

SAFETY DATA SHEET

1: IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

Product Name: **ESTOBOND ES (Base)**
Application: Base component of epoxy resin slow set concrete bonding agent.
Company: **Denka Construction Solutions Malaysia Sdn Bhd**
Address: No. 18, Jalan Utas 15/7, Seksyen 15, 40200 Shah Alam, Selangor
Telephone: 03 –55108810 Fax: 03 – 55100708

2: HAZARDS IDENTIFICATION

A. Hazard Risk Classification

- Skin corrosion / irritation: Category 2
- Eye irritation : Category 2A
- Skin Sensitization: Category 1
- Germ cell mutagenicity: Category 2
- Carcinogenicity : Category 2
- Reproductive Toxicity: Category 2

B. Label elements including precaution statements.

- Symbol:



Signal word: Warning

- Hazard Risk Statement

H315 Cause skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H341 Suspected of causing genetic defects
H351 suspected of causing cancer
H361 Suspected of damaging fertility or the unborn child

- Precautionary Statement
(Prevention)

P201 Obtain special instruction before use.
P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray
P264 Wash your handling region thoroughly after handling
P272 Contaminated work clothing should not be allowed out the work place
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P281 Use personal protective equipment as required

(Response)

- P302 + P352 IF ON SKIN: Gently wash with plenty of soap and water
 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
 P309 + P311 If exposed or if you feel unwell: Call a POISON CENTER or doctor /physician
 P319 Collect Spillage
 P331 Do NOT induce vomiting

(Storage)

- P405 Store locked up

(Disposal)

- P501 Dispose of contents / container

3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Content, %
Bisphenol-A-(epichlorhydrin) Epoxy resin	80-05-7	60 ~ 80
Filler	13463-67-7	5 ~ 10
Plasticizer	84-66-2	1 ~ 10
Retarder	9004-58-4	1 ~ 2
Solvent	67-56-01	1 ~ 2

All constituents of this product are listed in EINECS (European Inventory of Existing Commercial Chemical Substances) or EILINCS (European List of New Chemical Substances) or are exempt. Refer to Section 8 for Occupational Exposure Limits.

4: FIRST AID MEASURES

- Inhalation** When exposed to large amounts of steam and mist, move to fresh air.
 Take specific treatment if needed.
 Get medical attention immediately.
 If breathing is stopped or irregular, give artificial respiration and supply oxygen.
- Ingestion** About whether I should induce vomiting Take the advice of a doctor.
 Rinse your mouth with water immediately.
 Get medical attention immediately.
- Skin Contact** Flush skin with plenty of wter for at least 15 minutes while removing contaminated clothing and shoes.
 Laundering enough contaminated clothing before reuse.
 Get medical attention immediately.
 Go to the hospital immediately if symptoms (flare, irritate) occur.
 Remove contaminated clothing, shoes and isolate.
 Wash thoroughly after handling.
 Wear gloves when washing the patient, and please avoid contact with contaminated clothing.
- Eye Contact** Do not rub your eyes.
 Immediately flush eyes with plenty of water for at least 15minutes and call a doctor/physician.
 Get medical attention immediately.
 Remove contact lenses if worn.

5: FIRE FIGHTING MEASURES

Suitable Extinguishing Media:	Use extinguish measure that are appropriate to local circumstances and the surrounding environment.
Specific Extinguishing Method	Collect contaminated fire extinguishing water separately. This must not be discharge into the drains. Fire residue and contaminated fire extinguishing water must be disposed of in accordance with local regulations
Special Protective Equipment:	in the event of fire, wear self-contained breathing apparatus.

6: ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Wear suitable protective clothing, gloves and eye/face protection.
Environmental Precautions:	Do not flush into the surface water or sanitary sewer system. If product contaminate river and lakes or drain inform respective authorities. Local authorities should be advise if significant spillage
Methods and Material for Cleaning:	Soak up with inert absorbent or contain and remove by best available means. Gather into containers. Dispose of as waste.

