



H. A. Springer marine + industrie service GmbH  
24145 Kiel

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## 1 Identification of the substance / preparation and of the company

### 1.1 Product identifier

**Epocast 36-P, Hardener**

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

2-Components casting resin, hardener

### 1.3 Details of the supplier of the safety data sheet

#### Company

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Liebigstraße 21  
24145 Kiel / GERMANY  
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E-mail: info-springer@springer-kiel.com

#### Responsible

Schroeder@chemiebuero.de

### 1.4 Emergency phone

+49 (0) 89-19240 (24h)

## 2 Hazards identification

### 2.1 Classification of the substance or mixture

#### 2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]

not applicable

#### 2.1.2 Classification according to Regulation 67/548/EEC or 1999/45/EC

Xi-N, R 38-41-43-51/53

### 2.2 Label elements

#### Hazard symbols



Irritant



Dangerous for the environment

#### Contains

Pentaethylenehexamine

Triethylenetetramine

#### R-phrases

R 38: Irritating to skin.

R 41: Risk of serious damage to eyes.

R 43: May cause sensitisation by skin contact.

R 51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

#### S-phrases

S 24/25: Avoid contact with skin and eyes.

S 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 29/35: Do not empty into drains. Dispose of this material and its container in a safe way.

S 37/39: Wear suitable gloves and eye/face protection.

#### Special labelling

none

### 2.3 Other hazards

#### Physico-chemical hazards

See chapter 10.

#### Environmental hazards

Does not contain any PBT or vPvB substances.

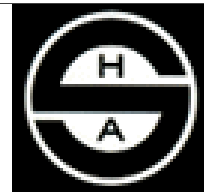
#### Other hazards

Further hazards were not determined with the current level of knowledge.

## 3 Composition / Information on ingredients

### 3.1 Substances

The product in question is a mixture.



### 3.2 Mixtures

Range [%]	Substance
60 -< 80	Quartz (< 10µm) CAS: 14808-60-7, EINECS/ELINCS: 238-878-4 GHS/CLP: STOT RE 1, H372b EEC: Xn R48/20
20 - <40	Polyaminoamide adduct CAS: , EINECS/ELINCS: Polymer GHS/CLP: not applicable EEC: Xi R41
2,5 -< 5	Pentaethylenhexamine CAS: 4067-16-7, EINECS/ELINCS: 223-775-9, EU-INDEX: 612-064-00-2 GHS/CLP: Skin Corr. 1B, H314 - Skin Sens. 1, H317 - Acute Tox. 1, H400 - Aquatic Chronic 1, H410 EEC: C-N R34-43-50/53
1 -< 5	Triethylenetetramine CAS: 112-24-3, EINECS/ELINCS: 203-950-6, EU-INDEX: 612-059-00-5 GHS/CLP: Acute Tox. 4, H312 - Skin Corr. 1B, H314 - Skin Sens. 1, H317 - Aquatic Chronic 3, H412 EEC: C R21-34-43-52/53

**Comment on component parts** Substances of Very High Concern - SVHC: substances are not contained or below 0,1%.  
For the wording of the listed risk phrases refer to section 16.

## 4 First aid measures

### 4.1 Description of first aid measures

<b>General information</b>	Change soaked clothing.
<b>Inhalation</b>	Ensure supply of fresh air. In the event of symptoms seek for medical treatment.
<b>Skin contact</b>	In case of contact with skin wash off immediately with soap and water. Consult a doctor if skin irritation persists.
<b>Eye contact</b>	In case of contact with eyes rinse thoroughly with plenty of water and seek medical advice.
<b>Ingestion</b>	Consult a doctor immediately. Do not induce vomiting. Rinse out mouth and give plenty of water to drink.

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

None known.

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

Treat symptomatically.

## 5 Fire-fighting measures

### 5.1 Extinguishing media

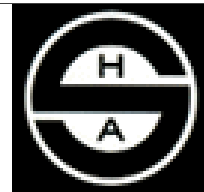
<b>Suitable extinguishing media</b>	Carbon dioxide. Water spray jet. Dry powder. Foam.
<b>Extinguishing media that must not be used</b>	Full water jet.

