

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 09.05.2014

Version number 5

Revision: 09.05.2014

## **SECTION 1: Identification of the substance/mixture and of the company/undertaking**

### · 1.1 Product identifier

· Trade name: **TREMCO ES100 B**

· MSDS code: W-T-ES100B

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

No further relevant information available.

· Application of the substance / the mixture Epoxy curing agent

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

#### · Manufacturer/Supplier:

tremco illbruck Coatings Ltd  
Coupland Road, Hindley Green, Wigan, WN2 4HT  
Tel: +44 (0) 1942251400, Fax: +44 (0) 1942251410  
msds@tremco-illbruck.com

#### · Further information obtainable from:

tremco illbruck Ltd  
Coupland Road, Hindley Green, Wigan, WN2 4HT  
T: +44 (0) 1942251400, F: +44 (0) 1942251410  
www.tremco-illbruck.co.uk, uk.info@tremco-illbruck.com

### · 1.4 Emergency telephone number:

During office hours tel.: +44 (0) 1942251400. At all other times please contact your national poisoning centre.

## **SECTION 2: Hazards identification**

### · 2.1 Classification of the substance or mixture

#### · Classification according to Regulation (EC) No 1272/2008

Repr. 2	H361f	Suspected of damaging fertility.
Skin Corr. 1A	H314	Causes severe skin burns and eye damage.
Aquatic Acute 1	H400	Very toxic to aquatic life.
Aquatic Chronic 1	H410	Very toxic to aquatic life with long lasting effects.
Acute Tox. 4	H332	Harmful if inhaled.
Skin Sens. 1	H317	May cause an allergic skin reaction.

#### · Classification according to Directive 67/548/EEC or Directive 1999/45/EC

C; Corrosive

R34: Causes burns.

Xn; Harmful

R20/22: Harmful by inhalation and if swallowed.

Xi; Sensitising

R43: May cause sensitisation by skin contact.

N; Dangerous for the environment

R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

(Contd. on page 2)

GB

## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 09.05.2014

Version number 5

Revision: 09.05.2014

Trade name: TREMCO ES100 B

(Contd. of page 1)

- **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

- **Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

- **2.2 Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms**



GHS05 GHS07 GHS08 GHS09

- **Signal word** Danger

- **Contains:**

Fatty acids, tall-oil, reaction products with triethylenetetramine

Benzyl alcohol

bisphenol A

m-phenylenebis(methylamine)

- **Hazard statements**

H332 Harmful if inhaled.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H361f Suspected of damaging fertility.

H410 Very toxic to aquatic life with long lasting effects.

- **Precautionary statements**

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P273 Avoid release to the environment.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P310 Immediately call a POISON CENTER/doctor.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **2.3 Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

## SECTION 3: Composition/information on ingredients

- **3.2 Mixtures**

- **Description:** Mixture of substances listed below with non-hazardous additions.

(Contd. on page 3)

GB

## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 09.05.2014

Version number 5

Revision: 09.05.2014

Trade name: TREMCO ES100 B

(Contd. of page 2)

**· Dangerous components:**

CAS: 100-51-6 EINECS: 202-859-9	Benzyl alcohol Xn R20/22 ----- Acute Tox. 4, H302; Acute Tox. 4, H332	20- <30%
CAS: 68919-79-9 EINECS: 272-905-0	Fatty acids, tall-oil, reaction products with triethylenetetramine C R34; Xi R43; N R50/53 ----- Skin Corr. 1C, H314; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Skin Sens. 1, H317	20- <30%
CAS: 2855-13-2 EINECS: 220-666-8	isophorone diamine C R34; Xn R21/22; Xi R43 R52/53 ----- Skin Corr. 1B, H314; Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317; Aquatic Chronic 3, H412	5- <10%
CAS: 1477-55-0 EINECS: 216-032-5	m-phenylenebis(methylamine) C R35; Xn R20/22; Xi R43 R52/53 ----- Acute Tox. 3, H331; Skin Corr. 1A, H314; Acute Tox. 4, H302; Skin Sens. 1, H317; Aquatic Chronic 3, H412	5- <10%
CAS: 80-05-7 EINECS: 201-245-8	bisphenol A Xn R62; Xi R37-41; Xi R43 R52 Repr. Cat. 3 ----- Repr. 2, H361f; Eye Dam. 1, H318; Skin Sens. 1, H317; STOT SE 3, H335	1- <5%

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

## SECTION 4: First aid measures

### · 4.1 Description of first aid measures

#### · General information:

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Take affected persons out of danger area and lay down.

#### · After inhalation:

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

#### · After skin contact:

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

#### · After eye contact:

Rinse opened eye for several minutes under running water. Then consult a doctor.

#### · After swallowing:

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

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

Causes burns.

Breathing difficulty

Allergic reactions

(Contd. on page 4)

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 09.05.2014

Version number 5

Revision: 09.05.2014

**Trade name: TREMCO ES100 B**

(Contd. of page 3)

- **Information for doctor:** No further relevant information available.
- **Hazards** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
Treat skin and mucous membrane with antihistamine and corticoid preparations.

### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.  
Use fire extinguishing methods suitable to surrounding conditions.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture**  
Formation of toxic gases is possible during heating or in case of fire.  
Ammonia  
Carbon monoxide (CO)  
Nitrogen oxides (NO<sub>x</sub>)
- **5.3 Advice for firefighters**
- **Protective equipment:**  
Wear self-contained respiratory protective device.  
Wear fully protective suit.
- **Additional information**  
Collect contaminated fire fighting water separately. It must not enter the sewage system.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.  
Ensure adequate ventilation
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Avoid contact with the eyes and skin.  
The usual precautionary measures are to be adhered to when handling chemicals.  
Ensure that washing facilities are available at the work place.  
When the product is mixed, it is recommended to be used within 20 - 30 minutes.  
Do not eat, drink, smoke or sniff while working.

(Contd. on page 5)

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 09.05.2014

Version number 5

Revision: 09.05.2014

**Trade name: TREMCO ES100 B**

(Contd. of page 4)

- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Store only in unopened original receptacles.
- **Information about storage in one common storage facility:**  
Do not store together with oxidizing and acidic materials.  
Protect from heat and direct sunlight.
- **Further information about storage conditions:**  
Keep container tightly sealed.  
Store in cool, dry conditions in well sealed receptacles.  
Protect from humidity and water.  
Store receptacle in a well ventilated area.
- **7.3 Specific end use(s)** No further relevant information available.

**SECTION 8: Exposure controls/personal protection**

- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.  
Do not eat, drink, smoke or sniff while working.  
Ensure that washing facilities are available at the work place.
- **Respiratory protection:**  
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.  
Filter A
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

- **Material of gloves**  
Neoprene gloves  
PVA gloves  
Impervious gloves  
PVC gloves

(Contd. on page 6)

GB

## Safety data sheet according to 1907/2006/EC, Article 31

Printing date 09.05.2014

Version number 5

Revision: 09.05.2014

**Trade name: TREMCO ES100 B**

(Contd. of page 5)

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Tightly sealed goggles

- **Body protection:** Protective work clothing

### SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

**Form:** Liquid  
**Colour:** Amber coloured

- **Odour:** Fish-like

- **Boiling point/Boiling range:** > 200 °C

- **Flash point:** > 100 °C

- **Danger of explosion:** Product does not present an explosion hazard.

- **Density at 20 °C:** 1.02 g/cm<sup>3</sup>

- **Solubility in / Miscibility with water:** Insoluble.

- **Viscosity:**

**Dynamic at 25 °C:** 700 - 1700 mPas

- **9.2 Other information** No further relevant information available.

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** Stable

- **10.2 Chemical stability**

- **Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

- **10.3 Possibility of hazardous reactions**

Forms heat.

Exothermic reaction.

Reacts with strong acids.

Explosive reaction with oxidizing agents such as calcium chlorate and or peroxides.

- **10.4 Conditions to avoid** Water / moisture.

- **10.5 Incompatible materials:**

Sodium nitrate / nitrates

(Contd. on page 7)

## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 09.05.2014

Version number 5

Revision: 09.05.2014

**Trade name: TREMCO ES100 B**

(Contd. of page 6)

May be corrosive to metals.

- **10.6 Hazardous decomposition products:**

Ammonia

Carbon monoxide

Nitrogen oxides

Aldehyde

## SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**

- **Acute toxicity:**

- **LD/LC50 values relevant for classification:**

### 100-51-6 Benzyl alcohol

Oral	LD50	1230 mg/kg (rat)
Dermal	LD50	2000 mg/kg (rabbit)

### 1477-55-0 m-phenylenebis(methylamine)

Oral	LD50	1040 mg/kg (rat)
Inhalative	LC50/4 h	2.4 mg/L (rat)

### 80-05-7 bisphenol A

Oral	LD50	3250 mg/kg (rat)
Dermal	LD50	3000 mg/kg (rabbit)

- **Primary irritant effect:**

- **on the skin:** Caustic effect on skin and mucous membranes.

- **on the eye:** Strong caustic effect.

- **Sensitization:** Sensitization possible through skin contact.

- **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Harmful: danger of serious damage to health by prolonged exposure through inhalation.

Corrosive

Irritant

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

Inhalation of concentrated vapours as well as oral intake will lead to anaesthesia-like conditions and headache, dizziness, etc.

- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

contains CAS 80-05-7 Bisphenol A

Suspected of damaging fertility.

Repr. 2

## SECTION 12: Ecological information

- **12.1 Toxicity**

- **Aquatic toxicity:** No further relevant information available.

- **12.2 Persistence and degradability** No further relevant information available.

- **12.3 Bioaccumulative potential** No further relevant information available.

- **12.4 Mobility in soil** No further relevant information available.

