

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**90 Min. Epoxy (hardener)**

Print date: 14.03.2016

Product code: 158110-GHS-2013

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

90 Min. Epoxy (hardener)

**1.2. Relevant identified uses of the substance or mixture and uses advised against****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	Telefax: +49 (0)7157 5304-70
e-mail:	info@r-g.de	
Internet:	www.r-g.de	
Responsible Department:	Management	

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

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

Hazard categories:

Acute toxicity: Acute Tox. 4

Skin corrosion/irritation: Skin Corr. 1B

Serious eye damage/eye irritation: Eye Dam. 1

Respiratory or skin sensitisation: Skin Sens. 1

Hazardous to the aquatic environment: Aquatic Chronic 2

Hazard Statements:

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

Harmful to aquatic life with long lasting effects.

**2.2. Label elements****Regulation (EC) No. 1272/2008****Hazard components for labelling**

3,6,9-triazaundecamethylenediamine; tetraethylenepentamine

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

H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H412	Harmful to aquatic life with long lasting effects.

**Precautionary statements**

P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

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present and easy to do. Continue rinsing.  
Immediately call a POISON CENTER/doctor.

**SECTION 3: Composition/information on ingredients****3.2. Mixtures****Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
112-57-2	3,6,9-triazaundecamethylenediamine; tetraethylenepentamine			10-25%
	203-986-2	612-060-00-0		
	Acute Tox. 4, Acute Tox. 4, Skin Corr. 1B, Skin Sens. 1, Aquatic Chronic 2; H312 H302 H314 H317 H411			

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

**Further Information**

Epoxy resin, formulation based on aliphatic polyamines

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

Remove contaminated clothing immediately.

**After inhalation**

Remove affected person from the immediate area. Ensure supply of fresh air. Irregular breathing / no breathing: artificial respiration. Summon a doctor immediately

**After contact with skin**

Washing places concerned with a lot of water and soap. If the symptom doesn't stop, consult doctor.

**After contact with eyes**

After contact with eye rinse immediately with lot of water at least 5 minutes with open eyelid. Subsequently consult an ophthalmologist.

**After ingestion**

Summon a doctor immediately. Do not induce vomiting. If swallowed give water to drink. Never give anything by mouth to an unconscious person.

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

No special measures necessary

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**Carbon dioxide (CO<sub>2</sub>). Extinguishing powder. Water spray. alcohol resistant foam.**Unsuitable extinguishing media**

Full water jet

**5.2. Special hazards arising from the substance or mixture**

When heating up or in the fire case formation of poisonous gasses possible.

**5.3. Advice for firefighters**

Wear breathing apparatus without recirculating air and suitable protective clothing.

**SECTION 6: Accidental release measures**

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**6.1. Personal precautions, protective equipment and emergency procedures**

Wearing a personal protective clothing.

**6.2. Environmental precautions**

Do not allow to enter the sewerage system. Do not allow to enter the soil or subsoil.

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

Take up with absorbent material (e.g. sand, kieselguhr, universal binder). Send in suitable containers for recovery or disposal.

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

The usual precautions when handling chemicals must be observed. Provide adequate room ventilation, if necessary with vapour extraction at the workplace.

**Advice on protection against fire and explosion**

No special measures necessary

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

Store only in original container. Keep container tightly closed and dry in a cool, well-ventilated place. Protect from heat and direct sunlight. Provide for retaining containers, eg. floor pan without outflow.

**Advice on storage compatibility**

Store separately from foodstuffs.

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****8.2. Exposure controls****Protective and hygiene measures**

Keep away from food, drink and animal feeding stuffs. Wash hands before breaks and after work. Avoid contact with skin and eyes.

**Eye/face protection**

Tightly sealed safety glasses.

**Hand protection**

PVC gloves Only chemicals - protective gloves with CE-labeling of category 3 use.

**Respiratory protection**

Combination filter device (DIN EN 141).

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

Physical state:	liquid
Colour:	amber coloured
Odour:	amine-like

pH-Value (at 20 °C):	/1000 g/l) 11	<b>Test method</b>
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**Changes in the physical state**

Initial boiling point and boiling range:	>200 °C
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Flash point:	>200 °C
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**Explosive properties**

not Explosive.

**Auto-ignition temperature**

Not self-igniting

Decomposition temperature:

250 °C

Vapour pressure:  
(at 20 °C)

&lt;10 hPa

Density (at 23 °C):

0,96 g/cm<sup>3</sup> ISO 2811-2

Water solubility:

immiscible with water

Viscosity / dynamic:  
(at 20 °C)

30000 mPa·s ISO 3219

**9.2. Other information****SECTION 10: Stability and reactivity****10.3. Possibility of hazardous reactions**

No dangerous reactions at a correct storage and handling.