7: HANDLING AND STORAGE

Handling:	Do not breath vapor or spray mist, avoid exceeding the given occupational exposure limit. Do not get in eye, on skin or clothing
Storage:	Keep containers dry and tightly closed.
Material to avoid	No data available

8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits:	None assigned.
Engineering Control Measures:	No specific ventilation requirement noted.
Personal Protective Equipment:	Impervious gloves (eg PVC). Safety glasses / Goggles. Plastic apron. Change contaminated clothing and clean before re-use.

9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid.
Colour:	Clear.
Odour:	Aromatic
pH(concentrate):	Not applicable.
Boiling Point/Range (°C):	Not determined.
Flash Point (closed, °C):	>212 F (>100°C)
Density (g/cm ³):	1.14
Explosive Properties (%):	Not known.
Kinematic Viscosity (mm ² /s):	20.5
Relative Density (at 20°C):	Not Known

10: STABILITY AND REACTIVITY

Reactivity:	No dangerous reaction known under condition of normal use
Chemical Stability:	The product is chemical stable
Possibility of hazardous reactions:	stable under recommended storage condition

11: TOXICOLOGICAL INFORMATION

The following toxicological assessment is based on a knowledge of the toxicity of the product's components:
Expected oral LD50, rat > 2g/kg.
Classified as a skin sensitiser.

Health Effects

On Eyes:	Causes transient irritation.
On Skin:	Irritation. May cause sensitisation.
By Inhalation:	May cause respiratory irritation.
By Ingestion:	May cause irritation of mouth, throat and digestive tract.
Chronic:	Repeated and prolonged skin contact may lead to skin disorders.

12: ECOLOGICAL INFORMATION

Environmental Assessment:	When used and disposed of as intended, no adverse environmental effects are foreseen.
Mobility: (Paste).	Insoluble in water.
Persistence and Degradability:	Not readily biodegradable.
Bio accumulative Potential:	Has the potential to bio accumulate.
Eco toxicity:	Eco toxic to fish/daphnia/algae.

13: DISPOSAL CONSIDERATIONS

Disposal must be in accordance with local and national legislation.

Unused Product:	Dispose of through an authorized waste contractor to a licensed site. May be reacted with hardener component to give an inert polymeric material.
Used/Contaminated Product:	As for Unused product.
Packaging:	Must be disposed of through an authorized waste contractor.

14: TRANSPORT INFORMATION

IATA
UN number 3082 (Environmentally hazardous substances, liquid)
Class 9
Packing group iii
Labels 9

IMDG
UN number 3082 (Environmentally hazardous substances, liquid)
Class 9
Packing Group iii
Labels 9

15: REGULATORY INFORMATION

Hazard Label Data:-

Named Ingredients: epoxy resin (number average molecular weight <700).
Symbol(s): Xi
Risk Phrases: Irritating to eyes and skin.
May cause sensitisation by skin contact.
Safety Phrases: After contact with skin, wash immediately with plenty of soap and water.
Wear suitable gloves and eye/face protection.
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
EC Directives: Contains epoxy constituents. See information supplied by the manufacturer.
Dangerous Substances Directive, 67/548/EEC and adaptations.
Dangerous Preparations Directive, 88/379/EEC.
Safety Data Sheets Directive, 91/155/EEC.
Statutory Instruments: Chemicals (Hazard Information and Packaging for Supply) (Amendment) Regs. 1996 (SI 1092).
Health & Safety at Work, etc. Act 1974.
Control of Substances Hazardous to Health Regs. 1994 (SI 3246).
Environmental Protection Act 1990.
Codes of Practice: Waste Management. The Duty of Care.
Guidance Notes: Occupational skin diseases: health and safety precautions (EH 26).

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 other than for the stated application or applications without seeking advice from Denka Construction Solutions Malaysia Sdn Bhd

If this product has been purchased for supply 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 the 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 in 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.

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