

## SAFETY DATA SHEET

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

Product Name: **ESTOCURE R90**  
Application: Concrete Curing Compound  
Company: Denka Construction Solutions Malaysia Sdn Bhd  
Address: No. 18, Jalan Utas 15/7, Seksyen 15, 40200 Shah Alam, Selangor, Malaysia  
Telephone: 03 – 55108810 Fax: 03 – 55100708

### 2. HAZARD IDENTIFICATION

#### A. Hazard Risk Classification

- Health Hazard
  - Flammable Liquids: Category 3
  - Aspiration Hazard: Category 1
  - Aquatic Toxicity (Chronic): Category 3
  - Aquatic Toxicity (Acute): Category 2
  - Skin Sensitization: Category 1

#### B. Label elements including precaution statements.

- Symbol:



- Signal word: Danger
- Hazard Risk Statement
  - H226 Flammable liquid and vapours
  - H304 May be fatal if swallowed and enters airways
  - H317 May cause an allergic skin reaction
  - 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 surface. 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
  - P261 Avoid breathing dust/fume/gas/mist/vapours/spray
  - P273 Avoid release to the environment
  - P280 Wear protective gloves/protective clothing/eye protection/face protection.

- Response  
P331 Do NOT induce vomiting  
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician  
P370 + P378 In case of fire: Use appropriate media for extinction.  
P303 + P361 + P353 IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing.  
Rinse skin with water/shower
- Storage  
P405 Store locked up  
P403 + P235 Store in well-ventilated place.

---

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

---

Ingredient	Cas No	%
White spirit	64742-82-1	60-70
Petroleum resin	64742-16-1	20-30
Additive	8050-09-7	0-5

All constituents of this product are listed in EINECS (European Inventory of Existing Commercial Chemical Substances) or EILINCS (European List of New Chemical Substances) or are exempt.  
Refer to Section 8 for Occupational Exposure Limits.

---

### 4. FIRST AID MEASURES

---

Eyes: Flush eye with copious 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: Obtain medical attention urgently. Do NOT induce vomiting. Beware of aspiration if vomiting occurs.

---

### 5. FIRE FIGHTING MEASURES

---

Suitable Extinguishing Media: Carbon dioxide, powder, foam or water fog – Do not use water jets.  
Special Exposure Hazards: Toxic fumes. For further information see Section 10.  
Special Protective Equipment: Self-contained breathing apparatus.

---

### 6. ACCIDENTAL RELEASE MEASURES

---

Personal Precautions: Immediately issue NO SMOKING and NO NAKED FLAMES warnings.  
Wear self-contained breathing apparatus and protective clothing.  
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 barrier.

Decontamination Procedures: Soak up with inert absorbent or contain and remove by best available means. Dispose of as waste.

---

## 7. HANDLING AND STORAGE

---

Handling:	Extinguish any naked flames. Do not smoke. Remove ignition sources. Avoid sparks. Avoid contact with skin, eyes, and clothing.
Storage:	Must be stored in a well-ventilated area, away from sunlight, ignition sources and other sources of heat. 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.
Product Transfer	Keep containers closed when not in use. Do not use compressed air for filling, discharging or handling.
Recommended material:	For containers, or container linings use mild steel, stainless steel. For container paints, use epoxy paint, zinc silicate paint.
Unsuitable material:	Avoid prolonged contact with natural, butyl or nitrile rubbers
Container advice:	Containers, even those that have been emptied, can contain explosive vapours. Do not cut, drill, grind, weld or perform similar operations on or near containers.
Other advice:	Ensure that all local regulations regarding handling and storage facilities are followed.

---

## 8. EXPOSURE CONTROL / PERSONAL PROTECTION

---

Occupational Exposure Limits:-

Material	Source	Type	ppm	mg/m3
1,2,4-Trimethyl benzene	ACGIH	TWA	25 ppm	
	SG PEL	TWA	25 ppm	123 mg/m3
1,3,5-Trimethyl benzene	ACGIH	TWA	25 ppm	
	SG PEL	TWA	25 ppm	123 mg/m3
Ethylbenzene	ACGIH	TWA	100 ppm	
	ACGIH	STEEL	125 ppm	
	SG PEL	TWA	100 ppm	434 mg/m3
	SG PEL	STEEL	125 ppm	543 mg/m3

**Additional information:** Adequate ventilation to control airborne concentrations below the exposure guidelines/limits

Material	Source	Hazard Designation
Ethylbenzene	ACGIH	Confirmed animal carcinogen with unknown relevance to humans

### Biological Exposure Index (BEI)

Material	Determinant	Sampling time	BEI	Reference
Ethylbenzene	Ethyl benzene in End-exhaled air	Sampling time: Not critical		ACGIH BEL (2008)
	Sum of mandelic acid and phenylglyoxylic acid in creatinine in urine	Sampling time: End of shift at end of work week	0.7 g/g	ACGIH BEL (2009)

#### Engineering Control Measures:

Adequate explosion-proof ventilation to control airborne concentrations below the exposure guidelines/limits. Eye washes and shower for emergency use.

