

SAFETY DATA SHEET

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

Product Name: **ESTOFOAM PU SUPER**
Application: Polyurethane Grout, Water Stop
Company: **Denka Construction Solutions Malaysia Sdn Bhd**
Address: No. 18, Jalan Utas 15/7, Seksyen 15, 40200 Shah Alam, Selangor, Malaysia
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2. HAZARD IDENTIFICATION

A. Hazard Risk Classification

- Health Hazard
 - Skin Corrosion/Irritation : Category 2
 - Skin Sensitization : Category 1
 - Eye Damage/Irritation : Category 2
 - Respiratory Sensitization : Category 1
 - Specific Target Organ Toxicity (Single Exposure) : Category 3
 - Reproductive Toxicity : Category 1B
 - Chronic Aquatic Toxicity : Category 3

B. Label elements including precaution statements.

- Symbol:



- Signal word: Danger
- Hazard Risk Statement
 - H315 Causes skin irritation
 - H317 May cause an allergic skin reaction
 - H319 Harmful if inhaled
 - H334 May cause allergic or asthma symptoms or breathing difficulties if inhaled
 - H335 May cause respiratory irritation
 - H360 May damage fertility or the unborn child
 - H412 Harmful to aquatic life with long lasting effects

- Precautionary Statement
(Prevention)

- P264 Wash thoroughly after handling
- P280 Wear protective gloves
- P261 Avoid breathing dust/fume/gas/mist/vapor/spray
- P272 Contaminated work clothing shall not be allowed out of the workplace
- P285 In case of inadequate ventilation wear respiratory protection
- P271 Use only outdoor or in a well-ventilated area
- P201 Obtain special instruction before use
- P202 Do not handle until all safety precautions have been read and understood
- P281 Use personal protective equipment as required
- P273 Avoid release to the environment

(Response)

- P302 + P352 IF ON SKIN: Wash with plenty of soap and water
- P321 Specific treatment (Reference to supplemental first aid instruction)
- P362 Take off contaminated cloth and wash before reuse
- P333 + P313 If skin irritation and rash occur: Get medical advice/attention
- P305 + P351 IF IN EYES: Rinse cautiously with water for several minutes
- + P338
- P337 + P313 If eye irritation persists: Get medical advice/attention
- P304 + P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing
- P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor
- P312 Call a POISON CENTER or doctor/physician if you feel unwell
- P308 + P313 IF exposed or concerned: Get medical advice/attention

(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

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Content, %
Isocyanates	Trade secret	45
Special Polyol	Trade secret	38
Other Additives	Trade secret	17

4. FIRST AID MEASURES

- Eye contact: Immediately flush eyes with running water for a minimum of 15 minutes. If irritation persists, repeat flushing. Obtain medical attention IMMEDIATELY.
- Skin: Remove contaminated clothing. Wash affected areas thoroughly with a cleanser based on polyethylene glycol, corn oil or with plenty of soap and water. If irritation, redness, or a burning sensation develops and persists, obtain medical advice.
- Inhalation: Move to fresh air. Consult a physician after significant exposure. Oxygen or artificial respiration if needed.
- Ingestion: Call a physician. Immediately clean mouth with water. Never give anything by mouth to an unconscious person. Do not induce vomiting unless directed to do so by medical personnel.

Most Important Symptoms and Effects, Both Acute and Delayed:

The product causes irritation of eyes, skin and mucous membranes.

Indication of Any Immediate Medical Attention and Special Treatment Needed:

Artificial respiration and/or oxygen may be necessary.

5. FIRE FIGHTING MEASURES

- Suitable Extinguishing Media** : Dry Chemical, CO₂, water spray or alcohol-resistant foam
- Special Hazards** : Carbon oxide (CO, CO₂), nitrogen oxides (NO, NO₂ etc), hydrocarbons, isocyanate vapors and trace of hydrogen cyanide can be released in case of fire. Burning produces irritant fumes. Risk of explosion if heated under confinement.
- Advice for Firefighters** : Do not allow contaminated extinguishing water to enter the soil, ground or surface water
- Special Protective Equipment** : Standard procedure for chemical fires. In the event of fire, wear self-contained breathing apparatus. Safety glasses. Wear fire/ flame resistant/retardant clothing
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6. ACCIDENTAL RELEASE MEASURES

Advice for non-emergency personnel:

Evacuate person to safe areas. Do not breathe vapor or spray mist. Avoid contact with skin and eyes. Keep people away from spill/leak.

Advice for non-emergency responders:

Handle in accordance with industrial hygiene and practice. In the case vapor formation use respirator with an approved filter.