### 5.2 Special hazards arising from the substance or mixture

Unknown risk of formation of toxic pyrolysis products.

### 5.3 Advice for firefighters

Use self-contained breathing apparatus.  
Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.



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## 6 Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

High risk of slipping due to leakage/spillage of product.

### 6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

### 6.3 Methods and material for containment and cleaning up

Take up mechanically.

Take up residues with absorbent material (f.ex. diatomaceous earth).

Dispose of absorbed material in accordance within the regulations.

### 6.4 Reference to other sections

See Chapter 8+13

## 7 Handling and storage

### 7.1 Precautions for safe handling

No special measures necessary if used correctly.

### 7.2 Conditions for safe storage, including any incompatibilities

Keep only in original container.

Do not store together with oxidizing agents.

Keep container tightly closed.

Store in a dry place.

Protect from heat/overheating.

### 7.3 Specific end use(s)

See product use, Chapter 1.2

## 8 Exposure controls / personal protection

### 8.1 Control parameters

#### Ingredients with occupational exposure limits to be monitored (GB)

Range [%]	Substance / WEL: Workplace exposure limit
60 -< 80	Quartz (< 10µm) / - ppm, 0,1 mg/m <sup>3</sup> , respirable, crystalline

### 8.2 Exposure controls

**Additional advice on system design** Ensure adequate ventilation on workstation.

**Eye protection** Safety glasses.

**Hand protection** Butyl rubber, >480 min (EN 374).  
The details concerned are recommendations. Please contact the glove supplier for further information.

**Skin protection** Light protective clothing of plastic material.

**Other** Avoid contact with eyes and skin.  
Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of these equipments to chemicals should be ascertained with the respective supplier.

Do not eat, drink, smoke or take drugs at work.

Wash hands before breaks and after work.

Use barrier skin cream.

Remove soiled or soaked clothing immediately.

**Respiratory protection** Breathing apparatus in the event of high concentrations.  
Short term: filter apparatus, combination filter A-P2.

**Thermal hazards** not applicable

**Delimitation and monitoring of the environmental exposition** See Chapter 6+7.



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## 9 Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Form	liquid
Color	brown
Odor	characteristic
Odour threshold	not determined
pH-value	not applicable
pH-value [1%]	not applicable
Boiling point [°C]	not applicable
Flash point [°C]	not applicable
Flammability [°C]	not determined
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Oxidizing properties	no
Vapour pressure [kPa]	not determined
Density [g/ml]	not determined
Bulk density [kg/m³]	not applicable
Solubility in water	immiscible
Partition coefficient [n-octanol/water]	not determined
Viscosity	not applicable
Relative vapour density determined in air	not applicable
Evaporation speed	not applicable
Melting point [°C]	not determined
Autoignition temperature [°C]	not determined
Decomposition temperature	not determined

### 9.2 Other information

none

## 10 Stability and reactivity

### 10.1 Reactivity

No dangerous reactions known if used as directed.

### 10.2 Chemical stability

The product is stable under standard conditions.

### 10.3 Possibility of hazardous reactions

Reactions with oxidizing agents.  
Reactions with strong acids and alkalis.

### 10.4 Conditions to avoid

See chapter 7.2.

### 10.5 Incompatible materials

not determined

### 10.6 Hazardous decomposition products

No hazardous decomposition products known.



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## 11 Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

##### Pentaethylenehexamine, CAS: 4067-16-7

LD50, oral, Rat: 1600 mg/kg.

##### Triethylenetetramine, CAS: 112-24-3

LD50, dermal, Rabbit: 550 mg/kg (IUCLID).

LD50, oral, Rat: 2780 mg/kg (IUCLID).

**Serious eye damage/irritation** not determined

**Skin corrosion/irritation** not determined

**Respiratory or skin sensitisation** not determined

**Specific target organ toxicity — single exposure** not determined

**Specific target organ toxicity — repeated exposure** not determined

**Mutagenicity** not determined

**Reproduction toxicity** not determined

**Carcinogenicity** not determined

#### General remarks

Toxicological data are not available.

