



SAFETY DATA SHEET
EPOCAST 36®, Hardener

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

1.1. Product identifier

Product name EPOCAST 36®, Hardener
Product number 10015/10025/10035
REACH registration number 01-2119485826-22-XXXX

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

Identified uses Hardener.

1.3. Details of the supplier of the safety data sheet

Supplier

ITW Performance Polymers
 Bay 150
 Shannon Industrial Estate
 Co. Clare
 Ireland
 V14 DF82
 353(61)771500
 353(61)471285
 mail@itwpp.com

1.4. Emergency telephone number

Emergency telephone +44(0)1235 239 670 (24h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified
Health hazards Skin Corr. 1B - H314 Eye Dam. 1 - H318 Skin Sens. 1 - H317
Environmental hazards Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410

2.2. Label elements

Pictogram



Signal word

Danger

Hazard statements

H314 Causes severe skin burns and eye damage.
 H317 May cause an allergic skin reaction.
 H410 Very toxic to aquatic life with long lasting effects.

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|---------------------------------|--|
| Precautionary statements | <p>P273 Avoid release to the environment.</p> <p>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P310 Immediately call a POISON CENTER/ doctor.</p> <p>P501 Dispose of contents/ container in accordance with national regulations.</p> |
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Contains PENTAETHYLENEHEXAMINE

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|---|---|
| Supplementary precautionary statements | <p>P260 Do not breathe vapour/ spray.</p> <p>P261 Avoid breathing vapour/ spray.</p> <p>P264 Wash contaminated skin thoroughly after handling.</p> <p>P272 Contaminated work clothing should not be allowed out of the workplace.</p> <p>P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.</p> <p>P302+P352 IF ON SKIN: Wash with plenty of water.</p> <p>P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.</p> <p>P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.</p> <p>P321 Specific treatment (see medical advice on this label).</p> <p>P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.</p> <p>P362+P364 Take off contaminated clothing and wash it before reuse.</p> <p>P363 Wash contaminated clothing before reuse.</p> <p>P391 Collect spillage.</p> <p>P405 Store locked up.</p> |
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2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

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|------------------------------|------------------------|--|
| PENTAETHYLENEHEXAMINE | | 60-100% |
| CAS number: 4067-16-7 | EC number: 223-775-9 | REACH registration number: 01-2119485826-22-0000 |
| M factor (Acute) = 1 | M factor (Chronic) = 1 | |

Classification

Skin Corr. 1B - H314
 Eye Dam. 1 - H318
 Skin Sens. 1 - H317
 Aquatic Acute 1 - H400
 Aquatic Chronic 1 - H410

The full text for all hazard statements is displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

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| General information | Remove contaminated clothing. |
| Inhalation | Get medical attention. Move affected person to fresh air at once. |
| Ingestion | Get medical attention immediately. Do not induce vomiting. Rinse nose, mouth and throat with water. Give plenty of water to drink. |

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Skin contact It is important to remove the substance from the skin immediately. Wash skin thoroughly with soap and water. Get medical attention immediately. Chemical burns must be treated by a physician.

Eye contact Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes and get medical attention.

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

General information The severity of the symptoms described will vary dependent on the concentration and the length of exposure. May cause allergy. May cause hypersensitivity.

Inhalation No specific symptoms known.

Ingestion Chemical burns.

Skin contact Allergic rash. Chemical burns.

Eye contact May cause blurred vision and serious eye damage. Corneal damage.

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

Notes for the doctor Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Water spray, foam, dry powder or carbon dioxide.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards Vapours/gases/fumes of: Carbon monoxide (CO). Nitrous gases (NOx).

Hazardous combustion products When heated, vapours/gases hazardous to health may be formed.

5.3. Advice for firefighters

Protective actions during firefighting Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Provide adequate ventilation. In case of spills, beware of slippery floors and surfaces. Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Environmental precautions Avoid discharge to the aquatic environment. Avoid the spillage or runoff entering drains, sewers or watercourses. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Absorb in vermiculite, dry sand or earth and place into containers. Collect and place in suitable waste disposal containers and seal securely. Containers with collected spillage must be properly labelled with correct contents and hazard symbol.

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6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. For waste disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Read and follow manufacturer's recommendations. Do not eat, drink or smoke when using the product. Contaminated clothing and shoes must be discarded. Good personal hygiene procedures should be implemented. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container. Keep container dry. Keep container tightly closed. Avoid contact with oxidising agents. Keep away from food, drink and animal feeding stuffs. Do not store near heat sources or expose to high temperatures.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

DNEL

- Industry - Dermal; Long term local effects: 0.044 mg/m³
- Industry - Inhalation; Long term systemic effects: 1.59 mg/m³
- Industry - Dermal; Long term systemic effects: 0.91 mg/kg/day
- Industry - Inhalation; Short term systemic effects: 8550 mg/m³
- Consumer - Inhalation; Long term systemic effects: 0.46 mg/m³
- Consumer - Inhalation; Short term systemic effects: 2542 mg/m³
- Consumer - Oral; Short term systemic effects: 32 mg/kg/day
- Consumer - Oral; Long term systemic effects: 0.65 mg/kg/day
- Consumer - Dermal; Long term local effects: 0.68 ppm

PNEC

- Fresh water; 0.0025 mg/l
- Marine water; 0.0025 mg/l
- Sediment; 0.22 mg/kg
- Soil; 0.18 mg/kg
- STP; 1.64 mg/l

8.2. Exposure controls

Protective equipment



Eye/face protection

The following protection should be worn: Chemical splash goggles.

