

SAFETY DATA SHEET

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

Product Name: **ESTOTECT SWR**
Application: Water Repellent
Company: Denka Construction Solutions Malaysia Sdn Bhd
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2. HAZARD IDENTIFICATION

A. Hazard Risk Classification

- Health Hazard
 - Flammable Liquid : Category 3
 - Aspiration Hazard : Category 1
 - Aquatic Toxicity (chronic) : Category 3
 - Aquatic Toxicity (Acute) : Category 2

B. Label elements including precaution statements.

- Symbol:



- Signal word: Danger
- Hazard Risk Statement
 - H226 Flammable liquid and vapour.
 - H304 May be fatal if swallowed and enter the airways.
 - H315 Cause skin irritation.
 - H319 Causes serious eye irritation.
 - H402 Harmful to aquatic life.
 - H412 Harmful to aquatic life with long lasting effects.
- Precautionary Statement (Prevention)
 - P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 - P233 Keep container tightly closed.
 - P240 Ground/bond container and receiving equipment.
 - P241 Use explosion-proof electrical/ventilating/lighting equipment.
 - P242 Use only non-sparking tools.
 - P243 Take precautionary measures against static discharge.
 - P280 Wear protective gloves/protective clothing/eye protection/face protection.
 - P273 Avoid release to the environment.

- Response
P303+P361+P353

IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.

P370+P378
P301+P310
P331

In case of fire: Use appropriate media for extinction.
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting.
- Storage
P403+P235
P405

Store in a well-ventilated place. Keep cool.
Store locked up.
- Disposal
P501

Dispose of contents and container to appropriate waste site or reclaimer accordance with local and national regulations

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Composition	CAS Number	%
White spirit	64742-88-7	90 – 98
Silane-Siloxane	3648-18-8	1 – 5

4. FIRST AID MEASURES

Eyes:	Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.
Skin:	Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available.
Inhalation	Remove to fresh air. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.
Ingestion	If swallowed, do not induce vomiting: transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. If any of the following delayed signs and symptoms appear within the next 6 hours, transport to the nearest medical facility: fever greater than 101° F (37° C), shortness of breath, chest congestion or continued coughing or wheezing. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Give nothing by mouth. Do not induce vomiting.
Notes to physician	Defatting dermatitis signs and symptoms may include a burning sensation and/or dried/cracked appearance. Other signs and symptoms of central nervous system (CNS) depression may include headache, nausea, and lack of coordination. Respiratory irritation signs and symptoms may include a temporary burning sensation of the nose and throat, coughing, and/or difficulty breathing. If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath, and/or fever. Auditory system effects may include temporary hearing loss and/or ringing in the ears.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media	Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only. Do not discharge extinguishing waters into the aquatic environment.
Special Exposure Hazards	Carbon monoxide may be evolved if incomplete combustion occurs. Will float and can be reignited on surface water. The vapour is heavier than air, spreads along the ground and distant ignition is possible.
Unsuitable Extinguishing Media	Do not use water in a jet.
Special Protective Equipment	Wear full protective clothing and self-contained breathing apparatus

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Avoid contact with spilled or released material. Immediately remove all contaminated clothing. For guidance on selection of personal protective equipment see Chapter 8 of this Safety Data Sheet. For guidance on disposal of spilled material see Chapter 13 of this Safety Data Sheet.
Environmental Precautions:	Shut off leaks, if possible, without personal risks. Remove all possible sources of ignition in the surrounding area. Use appropriate containment (of product and firefighting water) to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers. Attempt to disperse the vapour or to direct its flow to a safe location for example by using fog sprays. Take precautionary measures against static discharge. Ensure electrical continuity by bonding and grounding (earthing) all equipment
Decontamination Procedures:	For small liquid spills (< 1 drum), transfer by mechanical means to a labelled, sealable container for product recovery or safe disposal. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely. For large liquid spills (> 1 drum), transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Retain as contaminated waste. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.

7. HANDLING AND STORAGE

General Precaution	Avoid breathing vapours or contact with material. Only use in well ventilated areas. Wash thoroughly after handling. On guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.
Handling:	Extinguish any naked flames. Do not smoke. Remove ignition sources. Avoid sparks. Avoid contact with skin, eyes, and clothing. Electrostatic charges may be generated during pumping. Electrostatic discharge may cause fire. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Restrict line velocity during pumping in order to avoid generation of electrostatic

discharge (≤ 1 m/sec until fill pipe submerged to twice its diameter, then ≤ 7 m/sec). Avoid splash filling. Do NOT use compressed air for filling, discharging, or handling operations.

Storage: Must be stored in a diked (bunded) well-ventilated area, away from sunlight, ignition sources and other sources of heat. Bulk storage tanks should be diked (bunded). Keep away from aerosols, flammables, oxidizing agents, corrosives and from other flammable products which are not harmful or toxic to man or to the environment. Storage Temperature: Ambient.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Occupational Exposure Limits:-

Substance	8 Hour TWA	STEL	Source/Other Information
White spirit	550 mgm-3	720 mgm-3	EH40

Engineering Control Measures: The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Adequate explosion-proof ventilation to control airborne concentrations below the exposure guidelines/limits. Eye washes and showers for emergency use.

Individual Protection Measures: Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

Respiratory Protection: If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for organic gases and vapours [boiling point $>65^{\circ}\text{C}$ (149°F)] meeting EN14387. Where air-filtering respirators are unsuitable (e.g., airborne concentrations are high, risk of oxygen deficiency, confined space) use appropriate positive pressure breathing apparatus.

Hand Protection: Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739, AS/NZS: 2161) made from the following materials may provide suitable chemical protection: Longer term protection: Nitrile rubber gloves
Incidental contact/Splash protection: PVC or neoprene rubber gloves.
Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.