Environmental Precautions:

Prevent product from entering drains. Do not allow material to contaminated ground water system. Advise water authority if spillage has entered water course or drainage system. Contain and cover spill with dry sand or earth or any suitable material using shovel or broom. Keep in suitable container for disposal.

Decontamination Procedures:

Soak up inert absorbent material (sawdust, chemical binder based on calcium silicate hydrate, sand). Transfer to waste container after one hour and do not seal (evolution of CO₂!) Keep damp in a safe ventilated area for several days before seal. Spill area can be decontaminated with decontaminated solution by adding about 10 parts per part of isocyanate, with mixing:

Decontamination solution 1: 8-10% sodium carbonate and 2% of liquid soap in water

Decontamination solution 2: Liquid/yellow soap (potassium soap with – 15% anionic tenside – 20ml), water (700ml), Polyethylenglycol (PEG 400- 350ml)

7. HANDLING AND STORAGE

Handling:	Do not breathe dust/fume/gas/mist/vapor/spray. Use only in well ventilated areas Avoid contact with skin, eyes and clothing Wear appropriate respirator when ventilation is inadequate Eating, drinking and smoking are prohibited in working areas
Storage:	Keep containers tightly closed in a dry well-ventilated places Avoid moisture Keep containers dry and tightly closed to avoid moisture absorption and contamination Keep at temperatures between 15 - 25°C

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Exposure control:	Avoid contact with skin, eyes and clothing. Do not breathe dust/fume gas /mist/vapor/spray
Respiratory protection:	In the case of mist, spray or aerosol exposure, wear suitable personal respiratory protection and protective suit. Breathing apparatus with filter. Half mask with a particle filter P2 (EN 143). Respirator with combination filter for vapor/particulate.
Hand protection:	Rubber glove or protective gloves.
Eye Protection:	Protective goggles.
Thermal Hazard:	Risk of explosion if heated under confinement. Decomposes on heating. Carbon oxides (CO,CO ₂) nitrogen oxides (NO,NO ₂ etc) hydrocarbon, isocyanate vapor and hydrogen cyanide can be released in case of fire
Environmental Exposure Controls:	Should not be released into the environment. For environmental Protection remove and wash all contaminated protective.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Light brown
Odour	Aromatic
Boiling Point / Range (°C)	>300 °C
Flashing point (°C)	>200 °C
Vapour Pressure	>12hPA (at 50 °C)
Vapour Density	N/A
Specific Gravity	1.08 approx. (at 25°C)
Viscosity	400-600 mPa.s (25°C)

10. STABILITY AND REACTIVITY

Reactivity:	React with water. Generates carbon dioxide.
Stability:	Stable at room temperature.
Hazardous Reactions:	Hazardous polymerization may occur. Container can be pressurized by carbon dioxide due to reaction with humid air and / or water.
Condition to avoid:	Avoid high temperature. Avoid freezing. Decomposition under influence Of moisture is highly accelerated by heating. Keep from any possible Contact with water. Direct sources of heat
Material to avoid	Strong bases, water, amines, alcohols.
Hazardous decomposition product	No hazardous decomposition products when stored and handled correctly.

11. TOXICOLOGICAL INFORMATION

A- Chronic Toxicity	No Information Available
B- Inhalation	Inhalation of mist may cause irritation
C- Skin Contact	May cause slight irritation
D- Eye Contact	May cause slight irritation
E- Ingestion	No adverse effect, but large amount may cause nausea and vomiting
F- Long term effect	No information

12. ECOLOGICAL INFORMATION

Aquatic and terrestrial Eco-toxicity	: No information
Persistence and Biodegradability	: BOD – Not available COD – Not available

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method	The generation of waste should be avoided or minimized wherever possible. Disposal should be in accordance with local, state, provincial or national regulation. Can be incinerated, when in compliance with local regulations. Offer surplus and non-recyclable solutions to an established disposal company. Chemical waste, even small quantities, should never be poured down drains, sewers or waterways.
Contaminated Packaging	Empty containers should be decontaminated and either passed to a approved drum recycler or destroyed.

14. TRANSPORT INFORMATION

DOT (US)	
UN Number	3082
Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s
Class or Division	9
Packing group	III
Marine Pollutant	No
Poison Inhalation Hazard	No

IATA	
UN Number	3082
Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s
Class or Division	9
Packing group	III

IMDG	
UN Number	UN 3082
Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s
Class or Division	9
Packing group	III

15. REGULATORY INFORMATION

Any existing national regulation on the handling of isocyanate must be observed.

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.

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