

SAFETY DATA SHEET



ENGULF™

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1. SUBSTANCE/PREPARATION AND COMPANY IDENTIFICATION

Chemical name of active ingredient(s): A polyether-modified trisiloxane

Recommended use: A unique super penetrant and surfactant

Supplier: Etec Crop Solutions Limited

Emergency telephone number: 0800 Poison (0800 764 766) 24 Hours

2. HAZARDS IDENTIFICATION

Hazard Classification:

Classification of the substance or mixture
Classification according to the Regulation (EC) No 1272/2008 (GHS)
Acute toxicity, Category 4, Inhalation, H332
Skin irritation, Category 2, H315
Chronic aquatic toxicity, Category 3, H412

Classification according to directives 1999/45/EC and 67/548/EEC
Irritating to eyes.
Harmful by inhalation.
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Causes skin irritation.
Harmful to aquatic life with long lasting effects.

Required identification Details:

Precautionary Statements:
Avoid breathing dust/fume/gas/mist/vapours/spray.
Avoid release to the environment.
Wear protective gloves and eye/face protection.
Get medical advice/attention if you feel unwell.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/preparation Information on hazardous ingredients

| Common name | CAS No | % |
|--------------------------------|--------------|---------------|
| Polyether-modified trisiloxane | Trade secret | > 75 - <= 100 |

4. FIRST-AID MEASURES

Description of necessary first aid measures:

General advice: Remove soiled or soaked clothing immediately

Effects and symptoms

First-aid measures

Inhalation:

Ensure supply of fresh air. In the event of symptoms seek Medical treatment.

Ingestion:

In the event of symptoms seek medical advice.

Skin contact:

In case of contact with skin wash off with soap and water. Consult a doctor if skin irritation persists.

Eye contact:

In case of contact with eyes rinse thoroughly with plenty of water and seek medical advice

Notes to a physician:

Workplace facilities:

Required Instructions:

5. FIRE-FIGHTING MEASURES

HAZCHEM Code:

Extinguishing media :

Foam, carbon dioxide, dry powder, water spray.
Extinguishing media which shall not be used for safety reasons: Full water jet.

Hazardous thermal (de)composition products:

In the event of fire the following can be released: - Carbon monoxide, carbon dioxide, silicon dioxide.
Under certain conditions of combustion traces of other toxic substances cannot be excluded.

Protection of fire-fighters:

Use self-contained breathing apparatus and wear full protective suit.
Do not inhale explosion and/or combustion gases
Further information : Collect contaminated fire-fighting water separately, must not be discharged into the drains.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:

Use personal protective equipment.

Environmental precautions:

Do not allow to enter drains or waterways. Do not discharge into the subsoil/soil.

Methods for cleaning up:

Take up with absorbent material (e.g. sand, sawdust, universal binder)
Dispose of absorbed material in accordance with regulations.

7. HANDLING AND STORAGE

Handling:

Formation of aerosols or vapours during processing and

application should be prevented. Wear respiratory protection when spraying.

General protective measures:

Avoid contact with eyes and skin. Do not inhale aerosols

Hygiene measures: Do not eat, drink or smoke when working. Wash hands before breaks and after work.

Remove soiled or soaked clothing immediately.

Use barrier skin cream.

Storage:

Conditions for safe storage, including any incompatibilities:

Advice on protection against fire and explosion: No special measures required.

Further information: Keep container tightly closed

Packaging materials:

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Workplace Exposure Guidelines

Workplace exposure standards:

Application in the workplace:

Exposure Standards outside:

The workplace:

Engineering measures

Hierarchy of controls:

Exposure control measures:

No Hazard indication:

Ventilation specification:

Personal Protective Equipment

Detail specifications for equipment:

General protective measures:

Avoid contact with eyes and skin.

Do not inhale aerosols.

In case of formation of vapours/aerosols:

Short term: filter apparatus, Filter A-P2.

Impermeable protective clothing and a protective ointment is recommended.

