



H. A. Springer marine + industrie service GmbH

24145 Kiel

Date printed 11.08.2011, Revision 11.08.2011

Version 01

Page 1 / 7

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

### 1.1 Product identifier

**Epocast-F, Hardener**

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

#### 1.2.1 Relevant uses

2-Components casting resin, hardener

#### 1.2.2 Uses advised against

None known.

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

#### Company

H. A. Springer marine + industrie service GmbH

Liebigstraße 21  
24145 Kiel / GERMANY  
Phone: +49 (0) 431-71791-0  
Fax: +49 (0) 431-717 91-95  
Homepage: www.springer-kiel.com  
E-mail: info-springer@springer-kiel.com

#### Address enquiries to

#### Technical information

info-springer@springer-kiel.com

#### Safety Data Sheet

sdb@chemiebuero.de

### 1.4 Emergency phone

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

## 2 Hazards identification

### 2.1 Classification of the substance or mixture

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

Acute Tox. 4, H332  
Carc. 2, H351  
STOT RE 2, H373  
Skin Irrit. 2, H315  
Eye Irrit. 2, H319  
STOT SE 3, H335  
Resp. Sens. 1, H334  
Skin Sens. 1, H317

Classification according to conversion table Annex VII 1272/2008/EC

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

Xn, R 20-36/37/38-40-42/43-48/20

### 2.2 Label elements

#### Hazard symbols



Harmful

#### Contains:

Methylenediphenyl diisocyanate

#### R-phrases

R 20: Harmful by inhalation.  
R 36/37/38: Irritating to eyes, respiratory system and skin.  
R 40: Limited evidence of a carcinogenic effect.  
R 42/43: May cause sensitisation by inhalation and skin contact.  
R 48/20: Harmful - danger of serious damage to health by prolonged exposure through inhalation.

#### S-phrases

S 23.3: Do not breathe vapour.  
S 36/37: Wear suitable protective clothing and gloves.  
S 45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

#### Special labelling

Contains isocyanates. Observe manufacturer's instructions.



H. A. Springer marine + industrie service GmbH

24145 Kiel

Date printed 11.08.2011, Revision 11.08.2011

Version 01

Page 2 / 7

**2.3 Other hazards**

	none
<b>Physico-chemical hazards</b>	See chapter 10.
<b>Human health dangers</b>	May produce an allergic reaction.
<b>Environmental hazards</b>	Does not contain any PBT or vPvB substances.
<b>Other hazards</b>	none

**3 Composition / Information on ingredients****3.1 Product-type:**

The product in question is a mixture.

Range [%]	Substance
80 -< 100	Methylenediphenyl diisocyanate
	CAS: 26447-40-5, EINECS/ELINCS: 247-714-0, EU-INDEX: 615-005-00-9
	GHS/CLP: Carc. 2, H351 - Acute Tox. 4, H332 - STOT RE 2, H373 - Eye Irrit. 2, H319 - STOT SE 3, H335 - Skin Irrit. 2, H315 - Resp. Sens. 1, H334 - Skin Sens. 1, H317
	EEC: Xn, R 20-36/37/38-42/43-40-48/20

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

**4 First aid measures****4.1 Description of first aid measures**

<b>General information</b>	Remove contaminated soaked clothing immediately and dispose of safely.
<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>	Supply with medical care. 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**

Allergic reactions

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

Treat symptomatically.

**5 Fire-fighting measures****5.1 Extinguishing media**

**Suitable extinguishing media** Carbon dioxide.  
Water spray jet.  
Dry powder.  
Foam.

**Extinguishing media that must not be used** Full water jet.

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

Unknown risk of formation of toxic pyrolysis products.  
Hydrogen cyanide (HCN).  
Nitrogen oxides (NOx).

**5.3 Advice for firefighters**

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



H. A. Springer marine + industrie service GmbH

24145 Kiel

Date printed 11.08.2011, Revision 11.08.2011

Version 01

Page 3 / 7

## 6 Accidental release measures

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

Use personal protective clothing.  
Use breathing apparatus if exposed to vapours/dust/aerosol.  
High risk of slipping due to leakage/spillage of product.

### 6.2 Environmental precautions

Prevent spread over a wide area (e.g. by containment or oil barriers).  
Do not discharge into the drains/surface waters/groundwater.

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

Pick up with absorbent material (e.g. sand, sawdust, universal absorbent, 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

Provide suitable vacuuming at the processing machines.  
Use only in well-ventilated areas.

### 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.  
Keep container in a well-ventilated place.  
Store in a dry place.