The product was classified on the basis of the calculation procedure of the preparation directive.

## 12 Ecological information

### 12.1 Toxicity

#### Pentaethylenehexamine, CAS: 4067-16-7

LC50, (96h), fish: 180 mg/l.

EC50, (48h), Daphnia magna: 18 mg/l.

IC50, (72h), Algae: 0,7 mg/l.

#### Triethylenetetramine, CAS: 112-24-3

EC50, (48h), Daphnia magna: 31,1 mg/l (IUCLID).

LC50, (96h), Poecilia reticulata: 570 mg/l (IUCLID).

### 12.2 Persistence and degradability

not determined

**Behaviour in environment compartments** not determined

**Behaviour in sewage plant** not determined

**Biological degradability** not determined

### 12.3 Bioaccumulative potential

not determined

### 12.4 Mobility in soil

not determined

### 12.5 Results of PBT and vPvB assessment

not applicable

### 12.6 Other adverse effects

None known.



### 13 Disposal considerations

#### 13.1 Waste treatment methods

Coordinate the waste disposal with the national authorities.

##### Product

Disposal in an incineration plant in accordance with the regulations of the local authorities.  
Dispose of as hazardous waste.

##### Waste no. (recommended)

080409\*

##### Contaminated packaging

Packaging that cannot be cleaned should be disposed of as for product.  
Uncontaminated packaging may be taken for recycling.

##### Waste no. (recommended)

150110\*  
150102

### 14 Transport information

#### 14.1 UN number

See point 14.2 in accordance with UN shipping name

#### 14.2 UN proper shipping name

##### Classification according to ADR

UN 3082 Environmentally hazardous substance, liquid, n.o.s. (Pentaethylenehexamine) 9 N III  
M6

##### - Classification Code

##### - Label



##### - ADR LQ

5 I

##### - ADR 1.1.3.6 (8.6)

Transport category (tunnel restriction code) 3 (E)

##### Classification according to IMDG

UN 3082 Environmentally hazardous substance, liquid, n.o.s. (Pentaethylenehexamine) 9 III  
MARINE POLLUTANT

##### - EMS

F-A, S-F

##### - Label



##### - IMDG LQ

5 I

##### Classification according to IATA

UN 3082 Environmentally hazardous substance, liquid, n.o.s. (Pentaethylenehexamine-mixture) 9 III

##### - Label



#### 14.3 Transport hazard class(es)

See point 14.2 in accordance with UN shipping name

#### 14.4 Packing group

See point 14.2 in accordance with UN shipping name

#### 14.5 Environmental hazards

See point 14.2 in accordance with UN shipping name



#### 14.6 Special precautions for user

Relevant information under points 6 to 8.

#### 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

not determined



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## 15 Regulatory information

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

<b>EEC-REGULATIONS</b>	1967/548 (1999/45); 1991/689 (2001/118); 1999/13; 2004/42; 648/2004; 1907/2006 (Reach); 1272/2008; 75/324/EEC (2008/47/EC); 453/2010/EC
<b>TRANSPORT-REGULATIONS</b>	DOT-Classification, ADR (2011); IMDG-Code (2011, 35. Amdt.); IATA-DGR (2011).
<b>NATIONAL REGULATIONS (GB):</b>	EH40/2005 Workplace exposure limits with amendments October 2007. CHIP 3/ CHIP 4

### 15.2 Chemical safety assessment

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

## 16 Other informations

<b>R-phrases (Chapter 03)</b>	R 48/20: Harmful - danger of serious damage to health by prolonged exposure through inhalation. R 41: Risk of serious damage to eyes. R 34: Causes burns. R 43: May cause sensitisation by skin contact. R 50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R 21: Harmful in contact with skin. R 52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
<b>Hazard statements (Chapter 03)</b>	H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction. H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects. H312 Harmful in contact with skin. H412 Harmful to aquatic life with long lasting effects.
<b>Observe employment restrictions for people</b>	yes
<b>VOC (1999/13/CE)</b>	not applicable

Disclaimer: This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

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