

## SAFETY DATA SHEET

### 1. IDENTIFICATION THE SUBSTANCE / PREPARATION OF THE COMPANY / UNDERTAKING

Product Name: **ESTOTECT E230 Part B (Hardener)**  
 Application: Hardener component of two part epoxy coating  
 Company: Denka Construction Solutions Malaysia Sdn Bhd  
 Address: No. 18, Jalan Utas 15/7, Seksyen 15, 40200 Shah Alam, Selangor, Malaysia  
 Telephone: 03 – 55108810 Fax: 03 – 55100708

### 2. HAZARD IDENTIFICATION

#### A. Hazard Risk Classification

- Health Hazard
  - Flammable Liquids : Category 3
  - Acute Toxicity (dermal) : Category 4
  - Acute Toxicity (inhalation) : Category 4
  - Skin Corrosion / Irritation : Category 2
  - Serious Eye Damage / Eye Irritation : Category 2
  - Skin sensitization : Category 1
  - Specific target organ systemic toxicity  
Single exposure : Category 3
  - Hazardous to aquatic environment -  
chronic hazard : Category 2

#### B. Label elements including precaution statements.

- Symbol:



- Signal word: Warning
- Hazard Risk Statement

H226 Flammable liquid and vapour  
 H312 Harmful if in contact with skin  
 H315 Cause skin irritation.  
 H317 May cause allergic skin reaction  
 H319 Causes serious eye irritation.  
 H332 Harmful if inhaled  
 H335 May causes respiratory irritation  
 H411 Toxic to aquatic life with long lasting effects

- Precautionary Statement (Prevention)
  - P210 Keep away from ignition source such as heat/sparks/open flame. – No smoking
  - P233 Keep container tightly closed
  - P240 Ground/bond container and receiving equipment

- P241 Use explosion-proof electrical stirrer, ventilation and lighting  
 P242 Use only non-sparking tools  
 P243 Take precautionary measures against static discharge.  
 P261 Avoid breathing dust/fume/gas/mist/vapours/spray  
 P264 Wash hand thoroughly after handling  
 P270 Do not eat, drink, or smoke when using this product.  
 P271 Use only outdoors or in a well ventilated area  
 P272 Contaminated work clothing shall not be allowed out of the workplace  
 P273 Avoid release to environment  
 P280 Wear protective gloves, clothing, eye and face protection from competent authority.  
 P312 Call a POISON CENTRE or doctor/physician if you feel unwell.  
 P322 Specific measures: Refer to First aid instruction.  
 P363 Wash contaminated clothing before reuse.  
 P391 Collect Spillage  
 P302 + P352 If on skin: Wash with plenty of soap and water  
 P304 + P340 If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
 P333 + P313 If skin irritation or rash occurs: Get medical advice / attention.  
 P370 + P378 In case of fire, use fire extinguishing media as in section 5 for extinction.  
 P301 + P330 + P331 If swallowed, rinse mouth, do not induce vomiting  
 P301 + P312 + P330 If swallowed: Rinse mouth. Call a POISON CENTRE or doctor/physician.  
 P332 + P313 + P362 If skin irritation occurs: Take off contaminated clothing and wash before reuse. Get medical advice / attention.  
 P303 + P361 + P353 If on skin (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water / shower.  
 P305 + P351 + P338 If in eyes: remove contact lenses, if present and easy to do, rinse cautiously with water for several minutes.  
 P337 + P313 If eye irritation persists: Get medical advice / attention  
 P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
 P403 + P235 Store in a well-ventilated place. Keep cool.  
 P405 Store lock up  
 P501 Dispose of content / container in accordance to local / national regulation.