(Contd. on page 8)

GB

## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 09.05.2014

Version number 5

Revision: 09.05.2014

Trade name: TREMCO ES100 B

(Contd. of page 7)

- **Ecotoxicological effects:**
- **Remark:** Very toxic for fish
- **Additional ecological information:**
- **General notes:**  
 Very toxic for aquatic organisms  
 Do not allow product to reach ground water, water course or sewage system.  
 Must not reach sewage water or drainage ditch undiluted or unneutralized.  
 Danger to drinking water if even small quantities leak into the ground.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
 Must not be disposed together with household garbage. Do not allow product to reach sewage system.  
 Disposal must be made according to official regulations.  
 Can be disposed of with household garbage after solidification following consultation with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.
- **Waste disposal key:** UK : H5 H8 H14

#### · European waste catalogue

08 04 09*	waste adhesives and sealants containing organic solvents or other dangerous substances
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- **Uncleaned packaging:**
- **Recommendation:**  
 Dispose of packaging according to regulations on the disposal of packagings.  
 Packagings that may not be cleansed are to be disposed of in the same manner as the product.  
 Non contaminated packagings may be recycled.

### SECTION 14: Transport information

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>· <b>14.1 UN-Number</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>   | UN2735   |
| <ul style="list-style-type: none"> <li>· <b>14.2 UN proper shipping name</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG</b></li> <li>· <b>IATA</b></li> </ul> | 2735 AMINES, LIQUID, CORROSIVE, N.O.S. (m-phenylenebis(methylamine), ISOPHORONEDIAMINE), ENVIRONMENTALLY HAZARDOUS<br><br>AMINES, LIQUID, CORROSIVE, N.O.S. (m-phenylenebis(methylamine), ISOPHORONEDIAMINE), MARINE POLLUTANT<br><br>AMINES, LIQUID, CORROSIVE, N.O.S. (m-phenylenebis(methylamine), ISOPHORONEDIAMINE) |

(Contd. on page 9)



## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 09.05.2014

Version number 5

Revision: 09.05.2014

Trade name: TREMCO ES100 B

(Contd. of page 8)

· **14.3 Transport hazard class(es)**

· **ADR**



· **Class**

8 (C7) Corrosive substances.

· **Label**

8

· **IMDG**



· **Class**

8 Corrosive substances.

· **Label**

8

· **IATA**



· **Class**

8 Corrosive substances.

· **Label**

8

· **14.4 Packing group**

· **ADR, IMDG, IATA**

III

· **14.5 Environmental hazards:**

Product contains environmentally hazardous substances: Fatty acids, tall-oil, reaction products with triethylenetetramine

· **Marine pollutant:**

Yes

· **Special marking (ADR):**

Symbol (fish and tree)

Symbol (fish and tree)

· **14.6 Special precautions for user**

Warning: Corrosive substances.

· **Danger code (Kemler):**

80

· **EMS Number:**

F-A,S-B

· **Segregation groups**

Alkalis

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

Not applicable.

· **Transport/Additional information:**

· **ADR**

· **Limited quantities (LQ)**

5L

· **Transport category**

3

· **Tunnel restriction code**

E

· **UN "Model Regulation":**

UN2735, AMINES, LIQUID, CORROSIVE, N.O.S. (m-phenylenebis(methylamine),

(Contd. on page 10)

## Safety data sheet

### according to 1907/2006/EC, Article 31

Printing date 09.05.2014

Version number 5

Revision: 09.05.2014

**Trade name: TREMCO ES100 B**

(Contd. of page 9)

ISOPHORONEDIAMINE), ENVIRONMENTALLY  
HAZARDOUS, 8, III

**SECTION 15: Regulatory information**

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

Directive 1999/45/EC.

"CLP" Regulation (EC) No 1272/2008 (OJ L 353, 31.12.2008, p.1).

"CHIP" SI 2009 No.716.

"REACH" Regulation (EC) No 1907/2006 (OJ L 396, 30.12.2006, p.1, with subsequent amendments).

- **National regulations:**

- **Information about limitation of use:**

Employment restrictions concerning juveniles must be observed.

Employment restrictions concerning pregnant and lactating women must be observed.

- **Other regulations, limitations and prohibitive regulations**

- **Substances of very high concern (SVHC) according to REACH, Article 57** Not applicable.

- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**SECTION 16: Other information**

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.

- **Relevant phrases**

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.

H331 Toxic if inhaled.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

H361f Suspected of damaging fertility.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

R20/22 Harmful by inhalation and if swallowed.

R21/22 Harmful in contact with skin and if swallowed.

R34 Causes burns.

R35 Causes severe burns.

R37 Irritating to respiratory system.

R41 Risk of serious damage to eyes.

R43 May cause sensitisation by skin contact.

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R52 Harmful to aquatic organisms.

(Contd. on page 11)

**Safety data sheet**  
**according to 1907/2006/EC, Article 31**

Printing date 09.05.2014

Version number 5

Revision: 09.05.2014

**Trade name: TREMCO ES100 B**

(Contd. of page 10)

R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R62 Possible risk of impaired fertility.

**· Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

**· \* Data compared to the previous version altered.**

GB