Skin and body:

Rubber gloves, PVC gloves

Hands:

Goggles, or face shield if necessary

Eyes:

Do not eat, drink or smoke when working.

General hygiene:

Wash hands before breaks and after work.

Remove soiled or soaked clothing immediately.

Use barrier skin cream.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|--|--|
| Physical State: | Liquid |
| Colour: | yellow |
| Odour: | slight, typical |
| pH: | pH : 4 - 6 |
| Vapour Pressure: | |
| Vapour Density: | |
| Boiling Point: | not measured |
| Freezing/melting point: | not measured |
| Solubility: | soluble |
| Specific gravity or density: | Density: 1,010 - 1,030 g/cm ³ |
| Information for flammable material including: | |
| - Lower and upper flammability limits | |
| - Flashpoint (state test Method) | > 93 °C |
| Auto – ignition Temperature: | not measured |
| Octanol/water partition coefficient: | |
| Explosion properties: | not measured |
| Oxidation properties: | |
| Viscosity, kinematic: | 30 - 80 mm ² /s |

10. STABILITY AND REACTIVITY

Stability:
Conditions to avoid:
Materials to avoid:

Hazardous decomposition Products: None with proper storage and handling.

Hazardous polymerization:

Specific Data:

Hazardous reactions : No hazardous reactions with proper storage and handling.

11. TOXICOLOGICAL INFORMATION

Harmful by inhalation

Acute toxicity – Oral :

LD50 Species: rat Dose: > 5.000 mg/kg

Acute toxicity - Dermal :

LD50 Species: rat Dose: > 5.000 mg/kg

Acute toxicity – Inhalation:

LC50 aero. Species: rat Dose: 1,08 mg/l Exposure time: 4 h

Acute toxicity estimate dose:

11 mg/L

| | |
|--|---|
| Skin irritation : | Species: rabbit slight irritant |
| Eye irritation: | Slight irritant effect - does not require labelling |
| Sensitization : | Species: Guinea pig Classification: Did not cause sensitization On laboratory animals. non-sensitizing |
| Common name : | |
| Chronic toxicity : Carcinogenicity: | |
| Mutagenicity: | |
| Reproduction toxicity: | |
| Other information : | Non-mutagenic. Irritant to eyes. |

12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Toxicity to fish :

Toxicity to daphniae :

Toxicity to algae :

The ecotoxicological data refer to the undiluted 100 % product.

Ecotoxicity

| | |
|----------------------|--|
| Fish | LC50 Species: zebra fish Dose:18,1 mg/l Exposure time: 96 h |
| Daphnia magna | EC50 Species: Daphnia magna Dose: 28,3 mg/L Exposure time: 48 h |
| Algae | EC50 Species: Scenedesmus subspicatus Dose: 28,2 mg/L refer to biomass EC50 Species: Scenedesmus subspicatus Dose: 152,2 mg/l. Growth rate. The ecotoxicological data refer to the undiluted 100 % product. |

13. DISPOSAL CONSIDERATIONS

Methods of disposal :

Product: Ensure unwanted product is used by another operator strictly in accordance with label directions. Do not allow product to enter waterways, drains or sewers.

Packaging:

Ensure container is completely empty. Recycle through the Agrecovery programme. If this is not possible, burn if permitted and circumstances, especially wind direction allow,

otherwise bury in landfill.

14. TRANSPORT INFORMATION

International transport regulations

International transport regulations:

| | |
|-------------------------------|----------------------|
| UN number: | Not A Dangerous Good |
| Land - Road/Railway | Not A Dangerous Good |
| Proper shipping name : | Not A Dangerous Good |

15. REGULATORY INFORMATION

| | |
|--------------------------------|-----------------------------------|
| ACVM Registered Number: | Exempt from Registration |
| HSNO Approval Code: | HSR002503 [Group Standard] |

16. OTHER INFORMATION

Additional information:

Disclaimer

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