

# SAFETY DATA SHEET

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

Product Name: **Estoflex Solar 801 P (Part B)**  
Application: Pure Polyurea Waterproofing  
Use advised against: No additional information available  
Company: **PT. HISSAN TRADING INDONESIA**  
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## 2. HAZARD IDENTIFICATION

### A. Hazard Risk Classification

- Health Hazard
  - Skin Corrosion/Irritation : Category 4
  - Serious eye damage/eye irritation : Category 2
  - Respiratory Sensitization : Category 2
  - Skin Sensitization : Category 1
  - Reproductive Toxicity : Category 1
  - Specific Target Organ Toxicity - Single Exposure : Category 1
  - Specific Target Organ Toxicity - Repeated Exposure : Category 3

### B. Label elements including precaution statements.

- Symbol:



- Signal word: Danger
- Hazard Risk Statement:
  - H302 - Harmful if swallowed
  - H311 - Toxic in contact with skin
  - H314 - Causes severe skin burns and eye damage
  - H318 - Causes serious eye damage
  - H335 - May cause respiratory irritation
- Precautionary Statement (Prevention)
  - P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
  - P264 Wash your handling region thoroughly after handling.
  - P270 Do not eat, drink or smoke when using this product.
  - P271 May cause fire or explosion; strong oxidizer
  - P273 Avoid release to the environment.
  - P280 Wear protective gloves/protective clothing/eye protection/face protection

(Response)

P302+P352 IF ON SKIN: Gently wash with plenty of soap and water.

P304+P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

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.

P314 Get medical advice/attention if you feel unwell.

P321 Specific treatment

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.

P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

P362 Take off contaminated clothing and wash before reuse.

P363 Wash contaminated clothing before reuse.

(Storage)

P403+P233 - Store in a well-ventilated place. Keep container tightly closed

P405 Store locked up

(Disposal)

P501 Dispose of contents/container (in accordance with applicable law)

C. Other Hazard Risk which are not included in the classification criteria (NFPA classification)

NFPA rating Chemical Name	Health	Fire	Reactivity
Diethyl Toluene Diamine	2	1	0
Poly(oxypropylene)diamine	3	1	1

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

- A. Single product or Mixture: Mixture  
 B. Common chemical name of the product: Polyurea resin (Liquid)

Chemical Name	Other Name	CAS No	Content
Diethyl Toluene Diamine	Benzen Diamine	68479-98-1	20 ~ 30
Poly(oxypropylene)diamine	poly(oxy(methyl-1,2-ethandil	9046-10-0	70 ~ 80

### 4. FIRST AID MEASURES

Eyes	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Skin	If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

Inhalation	<p>Remove contaminated clothing. Wash thoroughly with soap and water          Flush with plenty of water for at least 20 minutes          If you have minor skin contact, Prevent the spread of contaminated place.          IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.          IF exposed or concerned: Get medical advice/attention.          If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.</p>
Ingestion	<p>IF exposed or concerned: Get medical advice/attention.          IF necessary, don't administer artificial respiration by mouth-to-mouth. Use proper respiratory medical apparatus.          If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into lungs.          Never give anything by mouth to an unconscious person.</p>
Indication of immediate	<p>medical attention and notes for physician:          IF exposed: Call a POISON CENTER or doctor/physician and take emergency measures</p>

## 5. FIRE FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media:

Suitable extinguishing media

Foam, Carbon dioxide, Dry sand

Unsuitable extinguishing media

No data available

Large fire

Keep containers cool with water spray.

Move container from fire area if you can do so without risk, use suitable extinguishing agent

Specific hazards arising from the chemical:

Materials from pyrolysis:

May produce toxic fumes if burning

Fire and explosion hazards

Containers may explode when heated.

Special protective equipment and precautions for fire-fighters:

- In the event of fire, wear self-contained breathing apparatus.
- Stay against the wind so as not to inhale chemicals or material from pyrolysis.
- Move container from fire area if you can do so without risk, use suitable extinguishing agent.