#### Personal Protective Equipment:

In case of insufficient ventilation wear suitable respiratory equipment. Imperious gloves (eg PVC). Safety glasses / goggles. Change contaminated clothing immediately and cleans before re-use.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Colour	Brown
Odour	Aromatic
pH (concentration)	Not applicable (non-aqueous)
Boiling Point / Range (°C)	150 -200
Melting point / Range (°C)	Not applicable
Flash Point (closed °C)	40
Autoflammability (°C)	>200
Explosive Properties (%)	Lower explosive limit (LEL): 0.6% Upper explosive limit (UEL): 8.0%
Oxidising Properties	Not applicable
Vapour Pressure (kPa at 20 °C)	0.53
Specific gravity (at 25 °C)	0.85 – 0.95
Water Solubility	Insoluble
Other data	Evaporation rate (n-butyl acetate = 1): 0.13

## 10. STABILITY AND REACTIVITY

Stability:	Contain volatile solvent
Condition to avoid:	Any source of ignition. Direct sunlight.
Material to avoid:	Strong oxidising agents.
Hazardous Decomposition Product:	Thermal decomposition:- Oxides of carbon.

---

## 11. TOXICOLOGICAL INFORMATION

---

Information on Toxicological effects

### 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.
Skin sensitization:	Not a skin sensitizer.
Aspiration hazard:	Aspiration into the lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.
Gem cell mutagenicity:	Not mutagenic
Carcinogenicity:	Not expected to be carcinogenic. Tumours produced in animals are not considered relevant to humans.
Reproductive & 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 nontoxic: 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

---

Disposal must be in accordance with local and national legislation.

Material disposal:	Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of 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 material 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.

---

## 14. 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

---

## 15. REGULATORY INFORMATION

---

### Hazard Label Data

Risk Phrases: Flammable. Harmful if swallowed.

Safety Phrases: Do not breathe vapours/spray.  
Wear suitable gloves and eye/face protection.  
Use only in well ventilated areas.

EC Directives: Dangerous Preparation Directive, 88/379/EEC  
Dangerous Substance Directive, 67/548/EEC and adaptations  
Safety Data Sheet Directive, 91/155/EEC

Statutory Instruments: Chemical (Hazard Information and Packaging for Supply) (Amendment) Regs. 1996 (SI 1092)  
Control of Substances Hazardous to Health Regs. 1994 (SI 3246)  
Health and Safety at Work, etc Act 1974  
Environmental Protection Act 1990

Codes of Practice: Waste Management. The Duty of Care.  
Guidance Notes: Storage of packages dangerous substances [HS(G)71]

## 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.

**SDS** : Estocure R90  
**Date Printed** : 30/01/2024  
**Revision** : 05



**Denka Construction Solutions Malaysia Sdn Bhd**

(591858-U)

No. 18, Jalan Utas 15/7, Seksyen 15,  
40200 Shah Alam, Selangor Darul Ehsan, Malaysia  
Tel: +603 5510 8810 Fax: +603 5518 8202

[www.denka-cs.com](http://www.denka-cs.com)

## Limitation of Liability

The information contained in this brochure provides general advice for potential customers for DENKA about the basic properties and characteristics of various DENKA products (hereafter known as "the Product Information"). DENKA makes no warranty or representation as to the entire accuracy or completeness of the Product Information in the brochure. Nothing in this brochure will be deemed to create any express or implied warranty of merchantability, fitness for a particular purpose or infringement of any intellectual property rights. Each user of the Product Information and DENKA products assumes their own responsibility to properly determine the manner and suitability of use of the Product Information and DENKA products in its own operations. The user should exercise proper care in considering the Material Safety Data Sheet, Product Information and any other technical information provided by DENKA including descriptions of the conditions of use, warnings and other cautionary instructions. DENKA reserves the right to change the Product Information from time to time at its discretion and without notice.