLYETHERDIAMIN)  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** II  
 Hazard label: 8



Limited quantity: 1 L  
 Excepted quantity: E2  
 EmS: F-A, S-B  
 Segregation group: 18 - alkalis

**Air transport (ICAO-TI/IATA-DGR)**

**14.1. UN number:** UN 2735  
**14.2. UN proper shipping name:** AMINES, LIQUID, CORROSIVE, N.O.S. (POLYETHERDIAMIN)  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** II  
 Hazard label: 8



Limited quantity Passenger: 0.5 L  
 Excepted quantity: E2

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**14.6. Special precautions for user**

Segregation Code: SG35 Stow "separated from" acids. Attention: Corrosive substances

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

not applicable

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**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 3

**National regulatory information**

Water hazard class (D): 1 - slightly hazardous to water

**15.2. Chemical safety assessment**

For this substance a chemical safety assessment has not been carried out.

**SECTION 16: Other information****Changes**

This data sheet contains changes from the previous version in section(s): 2,4,7,14,15.

**Abbreviations and acronyms**

CLP: Classification, labelling and Packaging

REACH: Registration, Evaluation and Authorization of Chemicals

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

UN: United Nations

CAS: Chemical Abstracts Service

DNEL: Derived No Effect Level

DMEL: Derived Minimal Effect Level

PNEC: Predicted No Effect Concentration

ATE: Acute toxicity estimate

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

LL50: Lethal loading, 50%

EL50: Effect loading, 50%

EC50: Effective Concentration 50%

ErC50: Effective Concentration 50%, growth rate

NOEC: No Observed Effect Concentration

BCF: Bio-concentration factor

PBT: persistent, bioaccumulative, toxic

vPvB: very persistent, very bioaccumulative

MARPOL: International Convention for the Prevention of Marine Pollution from Ships

IBC: Intermediate Bulk Container

SVHC: Substance of Very High Concern

CLP: Classification, labelling and Packaging

REACH: Registration, Evaluation and Authorization of Chemicals

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

UN: United Nations

CAS: Chemical Abstracts Service

DNEL: Derived No Effect Level

DMEL: Derived Minimal Effect Level

PNEC: Predicted No Effect Concentration

ATE: Acute toxicity estimate

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

LL50: Lethal loading, 50%

EL50: Effect loading, 50%

EC50: Effective Concentration 50%

ErC50: Effective Concentration 50%, growth rate

NOEC: No Observed Effect Concentration

BCF: Bio-concentration factor

PBT: persistent, bioaccumulative, toxic

vPvB: very persistent, very bioaccumulative

MARPOL: International Convention for the Prevention of Marine Pollution from Ships

IBC: Intermediate Bulk Container

SVHC: Substance of Very High Concern

For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>**Relevant H and EUH statements (number and full text)**

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

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H412 Harmful to aquatic life with long lasting effects.

**Further Information**

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.