### 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
80 -< 100	Methylenediphenyl diisocyanate / - ppm, 0,02 mg/m <sup>3</sup> , as-NCO, Sen, 25/3



H. A. Springer marine + industrie service GmbH

24145 Kiel

Date printed 11.08.2011, Revision 11.08.2011

Version 01

Page 4 / 7

**8.2 Exposure controls**

<b>Additional advice on system design</b>	Ensure adequate ventilation on workstation.
<b>Eye protection</b>	Safety glasses.
<b>Hand protection</b>	Butyl rubber, >480 min (EN 374). The details concerned are recommendations. Please contact the glove supplier for further information.
<b>Skin protection</b>	Light protective clothing.
<b>Other</b>	Avoid contact with eyes and skin. Do not inhale vapours. 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. After worktime and before work breaks the affected skin areas must be thoroughly cleaned. Use barrier skin cream. Remove soiled or soaked clothing immediately.
<b>Respiratory protection</b>	Breathing apparatus in the event of high concentrations. Short term: filter apparatus, combination filter A-P2.
<b>Thermal hazards</b>	no
<b>Delimitation and monitoring of the environmental exposition</b>	not determined

**9 Physical and chemical properties****9.1 Information on basic physical and chemical properties**

<b>Form</b>	liquid
<b>Color</b>	dark brown
<b>Odor</b>	characteristic
<b>Odour threshold</b>	not determined
<b>pH-value</b>	not applicable
<b>pH-value [1%]</b>	not applicable
<b>Boiling point [°C]</b>	not determined
<b>Flash point [°C]</b>	not applicable
<b>Flammability [°C]</b>	not determined
<b>Lower explosion limit</b>	not applicable
<b>Upper explosion limit</b>	not applicable
<b>Oxidizing properties</b>	no
<b>Vapour pressure [kPa]</b>	not determined
<b>Density [g/ml]</b>	1,24 (20°C / 68,0°F)
<b>Bulk density [kg/m³]</b>	not applicable
<b>Solubility in water</b>	reacts with water
<b>Partition coefficient [n-octanol/water]</b>	not determined
<b>Viscosity</b>	> 60 s 4 mm EN ISO 2431 (23°C)
<b>Relative vapour density determined in air</b>	not applicable
<b>Evaporation speed</b>	not applicable
<b>Melting point [°C]</b>	not determined
<b>Autoignition temperature [°C]</b>	not determined
<b>Decomposition temperature</b>	not determined

**9.2 Other information**

none

**10 Stability and reactivity****10.1 Reactivity**

See chapter 10.3.

**10.2 Chemical stability**

Stable under normal ambient conditions (ambient temperature).



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

Date printed 11.08.2011, Revision 11.08.2011

Version 01

Page 5 / 7

**10.3 Possibility of hazardous reactions**

Reactions with alcohols, amines, aqueous acids and alkalis.  
Reactions with water.

**10.4 Conditions to avoid**

See chapter 7

**10.5 Incompatible materials**

not applicable

**10.6 Hazardous decomposition products**

No hazardous decomposition products known.

**11 Toxicological information****11.1 Information on toxicological effects****Acute toxicity**

Range [%]	Substance
80 -< 100	Methylenediphenyl diisocyanate, CAS: 26447-40-5
	LD50, oral, Rat: > 10.000 mg/kg.
	LC50, inhalative, Rat: ~ 0,493 mg/l 4h.
	LD50, dermal, Rabbit: > 10.000 mg/kg.

**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**

Range [%]	Substance
80 -< 100	Methylenediphenyl diisocyanate, CAS: 26447-40-5
	LC0, (96h), fish: > 1000 mg/l.
	EC0, (24h), Daphnia magna: > 500 mg/l.
	EC0, (72h), Scenedesmus subspicatus: 1640 mg/l (OECD 201).

**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



H. A. Springer marine + industrie service GmbH

24145 Kiel

Date printed 11.08.2011, Revision 11.08.2011

Version 01

Page 6 / 7

**12.5 Results of PBT and vPvB assessment**

not applicable

**12.6 Other adverse effects**

Ecological data are not available.

No classification on the basis of the calculation procedure of the preparation directive.

**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)**

080501\*

**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\*

**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**

NO DANGEROUS GOODS

**Classification according to IMDG**

NOT CLASSIFIED AS "DANGEROUS GOODS"

**Classification according to IATA**

NOT CLASSIFIED AS "DANGEROUS GOODS"

**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 applicable

**15 Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****EEC-REGULATIONS**

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

**TRANSPORT-REGULATIONS**

DOT-Classification, ADR (2011); IMDG-Code (2011, 35. Amdt.); IATA-DGR (2011).

**NATIONAL REGULATIONS (GB):**EH40/2005 Workplace exposure limits with amendments October 2007.  
CHIP 3/ CHIP 4**15.2 Chemical safety assessment**

not applicable



H. A. Springer marine + industrie service GmbH

24145 Kiel

Date printed 11.08.2011, Revision 11.08.2011

Version 01

Page 7 / 7

**16 Other informations****R-phrases (Chapter 03)**

R 20: Harmful by inhalation.  
 R 36/37/38: Irritating to eyes, respiratory system and skin.  
 R 42/43: May cause sensitisation by inhalation and skin contact.  
 R 40: Limited evidence of a carcinogenic effect.  
 R 48/20: Harmful - danger of serious damage to health by prolonged exposure through inhalation.

**Hazard statements (Chapter 03)**

H351 Suspected of causing cancer.  
 H332 Harmful if inhaled.  
 H373 May cause damage to organs through prolonged or repeated exposure through inhalation.  
 H319 Causes serious eye irritation.  
 H335 May cause respiratory irritation.  
 H315 Causes skin irritation.  
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
 H317 May cause an allergic skin reaction.

**Observe employment restrictions for people** yes

**VOC (1999/13/CE)**

not applicable

**Customs Tariff**

not determined

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.

Copyright: Chemiebüro®