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### 3. COMPOSITION / INFORMATION ON INGREDIENTS

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Ingredients	CAS Number	%
Xylene	1330 - 20 - 7	10 ~ 30
Polyamide resin	68410 - 23 -1	30 ~ 60
Nonyl Phenol	25154 - 51 - 3	5 ~ 10

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### 4. FIRST AID MEASURES

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- Eyes: Flush eyes with large amount of water for 10 minutes or until irritation subsides. If irritation persists, get medical attention.  
 Skin: Remove contaminated clothing, immediately flush with large amounts of water and use soap, if available. Get medical attention, if symptom or pain persists.  
 Inhalation: Remove victim to fresh air. Administer artificial respiration if breathing stopped. Keep at rest, seek prompt medical attention.  
 Ingestion: If swallowed, do not induce vomiting. Keep at rest. Seek prompt medical attention.

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## 5. FIRE FIGHTING MEASURES

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Fire Extinguishing Media	: Foam, Carbon Dioxide, Dry Chemical Powder. In case of larger fire, water spray should be used.
Unsuitable	: Water jet
Fire Fighting Instruction	: If a leak or spill has not ignited, use spray to disperse the vapours and to protect worker attempting to stop a leak. Keep adjacent containers cool by spraying with water. Extinguish with foam or dry chemicals and try to cover spills with foam. For major fire, contact local fire authority.
Special Protective Equipment	: Fireman must wear self-contained breathing apparatus

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## 6. ACCIDENTAL RELEASE MEASURES

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- Exclude sources of ignition and ventilate the area. Exclude nonessential personnel.
  - Avoid breathing vapors. Refer to protective measure listed in section 8.
  - Contain and collect spillages with non-combustible absorbent materials e.g sand, earth vermiculite, diatomaceous earth and place in a suitable container for disposal in accordance with waste regulations.
  - Do not allow to enter drains or water courses.
  - Clean preferably with detergent, avoid the use of solvents.
  - If the product enters drains or sewers, or in the case of contamination of streams, rivers or lakes contact the relevant authorities.
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## 7. HANDLING AND STORAGE

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### Handling

- Handle in well ventilated area
- The product should only be used in areas from which all naked flames and other sources of ignition have been excluded
- Keep the container tightly closed. Exclude sources of heat, sparks and open flame.
- Avoid skin and eye contact. Avoid inhalations of vapour. Smoking, eating and drinking should be prohibited in areas of storage and use.
- Do not press, cut, heat or weld containers. Use only tools that do not produce spark to open and close container.
- Regular safe removal of waste material to minimize the risks of spontaneous combustion and other fire hazards.

### Storage

- Observe the label precautions. Store separately from oxidizing agents and strongly alkaline and strongly acidic materials.
- Store at ambient temperature in a dry, well ventilated place away from sources of heat, ignition and direct sunlight.
- Containers which are opened should be properly resealed and kept upright to prevent leakage.

## 8. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering Control Measures: Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.  
Suitable respiratory protective equipment should be worn.  
Ground equipment for liquid transfer, pumping and stirring.

Exposure Limits: Occupational Exposure Standards and / or Maximum Exposure Limits have been established by the Health and Safety Commission or recommended by the supplier for certain of the ingredients. OELs are taken from the current versions of EH40 except those marked 'Sup' which assigned by the supplier of the substance.

Substances	Occupational Exposure Limits		
	8hr TWA (+)	15 min STEL (+)	Notes
Xylene	100 ppm	150 ppm	Skin

Personal Protection:

Eye Protection : Eye protection designed to protect against liquid splashed should be worn

Respiratory Protection : All personal protective equipment, including respiratory protective equipment, used to control exposure to hazardous substances must be selected to meet requirement of the COSHH Regulation.

Hand Protection : When skin exposure may occur, advice should be sought from glove Suppliers on appropriate types. Barrier cream may help to protect exposed areas of skin but are not substitute for full physical protection. They should not be applied once exposure has occurred.