**10.5. Incompatible materials**

Strong oxidizing agents.

**10.6. Hazardous decomposition products**

In case of fire may be liberated: toxic gases

**SECTION 11: Toxicological information****11.1. Information on toxicological effects****ATEmix calculated**

ATE (oral) 2000,0 mg/kg

**Acute toxicity**

CAS No	Chemical name				
	Exposure routes	Method	Dose	Species	Source
112-57-2	3,6,9-triazaundecamethylenediamine; tetraethylenepentamine				
	oral	ATE	500 mg/kg		
	dermal	LD50	660 mg/kg	Rabbit	RTECS

**Irritation and corrosivity**

Irritates skin and mucous membranes. Risk of serious eye injury.

**Sensitising effects**

Contact may cause skin sensitisation.

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

CAS No	Chemical name					
	Aquatic toxicity	Method	Dose	[h]   [d]	Species	Source
112-57-2	3,6,9-triazaundecamethylenediamine; tetraethylenepentamine					
	Acute fish toxicity	LC50	420 mg/l	96 h	Poecilia reticulata	
	Acute algae toxicity	ErC50	2,1 mg/l	72 h	Selenastrum capricornutum	
	Acute crustacea toxicity	EC50	24,1 mg/l	48 h	Daphnia magna	

**12.2. Persistence and degradability**

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No further relevant information

### 12.3. Bioaccumulative potential

No further relevant information

### Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
112-57-2	3,6,9-triazaundecamethylenediamine; tetraethylenepentamine	-1,05

### 12.4. Mobility in soil

No further relevant information

### Further information

Harmful for Fish.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### **Advice on disposal**

Für die Entsorgung sind die örtlichen behördlichen Vorschriften zu beachten. Flüssige Komponente einer geeigneten Verbrennung zuführen.

Produkt kann nach Aushärtung zusammen mit dem Hausmüll entsorgt werden.

#### **Waste disposal number of waste from residues/unused products**

080199 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU and removal of paint and varnish; wastes not otherwise specified

## SECTION 14: Transport information

### **Land transport (ADR/RID)**

<b><u>14.1. UN number:</u></b>	UN2735
<b><u>14.2. UN proper shipping name:</u></b>	AMINES, LIQUID, CORROSIVE, N.O.S.(TETRAETHYLENPENTAMIN)
<b><u>14.3. Transport hazard class(es):</u></b>	8
<b><u>14.4. Packing group:</u></b>	III
Hazard label:	8



Classification code:	C7
Special Provisions:	274
Limited quantity:	5 L
Transport category:	3
Hazard No:	80
Tunnel restriction code:	E

#### **Other applicable information (land transport)**

E1

### **Marine transport (IMDG)**

<b><u>14.1. UN number:</u></b>	UN2735
<b><u>14.2. UN proper shipping name:</u></b>	AMINES, LIQUID, CORROSIVE, N.O.S. (TETRAETHYLENPENTAMINE)
<b><u>14.3. Transport hazard class(es):</u></b>	8
<b><u>14.4. Packing group:</u></b>	III
Hazard label:	8

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Marine pollutant: Nein  
 Special Provisions: 223, 274  
 Limited quantity: 5 L  
 EmS: F-A, S-B

**Other applicable information (marine transport)**

E1

**Air transport (ICAO)**

**14.1. UN number:** UN2735  
**14.2. UN proper shipping name:** AMINES, LIQUID, CORROSIVE, N.O.S. (TETRAETHYLEN-PENTAMINE)  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** III  
 Hazard label: 8



Special Provisions: A3 A803  
 Limited quantity Passenger: 1 L  
 IATA-packing instructions - Passenger: 852  
 IATA-max. quantity - Passenger: 5 L  
 IATA-packing instructions - Cargo: 856  
 IATA-max. quantity - Cargo: 60 L

**Other applicable information (air transport)**

E1

: Y841

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: yes

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

Water contaminating class (D): 2 - water contaminating

**15.2. Chemical safety assessment**

Chemical safety assessments for substances in this mixture were not carried out.

**SECTION 16: Other information****Relevant H and EUH statements (number and full text)**

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.  
 H411 Toxic to aquatic life with long lasting effects.

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Harmful to aquatic life with long lasting effects.

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*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*