Hand protection

It is recommended that gloves are made of the following material: Butyl rubber. It should be noted that liquid may penetrate the gloves. Frequent changes are recommended. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. (EN 374)

Other skin and body protection

Wear apron or protective clothing in case of contact.

Hygiene measures

Use engineering controls to reduce air contamination to permissible exposure level. When using do not eat, drink or smoke. Good personal hygiene procedures should be implemented. Remove contaminated clothing and wash the skin thoroughly with soap and water after work.

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| Respiratory protection | If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: Combination filter, type A2/P2. Full face mask respirators with replaceable filter cartridges should comply with European Standard EN136. Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140. |
| Thermal hazards | Not applicable. |

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

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| Appearance | Coloured liquid. |
| Colour | Yellowish. |
| Odour | Amine. |
| pH | pH (concentrated solution): 12.6 Not determined. |
| Melting point | -20°C |
| Initial boiling point and range | 426°C @ |
| Flash point | 183°C |
| Evaporation rate | Not applicable. |
| Upper/lower flammability or explosive limits | Not applicable. |
| Vapour pressure | <0.1 kPa @ °C |
| Vapour density | Not applicable. |
| Relative density | 1.003 @ °C |
| Solubility(ies) | 500 @ °C |
| Auto-ignition temperature | 335°C |
| Viscosity | Not applicable. |
| Oxidising properties | Not applicable. |

9.2. Other information

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| Other information | None. |
| Volatile organic compound | This product contains a maximum VOC content of 0 g/litre. |

SECTION 10: Stability and reactivity

10.1. Reactivity

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| Reactivity | There are no known reactivity hazards associated with this product. |
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10.2. Chemical stability

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|------------------|---|
| Stability | Stable at normal ambient temperatures and when used as recommended. |
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10.3. Possibility of hazardous reactions

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| Possibility of hazardous reactions | The following materials may react with the product: Acids. Not relevant. |
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10.4. Conditions to avoid

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Conditions to avoid Avoid exposure to high temperatures or direct sunlight. Avoid contact with strong oxidising agents.

10.5. Incompatible materials

Materials to avoid Not determined.

10.6. Hazardous decomposition products

Hazardous decomposition products Not known.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological effects No data recorded.

Specific target organ toxicity - single exposure

STOT - single exposure None , ,

Specific target organ toxicity - repeated exposure

STOT - repeated exposure None , ,

Inhalation No specific health hazards known.

Ingestion Swallowing concentrated chemical may cause severe internal injury. Causes burns.

Skin contact Corrosive. Prolonged contact causes serious tissue damage.

Eye contact Risk of serious damage to eyes.

Acute and chronic health hazards The product contains an epoxy resin. May cause sensitisation or allergic reactions in sensitive individuals.

SECTION 12: Ecological Information

Ecotoxicity This substance is not classified as PBT or vPvB according to current EU criteria.

12.1. Toxicity

Acute toxicity - fish LC₅₀, 96 hours: 180 mg/l, Algae

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 17.5 mg/l, Daphnia magna

Acute toxicity - aquatic plants IC₅₀, 72 hours: 0.7 mg/l, Fish

12.2. Persistence and degradability

Persistence and degradability No data available.

12.3. Bioaccumulative potential

Bioaccumulative potential -3,67

12.4. Mobility in soil

Mobility Not determined.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

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Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Waste is classified as hazardous waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Waste liquid components should be suitable for incineration at an approved facility. Residues and empty containers should be taken care of as hazardous waste according to local and national provisions.

Waste class 08 04 09*

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID) 2735

UN No. (IMDG) 2735

UN No. (ICAO) 2735

14.2. UN proper shipping name

Proper shipping name (ADR/RID) AMINES, LIQUID, CORROSIVE, N.O.S. (Pentaethylenehexamine)(ENVIRONMENTALLY HAZARDOUS)

Proper shipping name (IMDG) AMINES, LIQUID, CORROSIVE, N.O.S. (Pentaethylenehexamine)(ENVIRONMENTALLY HAZARDOUS)

Proper shipping name (ICAO) AMINES, LIQUID, CORROSIVE, N.O.S. (Pentaethylenehexamine)(ENVIRONMENTALLY HAZARDOUS)

Proper shipping name (ADN) AMINES, LIQUID, CORROSIVE, N.O.S. (Pentaethylenehexamine)(ENVIRONMENTALLY HAZARDOUS)

14.3. Transport hazard class(es)

ADR/RID class 8

ADR/RID label 8

IMDG class 8

ICAO class/division 8

Transport labels



14.4. Packing group

ADR/RID packing group III

IMDG packing group III

ICAO packing group III

14.5. Environmental hazards

EPOCAST 36®, Hardener**Environmentally hazardous substance/marine pollutant****14.6. Special precautions for user**

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| EmS | F-A, S-B |
| Emergency Action Code | 2X |
| Hazard Identification Number (ADR/RID) | 80 |
| Tunnel restriction code | (E) |

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

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not relevant.

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

| | |
|-----------------------------|--|
| National regulations | The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716). |
| EU legislation | Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended). |

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

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|----------------------------------|---|
| Revision date | 04/04/2018 |
| Revision | 5 |
| Supersedes date | 06/12/2017 |
| Hazard statements in full | H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects. |