## 6. ACCIDENTAL RELEASE MEASURES

A. Personal precautions, protective equipment and emergency procedures

- Avoid breathing dust/fume/gas/mist/vapours/spray
- Immediately clean leaked material and allows prevention of item 8
- Eliminate all sources of ignition
- Stop leak if you can do so without risk.
- Make prevent the spread covered with plastic sheets
- Avoid prohibited condition & materials

B. Environmental precautions and protective procedures

- Prevent spilled material from entering the ground, water and/or air by using appropriate containment methods.

C. Methods and materials for containment and cleaning up

- Stop leak. Dike and contain spill.
- Absorb with suitable material (e.g dry sand or soil) and clean with water and cleaner.

## 7. HANDLING AND STORAGE

- Handling : Do not handle until all safety precautions have been read and understood.  
 Avoid breathing dust/fume/gas/mist/vapours/spray.  
 Contaminated work clothing should not be allowed out of the workplace.  
 Keep container closed when not in use.  
 Avoid contact with skin and eyes.  
 Wash your handling region thoroughly after handling.  
 Avoid prohibited condition & materials.
- Storage : Keep away from heat.  
 Store in a well-ventilated place. Keep container tightly closed.

## 8. EXPOSURE CONTROL / PERSONAL PROTECTION

- A. Control parameters (e.g. occupational exposure limit values, biological limit values)

Division	KOSHA	ACGIH	Biological exposure limit
Diethyl Toluene Diamine	No data available	No data available	No data available
Poly(oxypropylene)diamine	No data available	No data available	No data available

※Describe exposure standards of single material, as there is no data available for mixtures

- B. Appropriate engineering controls  
 Use local ventilation or engineering controls as needed to maintain personnel exposure below the exposure limits.
- C. Personal Protective Equipment
- Respiratory protection : Wear respiratory protection tested and approved under appropriate government standards such as KOSHA
- Eye protection : Wear approved chemical safety glasses or goggles
- Hand protection : Wear approved chemical resistant gloves that may protect hands from direct contact with chemical
- Body protection : Wear approved chemical resistant cloths

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colored liquid
Odor	Aromatic odor
Odor Threshold	No data available
pH	No data available
Melting point/Freezing point	No data available
Initial boiling point/boiling range	No data available
Flash point (°C)	210
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	No data available

Vapor pressure	No data available
Solubility	Soluble in toluene, xylene, acetic acid
Vapor density	No data available
Specific gravity	0.97 ~ 1.07
Partition coefficient : n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity[25°C,mPa.s(cps)]	400 ~ 700
Molecular weight	No data available

## 10. STABILITY AND REACTIVITY

Chemical stability & Possibility of hazardous reaction	Stable at normal temperature and pressure conditions. Containers may explode when heated. May produce toxic fumes if burning
Conditions to avoid	Avoid all sources (e.g. Heat, flame, spark) of ignition. Avoid contact with materials prohibited to mix.
Incompatible material	No data available
Hazardous decomposition products	May produce irritative, toxic and corrosive gas if burning.

## 11. TOXICOLOGICAL INFORMATION

Information on the likely routes of exposure

Diethyl Toluene Diamine	No data available
Poly(oxypropylene)diamine	No data available

Health hazards information

- Acute toxic

	Oral	Dermal	Inhalation
Diethyl Toluene Diamine	LD50 472mg/kg	No data available	No data available
Poly(oxypropylene)diamine	LD50 242mg/kg	LD50 360mg/kg Rabbit	No data available

- Skin corrosion/irritation

Diethyl Toluene Diamine	No data available
Poly(oxypropylene)diamine	If on skin, it may occur light burn.

