

SAFETY DATA SHEET

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

Product Name: **ESTOBOND EC(X) PART A (BASE)**
 Application: Epoxy putty
 Use advised against: No additional information available
 Company: **PT HISSAN TRADING INDONESIA**
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2. HAZARD IDENTIFICATION

A. Classification of the substance and mixture:

- Health Hazard

Acute Toxicity - Oral :	Category 4
Skin Corrosion/Irritation :	Category 2
Serious Eye Damage/Irritation :	Category 2
Skin Sensitization :	Category 1
Chronic hazards to the aquatic environment :	Category 2

B. Label elements and precautionary statement:

- Symbol
- Hazard Risk Statement

H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause allergic skin reaction.
H319	Cause serious eye irritation.
H411	Toxic to aquatic life with long lasting effects.
- Precautionary Statements:

P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash ... thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312	If swallowed: Call a POISON CENTER or doctor/physician if you feel unwell.
P302+P352	If on skin: 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.
P321	Specific treatment (see ... on this label).
P330	Rinse mouth.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P362	Take off contaminated clothing and wash before reuse.
P363	Wash contaminated clothing before reuse.
P391	Collect spillage.
P405	Store locked up
P501	P501 Dispose of contents/container to
- Other Hazard-which do not result in classification criteria: No data

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Content (%)
Diglycidylether of bisphenol A	25068-38-6	35~45
Calcium Carbonate	471-34-1	55~65
Titanium dioxide	13463-67-7	< 1
Fume Silica	67762-90-7	1~3

4. FIRST AID MEASURES

Eye contact	Flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Consult a physician if signs of irritation appear.
Skin contact	Immediately remove contaminated clothing or shoes, wash skin with plenty of water for at least 15 minutes. Use soap if readily available, or follow by thoroughly washing soap and water. Do not reuse clothing until thoroughly decontaminated.
Inhalation	Move person to fresh air area and provide oxygen if breathing is difficult. Consult a physician if effects occur.
Ingestion	Do not induce vomiting because of risk of aspiration. Rinse mouth with water. Consult a physician if effects occur.
Indication of immediate medical attention and notes for physician	Get adequate measure with the symptoms. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

5. FIRE FIGHTING MEASURES

Suitable (and unsuitable) extihuish media

Suitable extinguishing media	Dry chemical, carbon dioxide, water, foam in use.
Unsuitable extinguishing media	No data
Conflagration	Use foaming agent in use or water spray.

Specific hazards arising from the chemical

Combustion product	In case of fire, toxic fumes might be formed
Fire-fighting hazard	May cause fire.

Special protective actions for fire-fighters precautions for fire-fighters flame	Isolate from heat, electrical equipment, sparks and opened Were self-contained breathing apparatus.
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6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Use protective equipment as required Avoid skin contact or inhalation
Environmental precautions and protective procedures	
Air	No data
Soil	No data
Underwater	Store away from water supply and drainage
Methods and materials for containment and cleaning up	
Little leakage	No entry to unauthorized person. All disposal methods must be in compliance with applicable local regulations. Sweep spilled material into non-leaking containers. Absorpt with sand or non-flammable material.
Enormous leakage	No data

7. HANDLING AND STORAGE

Precautions for safe handling	Keep in a cool, well-ventilated place and container closed.
Conditions for safe storage:	Avoid contact with skin and eyes. Use with adequate ventilation. Keep away from heat, flame, sparks and high temperature.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

<ul style="list-style-type: none"> • Control parameters <ul style="list-style-type: none"> Domestic regulations ACGIH (TLV) ACGIH (BEI) • Appropriate engineering controls safety 	<p>No data No data No data</p> <p>Shower and eye bath. Mechanical exhaust required. Install a local ventilation. Check the exposure limit. General industrial hygiene practice. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.</p>
<ul style="list-style-type: none"> • Personal protective equipment <ul style="list-style-type: none"> Respiratory protection Eye protection Hands protection Body protection 	<p>Never exceed the national Occupational Exposure Limit. Use local. Exhaust ventilation or handle in a ventilated enclosure. For greater protection a face piece chemical cartridge respirator is recommended. Safety glasses with side shields. Chemical resistant gloves. Chemical resistant protective suit. Chemicals resistant boots. Don't need protective clothes at normal state.</p>

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Paste
Color	White
Odor	Slightly Odor
Odor threshold	No data
pH	7
Melting point/freezing point	Not applicable
Initial boiling point and boiling range	> 200°C
Flashing point	259°C
Evaporation rate	No data
Flammability (solid, gas)	No data
Upper/lower flammability or explosive limits :	No data
Vapor pressure	< 0.01Pa (at 20°C)
Solubility	0.009 kg/m ³ (at 23°C)
Relative density	1.3 – 1.4
Partition coefficient:	log Pow >3
n-octanol/water	
Auto-ignition temperature	No data
Decomposition temperature	No data

Viscosity Paste
 Formula mass (Mw) No data

10. STABILITY AND REACTIVITY

Chemical stability Stable in recommended conditions.
 Possibility of hazardous reactions It may cause exothermic polymerization with acid, amines or other epoxy.
 Condition to avoid Avoid to contact with strong oxidizing agent, heat, spark and flame. Don't apply heat to container.
 Incompatible materials Acid, amine, anhydride, oxidizing agent, chloroform, chloroform acid.
 Hazardous decomposition products May produce hazardous carbon oxides, chloro hydrogen.

