



**SAFETY DATA SHEET
EPOCAST-INDUSTRIE HARDENER**

1. Identification

Product identifier

Product name EPOCAST-INDUSTRIE HARDENER

Product number 10075

Recommended use of the chemical and restrictions on use

Application Hardener.

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

Emergency telephone number

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

2. Hazard(s) identification

Classification of the substance or mixture

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

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>P260 Do not breathe vapor/ spray.</p> <p>P261 Avoid breathing vapor/ spray.</p> <p>P264 Wash contaminated skin thoroughly after handling.</p> <p>P272 Contaminated work clothing must not be allowed out of the workplace.</p> <p>P273 Avoid release to the environment.</p> <p>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</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>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>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> <p>P501 Dispose of contents/ container in accordance with national regulations.</p>
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Contains PENTAETHYLENEHEXAMINE

Other hazards

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

3. Composition/information on ingredients

Mixtures

PENTAETHYLENEHEXAMINE	60-100%
CAS number: 4067-16-7	
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.

4. First-aid measures

Description of first aid measures

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.
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.

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

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.

Indication of immediate medical attention and special treatment needed

Notes for the doctor Treat symptomatically.

5. Fire-fighting measures

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.

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.

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.

6. Accidental release measures

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.

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.

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 labeled with correct contents and hazard symbol.

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

7. Handling and storage

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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.

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 oxidizing agents. Keep away from food, drink and animal feeding stuffs. Do not store near heat sources or expose to high temperatures.

Specific end uses(s)

Specific end use(s)

The identified uses for this product are detailed in Section 1.

8. Exposure Controls/personal protection

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.

Respiratory protection

If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: Gas filter, type A2. Full face mask respirators with replaceable filter cartridges should comply with OSHA 1910.134. Half mask and quarter mask respirators with replaceable filter cartridges should comply with OSHA 1910.134.

Thermal hazards

Not applicable.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance	Colored liquid.
Color	Yellowish.
Odor	Amine.
pH	pH (concentrated solution): 12.6 Not determined.
Melting point	-20°C
Initial boiling point and range	426°C @
Flash point	183°C

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Evaporation rate	Not applicable.
Upper/lower flammability or explosive limits	Not applicable.
Vapor pressure	<0.1 kPa @ °C
Vapor density	Not applicable.
Relative density	1.003 @ °C
Solubility(ies)	500 @ °C
Auto-ignition temperature	335°C
Viscosity	Not applicable.
Oxidizing properties	Not applicable.
Other information	None.
Volatile organic compound	This product contains a maximum VOC content of 0 g/litre.

10. Stability and reactivity

Reactivity	There are no known reactivity hazards associated with this product.
Stability	Stable at normal ambient temperatures and when used as recommended.
Possibility of hazardous reactions	The following materials may react with the product: Acids. Not relevant.
Conditions to avoid	Avoid exposure to high temperatures or direct sunlight. Avoid contact with strong oxidizing agents.
Materials to avoid	Not determined.
Hazardous decomposition products	Not known.

11. Toxicological information

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 sensitization or allergic reactions in sensitive individuals.

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12. Ecological Information

Ecotoxicity	This substance is not classified as PBT or vPvB according to current EU criteria.
Acute toxicity - fish	LC ₅₀ , 96 hours: 180 mg/l, Fish
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: 17.5 mg/l, Daphnia magna
Acute toxicity - aquatic plants	IC ₅₀ , 72 hours: 0.7 mg/l, Algae
<u>Persistence and degradability</u>	
Persistence and degradability	No data available.
<u>Bioaccumulative potential</u>	
Bio-Accumulative Potential	-3,67
<u>Mobility in soil</u>	
Mobility	Not determined.
<u>Other adverse effects</u>	
Other adverse effects	None known.

13. Disposal considerations

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*

14. Transport information

UN Number

UN No. (TDG)	2735
UN No. (IMDG)	2735
UN No. (ICAO)	2735
UN No. (DOT)	2735

UN proper shipping name

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

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Transport hazard class(es)

TDG class	8
TDG label(s)	8
IMDG Class	8
ICAO class/division	8

Transport labels



Packing group

TDG Packing Group	III
IMDG packing group	III
ICAO packing group	III
DOT packing group	III

Environmental hazards

Environmentally Hazardous Substance



Special precautions for user

EmS F-A, S-B

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

15. Regulatory information

16. Other information

Revision date	4/4/2018
Revision	4
Supersedes date	12/6/2017
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.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.