Skin Protection : Cotton or synthetic overalls or coveralls are normally suitable. Grossly contaminated clothing should be removed and the skin washed with soap and water or proprietary skin cleaner.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Colour	Yellow greyish
Odour	Characteristic
pH (concentration)	Not applicable
Boiling Range (°C)	Not Available
Flash Point (closed °C)	27
Explosion Limit (°C)	Not Available
Specific Gravity	1.12 ± 0.03 g/cm <sup>3</sup>
% Volatiles (By Wt.)	20 – 25%
Water Solubility	Immiscible

## 10. STABILITY AND REACTIVITY

- Stable under the recommended storage and handling conditions.
- Keep away from oxidizing agents and strongly alkaline and strongly acidic materials to prevent the possibility of exothermic reaction.
- In case of fire, hazardous decomposition products such as smoke, carbon monoxide, carbon dioxide and oxides of nitrogen may be produced.

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

Substance	LD <sub>50</sub> Oral	LD <sub>50</sub> Dermal	LC <sub>50</sub> Inhalation
Xylene	-	-	5000 ppm
Polyamide Resin	>5000 mg/kg	-	-
Nonyl Phenol	1900 mg/kg	2140 mg/kg	

### Health Effects

Inhalation	: Exposure to organic solvent vapours may result in adverse health effects such as irritation of the mucous membrane and the respiratory system and adverse effects on the renal and central nervous systems. Symptoms include headache, dizziness, fatigue, muscular weakness, drowsiness, and in extreme cases loss of consciousness.
Skin Contact	: Repeated or prolonged contact with the product may lead to removal of natural fats from the skin resulting in non-allergic contact dermatitis and absorption through the skin.
Eye Contact	: Splashes in the eye may cause irritation and reversible eye damages
Ingestion	: Ingestion may result in the following effects: sore throat, abdominal pain, drowsiness, nausea, vomiting, and diarrhoea. Other effects may be as described for exposure to vapours.

## 12. ECOLOGICAL INFORMATION

There is no data available on the product itself. The product should not be allowed to enter drains or water courses or be deposited where it can affect ground or surface water. The Air Pollution Control requirements of regulations made under the Environmental Protection Act may apply to the use of this product.

Mobility	: Not Available
Biodegradability	: Not Available
Bioaccumulation	: Not Available
Sewage Treatment	: Not Available

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## 13. DISPOSAL CONSIDERATIONS

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- This product is not suitable for disposal by either landfill or via municipal sewer, drains, natural streams or river
- Recover or recycle if possible, otherwise incineration
- Empirical containers should be taken for recycling, recovery or disposal.
- For any disposal, care should be taken to ensure that a suitably qualified or licensed contractor has been selected.

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## 14. TRANSPORT INFORMATION

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### Road ADR / Railway RID

UN Number : UN 1263  
Proper Shipping Name : Paint  
Class : 3  
Packing Group : III

### Air Transport ICAO-TI/IATA-DGR

UN Number : UN 1263  
Proper Shipping Name : Paint  
Class : 3  
Packing Group : III

### Transport by sea IMDG-Code

Marine Pollutant : Yes  
EMS No : F-E , S-E  
UN Number : UN 1263  
Proper Shipping Name : Paint  
Class : 3  
Packing Group : III  
MFAG No : 310 , 313  
IMDG Code Page : 3372

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## 15. REGULATORY INFORMATION

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Follow the local regulations

## 16. OTHER INFORMATION

The data and advice given apply when the product is used for the stated application or applications. The product is not sold as suitable for any other application. Use of the product for applications other than as stated in this sheet may give rise to risks not mentioned in this sheet. The product should not be used than for the stated application or applications without seeking advice from Denka Construction Solutions Malaysia Sdn Bhd.

If this product has been purchased to a third party for use at work, it is the purchaser's duty to take all necessary steps to secure that any person handling or using the product is provided with information in this sheet. It is the responsibility and duty of the employer to inform employees and others who may be affected of any hazards described to this sheet and of any precautions which should be taken. This sheet does not constitute or substitute for the users own assessment of workplace risk, as required by other health and safety legislation.

<b>SDS</b>	<b>Estotect E230 Part B (Hardener)</b>
<b>Date Issued</b>	<b>04/10/2025</b>
<b>Revision</b>	<b>03</b>



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