

SAFETY DATA SHEET

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

Product Name: **ESTOPROOF 3P/4P**
 Application: Waterproofing sheet membrane
 Company: **Denka Construction Solutions Malaysia Sdn Bhd**
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2: HAZARDS IDENTIFICATION

The product is not classified as hazardous in accordance with the national regulation.

Health Risk	Acute and throat irritation are possible during the heat treatment and application of the product, especially in indoor areas, due to the inhalation of potentially hazardous substances such as gas and condensed fumes.
GHS Label Requirements	Not required
Safety Risk	The molten product may adhere to the skin and may cause burns. The presence of inflammable material may cause fire events.
Environmental Risks	Membrane may cause long-term adverse effects because their components are not biodegradable.

3: COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	CAS No.	%
Bitumen	64741-56-6	30 – 70
Calcium Carbonate	471-34-1	5 – 10
Polyolefin	9003-07-0	10 – 20
Mineral Granules	14808-60-7	1 – 10
Polyethylene Film	9002-88-4	1 – 10

4: FIRST AID MEASURES

Eyes:	If substances has got into eyes, wash out with water for at least 15 minutes and seek immediate medical attention. Do not pull product away from the eye. In case of irritation by fumes, wash out with cold water.
Skin:	In case of skin contact with molten product, immediately flush skin with plenty of water. Do not pull solidified product away from the skin by using solvents. Remove contaminated clothing immediately and seek immediate medical services.
Inhalation:	In case of long-term inhalation of fumes, particularly in indoors areas, move person to fresh air and call for medical assistance
Ingestion:	Seek immediate medical attention.

5: FIRE FIGHTING MEASURES

Extinguishing Media	: Carbon Dioxide, nebulized water, foam, dry chemical. Do not use direct stem of water to extinguish
Special Fire Fighting Procedure	: In the event of fire, use supplied air respirators with universal filters

6: ACCIDENTAL RELEASE MEASURES

No environmental threat is expected from a release.

7: HANDLING AND STORAGE

Condition for safe storage	: Protect material from heat and direct sunlight (temperature 0°C - 40°C) and keep away from electrical equipment. : Keep rolls in a vertical position and do not stack them. : Open flames are prohibited. : Keep extinguish media available.
Precaution for safe handling	: Provide appropriate ventilation when product is applying in indoor areas.
Precaution for use	: Membrane application should follow the Technical instruction provided. : In case of indoor applications, use the personal protective equipment. : During application, the material in the molten state can cause scalding. : Use of a freely burning flame, if unguarded may constitute a fire risk. : When flame or hot air are used for application purposes, the right heating temperature for sheathing with thermos-melt film covering on their face is indicated by the full retraction of the film, : For sand-covered or talc covered surfaces, the right temperature for surface adhesion is indicated by blackening and the appearance of shiny surface. : The right application procedure is reported by a molten mix along the line where the sheet overlap. : The molten mix should not be above 1-2cm. : Further removal of make-up has to be avoided because of possible damages to the mix and because it can produce useless emission of vapours. : During the application, the flames colour must be blue. A red flame indicates an excessive heating that must be avoided. : Where application involves the use of molten bitumen, a thermometer will enable a check to be kept on the temperature of the pot in which the bitumen is melted.

8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Control	: Normally the product doesn't generate hazardous substances. Open flames operation involved in installing bitumen-polymer waterproofing membrane may generate the dispersion of potentially hazardous substances, among which polycyclic aromatic compounds. Provide appropriate ventilation when the product is applied in indoor area in order to keep the exposure level below the require limits.
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Personal Protective equipment	During product applications, the following personal protective equipment is recommended.
Skin Protection	: Protective glove, long sleeve, safety shoes.
Eye Protection	: Safety glasses.
Respiratory Protection	: In case of indoor application, provide appropriate ventilation. : in case of inadequate ventilation system, use respiratory protection equipment. The use of particulate filter respiratory against solid and liquid particle is recommended.
Hygienist Measure	: Wash hand before every break and after the work shift : Keep work clothes separate from other clothing.

9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Solid
Appearance	Membrane Roll
Odour:	Slight bitumen odour
Boiling Point/Range (°C):	+470 ca(bitumen)
Melting Point/Range (°C):	> 100
Flash Point /Range, °C):	+230 approx (bitumen)
Flash Point (Solid, Gas)	calorific value = 9.000kcal/kg approx
Auto ignition (°C):	+485 approx (bitumen)
Explosive Properties (%):	NA
Vapour Pressure (kPa at 20°C):	Not determined
Water solubility	No
Lipid Solubility	Yes (organic solvents – oils)

10: STABILITY AND REACTIVITY

Stability	: Stable and not considered to be reactive under normal temperature and pressure
Reactivity	: This product is chemically inert.
Incompatible material	: Avoid contacts with oxidizing agents, especially under high temperature because the product may have isothermal reactions.

11: TOXICOLOGICAL INFORMATION

This product consists in a mixture of distilled bitumen and polyolefin and elastomer polymers and reinforcement. This product does not contain coal tar and asbestos. This product is not classified as hazardous.

Information on toxicological effects:

This product may be applied in adhesive cold or heat welded. Open flame operation involved in installing bitumen-polymer waterproofing membranes may generate the dispersion of potentially hazardous substances, among which polycyclic aromatic compounds. The exposure levels to these substance are widely below the normative limits for IPA fumes in metropolitan areas.

Acute health hazards : Eye irritation, skin irritation, nose and throat irritation

Repeated long-term exposure needs regular medical examination in accordance with the national regulation.

The product should be applied in accordance with the rules of hygiene, safety and good industrial practice, according to technical instruction provided by the manufacturer.

12: ECOLOGICAL INFORMATION

Not expected to be hazardous to the environment in its present form.

13: DISPOSAL CONSIDERATIONS

Dispose of the product in landfill. The product is classified as non-hazardous special waste in accordance with national regulations.

14: TRANSPORT INFORMATION

UNRTDG	Not classified as dangerous for transport.
IATA – DGR	Not classified as dangerous for transport.
IMDG – Code	Not classified as dangerous for transport.

15: REGULATORY INFORMATION

Label	: No labelling required
R – Phrases	: Not Applicable
S – Phrases	: Not Applicable
European Regulation	: Directive 67/548/CEE, Directive 1994/45/CE, Directive 91/155/CEE and subsequent modifications and integrations, Directive 92/32/CEE, Directive 93/67/CEE, Regulation 793/93, Regulation 1488/94, Directive 98/24/CE, Directive 2001/60/CE, Directive 2004/73/CEE, Regulation (CE) n, 1907/2006 (REACH), Directive 2008/98/CE

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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