11. TOXICOLOGICAL INFORMATION

Information on the likely routes of exposure
 by mouth May cause mouth irritation.
 by skin and contact May cause skin irritation.
 by eye and contact May cause eye irritation.
 Delayed and immediate effects as well as chronic effects from short- and long-term exposure
 Acute toxic
 Oral LD50 > 1,000mg/kg Rat
 Dermal LD50 > 20,000mg/Kg Rabbit
 Inhalation No data
 Skin corrosive/irritant Test material was slightly irritating to the skin in the key studies. For the skin, mean erythema and edema scores were 0.8 and 0.5, respectively. Skin irritation at rabbit (CERI Hazard 2008) R38 - Skin irritation (EU regulation 7th revision) Moderate irritation at rabbit (STANDARD DRAIZE TEST)
 Serious eye damage/eye irritation Test material was slightly irritating to the eye in the key studies. The mean eye score was 0.4. Eye irritation at rabbit (CERI Hazard 2008) Moderate irritation at rabbit (STANDARD DRAIZE TEST)
 Respiratory sensitization No data
 Skin sensitization In a local lymph node assay, the concentration that would cause a 3-fold increase in proliferation (EC-3) was calculated to be 5.7% which is consistent with moderate dermal sensitization potential. R43 (EU regulation 7th revision)
 - May causes sensitization in contact with skin.
 Carcinogenicity
 IARC No data
 NTP No data
 OSHA No data
 ACGIH No data
 Germ Cell Mutagenicity in vitro – Positive

Histidine reverse gene mutation, Ames assay			
Species/Cell Type	<i>Salmonella typhimurium</i> (TA98, TA100, TA1535, TA1537, and TA1538)		
Assay Code	SAL+	Results	Positive
IN VITRO CHROMOSOMAL ABERRATIONS			
Test System	CHL CELLS	Metabolic Activation	NONE
Dose	0.01-0.04 MG/ML		

	(TEST MATERIAL SOLVENT: DMSO)
Dose Regimen	24 HR CONTINUOUS TREATMENT
Results	POSITIVE (STRUCTURAL CHANGES)

	in vitro – Negative
	A number of in vivo assays were conducted and all were negative. These included, mouse, micronucleus, dominant ethal, chromosome, aberration, mouse spermatocytes and DNA damage/repair.
	activation (CCRIS)
Reproductive toxicity	No data
Specific target organ toxicity (single exposure)	No data
Specific target organ toxicity (repeated exposure)	No data
Aspiration hazard	No data

12. ECOLOGICAL INFORMATION

A. Aquatic and terrestrial ecotoxicity	
fish	LC50 1.41mg/L 96hr Oryzias latipes
crustacea	EC50 1.7mg/L 48hr
aquatic plant	No data
B. Persistence and degradability	
Persistence	log Kow 2.281
Resolvability	No data
C. Bioaccumulative potential	
Concentration	BCF 0.56 - 0.67
	(Exposure concentration:10ug/l, 5.6<= BCF=<6.8, Exposure concentration :1ug/l)
Bio resolvability	0(%) 28day
D. Mobility in soil	No data
E. Other adverse effects	No data

13. DISPOSAL CONSIDERATIONS

Disposal method	Dispose of contents/container to the regulations
Disposal considerations	No data

14. TRANSPORT INFORMATION

UN number	No UN transportation hazard classification available
UN proper shipping name	Not applicable
Transport hazard class	Not applicable
Packing group	Not applicable
Marin pollution	No data available
Special precaution which a user to be aware of or needs to complain with in connection with transport or conveyance either within or outside their premises	
Emergency procedure at fire	Not applicable
Emergency procedure at leakage	Not applicable

15. REGULATORY INFORMATION

Toxic Chemical Control Act	No data
Safety Control Dangerous Substance Act	Class4, Class4 petroleum
Wastes Control Act	No data

Other requirements in domestic and other countries

USA

USA (OSHA)	Not applicable
USA (CERCLA)	Not applicable
USA (EPCRA 302)	Not applicable
USA (EPCRA 304)	Not applicable
USA (EPCRA 313)	Not applicable
USA (Rotterdam Convention material)	Not applicable
USA (Stockholm Convention material)	Not applicable
USA (Substance Montreal Protocol)	Not applicable

EU

EU (Classification)	Xi Irritation N Environmental hazardous
EU (Risk Phrases)	R36/38 Irritating to eyes and skin. R43N May cause sensitization by skin contact. R51/53 Toxic aquatic organisms, may cause long-term adverse effects in the aquatic environment.
EU (Safety Phrases)	S2 Keep out of the reach of children. S28 After contact with skin, wash immediately with plenty of...(to be specified by the manufacturer). S37/39 Wear suitable protective clothing and eye/face protection. S61 Avoid release to the environment. Refer to special instructions/safety data sheets.

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 PT. Hissan Trading Indonesia.

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 user's own assessment of workplace risk, as required by other health and safety legislation.

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