- Serious eye damage/eye irritation

Diethyl Toluene Diamine	50mg Rabbit - Mild irritation
Poly(oxypropylene)diamine	Rabbit - Mild eye irritation

- Respiratory sensitization

Diethyl Toluene Diamine	No data available
Poly(oxypropylene)diamine	No data available

- Skin sensitization



Diethyl Toluene Diamine	No data available
Poly(oxypropylene)diamine	No data available

○ Carcinogenicity

	KOSHA	IARC	OSHA	ACGIH	NTP	EU CLP
Diethyl Toluene Diamine	No data available	No data available	No data available	No data available	No data available	No data available
Poly(oxypropylene)diamine	No data available	No data available	No data available	No data available	No data available	No data available

○ Germ Cell Mutagenicity

Diethyl Toluene Diamine	No data available
Poly(oxypropylene)diamine	No data available

○ Reproductive toxicity

Diethyl Toluene Diamine	No data available
Poly(oxypropylene)diamine	No data available

○ Specific target organ toxicity (single exposure)

Diethyl Toluene Diamine	No data available
Poly(oxypropylene)diamine	Cause irritation

○ Specific target organ toxicity (repeated exposure)

Diethyl Toluene Diamine	No data available
Poly(oxypropylene)diamine	No data available

○ Aspiration hazard

Diethyl Toluene Diamine	No data available
Poly(oxypropylene)diamine	No data available

## 12. ECOLOGICAL INFORMATION

Aquatic and terrestrial ecotoxicity

	Fishes	Crustacea	Algae
Diethyl Toluene Diamine	No data available	No data available	No data available
Poly(oxypropylene)diamine	No data available	No data available	No data available

Persistence and degradability

	Persistence	Degradability
Diethyl Toluene Diamine	log kow 2.23	No data available

Poly(oxypropylene)diamine	No data available	No data available
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**Bio accumulative potential**

	Accumulation	Biodegradability
Diethyl Toluene Diamine	No data available	No data available
Poly(oxypropylene)diamine	No data available	No data available

**Mobility in soil**

Diethyl Toluene Diamine	No data available
Poly(oxypropylene)diamine	No data available

**Other adverse effects**

Diethyl Toluene Diamine	No data available
Poly(oxypropylene)diamine	No data available

### 13. DISPOSAL CONSIDERATIONS

**Disposal Methods**

Dispose of contents and containers in accordance with prescribed manners in the Wastes Management Act

**Disposal precaution (including the disposal method of contaminated container and packaging)**

Dispose of contents and containers in accordance with prescribed manners in the Wastes Management Act

### 14. TRANSPORT INFORMATION

UN number	2735
UN proper shipping name	Polyamines
Transport hazard class	8
Packing group	I
Marin pollution	No data available
Special precaution which a user to be aware of or needs to comply with in connection with transport or conveyance either within or outside their premises	
<input type="radio"/> Emergency action (fire): F-A	
<input type="radio"/> Emergency action (outflow): Not applicable	

### 15. REGULATORY INFORMATION

Industrial Safety & Health Act	Regulated hazardous substance (Article39, Enforcement Decree: article81)
Toxic Chemicals Control Act	Not applicable
Dangerous Material Safety Control Act:	Not applicable

Wastes Management Act	Designated waste
Other requirements in domestic and other countries	
○ Domestic Regulation	
Persistent Organic Pollutant Control Act	Not applicable
○ Other Countries Regulation	
EU Classification Code	No data available
EU Risk Phrases	No data available
EU Safety Phrases	No data available
OSHA regulation	No data available
CERCLA 103 regulation	No data available
EPCRA 302,304,313 regulation	No data available
Rotterdam Convention	No data available
Stockholm Convention	No data available
Montreal Protocol	No data available

## 16. OTHER INFORMATION

Also refer to the Safety Data Sheet (s) for information on other components of this product. 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 users own assessment of workplace risk, as required by other health and safety legislation.

Further copies of this Safety Data Sheet may be obtained from PT. Hissan Trading Indonesia.

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**SDS** : Estoflex Solar 801 P (Part B)  
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