Eye Protection: Mono goggles (EN166).

Chemical splash goggles (chemical mono goggles).

Body protection: Use protective clothing which is chemical resistant to this material. Safety shoes and boots should also be chemical resistant.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Colour	Colourless
Odour	Mild
pH (concentration)	Not applicable (non-aqueous)
Boiling Point / Range (°C)	155 – 190
Melting point / Range (°C)	Not applicable
Flash Point (closed °C)	38 - 40
Auto flammability (°C)	Autoignition temperature: 500
Explosive Properties (%)	Lower explosive limit (LEL): 0.6% Upper explosive limit (UEL): 8.0%
Oxidising Properties	Not determined
Vapour Pressure (kPa at 20 °C)	0.30
Relative Density (at 20 °C)	0.775 – 0.795
Water Solubility	Insoluble
Other data	Evaporation rate (n-butyl acetate = 1): 0.20

10. STABILITY AND REACTIVITY

Chemical stability:	Stable under normal conditions of use.
Conditions to Avoid:	Avoid heat, sparks, open flames and other ignition sources.
Incompatible materials:	Strong oxidising agents.
Hazardous Decomposition Products:	Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases, including carbon monoxide, carbon dioxide and other organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.
Possibility of hazardous reactions:	Data not available.
Sensitivity to Static Discharge:	Data not available.

11. TOXICOLOGICAL INFORMATION

Information on Toxicological effects

Basis for Assessment:	Information given is based on product testing, and/or similar products, and/or components.
Likely routes of exposure	Exposure may occur via inhalation, ingestion, skin absorption, skin or eye contact, and accidental ingestion.
Acute Toxicity	
Acute Oral Toxicity:	Expected to be of low toxicity: LD50 >5000 mg/kg , Rat
Acute Dermal Toxicity:	Low toxicity: No deaths at highest tested dose.
Acute Inhalation Toxicity:	Low toxicity: LC50 greater than near-saturated vapour concentration. , 4 hours, Rat
Skin corrosion/irritation:	Not irritating to skin. Prolonged/repeated contact may cause defatting of the skin which can lead to dermatitis.
Serious eye damage/irritation:	Not irritating to eye.
Respiratory Irritation:	Inhalation of vapours or mists may cause irritation to the respiratory system.
Respiratory or skin sensitization:	Not a skin sensitiser.
Aspiration hazard:	Aspiration into the lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.

Germ cell mutagenicity:	Not mutagenic.
Carcinogenicity:	Not expected to be carcinogenic. Tumours produced in animals are not considered relevant to humans.
Reproductive and Developmental Toxicity:	Not expected to impair fertility. Not a developmental toxicant.
Specific target organ toxicity – Single exposure:	May cause drowsiness or dizziness.
Specific target organ toxicity – Repeated exposure:	Kidney: caused kidney effects in male rats which are not considered relevant to humans' Central nervous system: repeated exposure affects the nervous system.

12. ECOLOGICAL INFORMATION

Acute Toxicity Fish:	Toxic: LL/EL/IL50 1-10 mg/l
Aquatic Invertebrates:	Toxic: LL/EL/IL50 1-10 mg/l
Algae:	Toxic: LL/EL/IL50 1-10 mg/l
Microorganisms:	Practically non-toxic: LL/EL/IL50 > 100 mg/l
Mobility:	Floats on water. Adsorbs to soil and has low mobility.
Persistence/degradability:	Readily biodegradable. Oxidises rapidly by photo-chemical reactions in air.
Bio accumulative potential:	Has the potential to bio accumulate.
Other Adverse Effects:	In view of the high rate of loss from solution, the product is unlikely to pose a significant hazard to aquatic life.

13. DISPOSAL CONSIDERATIONS

Material Disposal:	Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses. Waste product should not be allowed to contaminate soil or water.
Container Disposal:	Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Residues may cause an explosion hazard. Do not puncture, cut or weld uncleaned drums. Send to drum recoverer or metal reclaimer.
Local Legislation:	Disposal should be in accordance with applicable regional, national, and local laws and regulations. Local regulations may be more stringent than regional or national requirements and must be complied with.

TRANSPORT INFORMATION

Land (as per ADR classification): Regulated

Class:	3
Packing group:	III
Hazard identification no.:	30
UN No.:	1300
Danger label (primary risk):	3
Proper shipping name:	Turpentine substitute
Environmentally Hazardous:	Yes

IMDG

Identification number:	UN 1300
Proper shipping name:	TURPENTINE SUBSTITUTE
Class / Division:	3
Packing group:	III
Marine pollutant:	Yes

IATA (Country variations may apply)

UN No.:	1300
Proper shipping name:	Turpentine substitute
Class / Division:	3
Packing group:	III

Sea (Annex II of MARPOL 73/78 and the IBC code)

Pollution Category:	Y
Ship Type:	2
Product Name:	White spirit, low (15-20%) aromatic
Special Precaution:	Refer to Chapter 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport

14. REGULATORY INFORMATION

Local Regulations

Workplace Safety and Health Act & Workplace Safety and Health (General Provision) Regulations:
This product is subject to the SDS, Labelling, PEL and other requirements in the Act/ Regulations

Environmental Protection and Management Act and Environmental Protection:
This product is not subject to control under this Act/ Regulation.

Maritime and Port Authority of Singapore (Dangerous Goods, Petroleum and Explosives) Regulations:
This product is subject to the requirement of this regulation.

Fire Safety Act and Fire Safety (Petroleum & Flammable Materials) Regulations:
This product is subject to the requirement of this regulation.

Chemical Inventory Status

DSL:	Listed.
INV (CN):	Listed.
TSCA:	Listed.
EINECS:	Listed. 265-185-4
KECI (KR):	Listed. KE-25620

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

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