MATERIAL SAFETY DATA SHEET
KLARTAN

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

Product name: KLARTAN
Chemical name of active ingredient(s): Tau-fluvalinate
Code no.: R-10834.G
Supplier: Makhteshim Agan (UK) Limited
Unit 16, Thatcham Business Village Colthrop Way
Thatcham
Berkshire RG19 4LW
Tel No: 01635 860555      Fax No: 01635 861555

Emergency telephone number: National Chemical Emergency Centre
Tel: 01865 407333

2. COMPOSITION/INFORMATION ON INGREDIENTS

Preparation: Substance/preparation
Information on hazardous ingredients: *  
<table>
<thead>
<tr>
<th>Common name</th>
<th>CAS No.</th>
<th>%</th>
<th>EC Number</th>
<th>Symbol</th>
<th>R-Phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tau-fluvalinate</td>
<td>102851-06-9</td>
<td>24</td>
<td></td>
<td>Xn, N</td>
<td>R22-38-50/53</td>
</tr>
<tr>
<td>1,2-ethanediol</td>
<td>000107-21-1</td>
<td>1-10</td>
<td>203-473-3</td>
<td>Xn</td>
<td>R22</td>
</tr>
</tbody>
</table>

* Occupational Exposure Limit(s), if available, are listed in section 8

3. HAZARDS IDENTIFICATION

Human health hazards: Not hazardous.
Environmental hazards: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

4. FIRST-AID MEASURES

Effects and symptoms

First-aid measures

Inhalation: Remove victim to fresh air.
Ingestion: If swallowed, seek medical advice immediately and show this container or label; administer active carbon in a large amount of water. Never give anything by mouth to an unconscious person.
Do not induce vomiting.

Skin contact: Wash off with plenty of water and soap. Remove contaminated clothing.
Eye contact: Wash out with plenty of water. Consult an eye specialist.
Notes to a physician: There is no specific antidote. Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable: Dry chemical, water spray, foam, carbon dioxide.
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Not suitable: Direct water jets.
Special fire-fighting procedures: Dike fire control water for later disposal. Prevent all discharge into the environment.
Unusual fire-explosion hazards: Combustion products are toxic and/or irritant. Measures must be taken to prevent the contaminated extinguishing agent from seeping into the ground or from spreading uncontrollably.
Hazardous thermal (de)composition products: Toxic and/or irritating gas.
Protection of fire-fighters: Self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Wear suitable protective clothing, nitrile rubber gloves, safety glasses or face shield.
Environmental precautions: Do not discharge into drains or the environment.
Methods for cleaning up: Collect and contain as much free liquid as possible. Absorb remainder in sand or other inert material. Place into a clean container and cover container loosely for later disposal.

7. HANDLING AND STORAGE

Handling: Avoid contact with skin and eyes. Do not breathe fumes. Wear suitable protective clothing, nitrile rubber gloves, safety glasses or face shield.
Storage: Keep only in the original container at a temperature not exceeding 40 ºC. Keep away from food, drink and animal feedingstuffs.
Packaging materials: Coextruded polyethylene bottles; Drums with polyethylene liner.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits
Common name: 1,2-ethanediol
TLV (USA): 100 mg/m³; 39.4 ppm.
Personal protective equipment
Respiratory system: In case of insufficient ventilation, wear suitable respiratory equipment.
Skin and body: Wear suitable protective clothing and boots.
Hands: nitrile rubber gloves.
Eyes: Safety goggles or face shield.
Other information: Wash hands thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid.
Colour: White - yellowish.
Odour: Characteristic.
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Density : 1.07 - 1.11 g/cm³ (20°C).
Solubility in water : Miscible.
pH : 3 - 7 (1% soluzione).
Flash point : > 100°C (Closed cup).
Flammability : Not flammable (Combustible).
Explosion properties : Not explosive.

10. STABILITY AND REACTIVITY

Stability : Stable under normal conditions.
Conditions to avoid : Avoid temperatures above 40°C.
Materials to avoid : strong acids, strong bases.
Hazardous reactions : Not known.
Hazardous decomposition products : Emits toxic fumes.

11. TOXICOLOGICAL INFORMATION

Acute toxicity - Oral : LD₅₀ > 2000 mg/kg, rat.
Acute toxicity - Dermal : LD₅₀ > 2000 mg/kg, rat.
Acute toxicity - Inhalation : LC₅₀ > 5.5 mg/l (4 hours) rat - Tau-fluvalinate.
Skin irritation : Not irritating (rabbit).
Eye irritation : Not irritating (rabbit).
Sensitization : Guinea pig maximization test: Non sensitizer

12. ECOLOGICAL INFORMATION

Very toxic to aquatic organisms.

Ecotoxicity : Fish: LC₅₀ > 0.024 mg/l, 96 hours (rainbow trout).
              Algae: EC₅₀ = >100 mg/l (72 hours).
              Daphnia: LC₅₀ = 0.011 mg/l (48 hours)

13. DISPOSAL CONSIDERATIONS

Methods of disposal : Disposal according to the local legislation.

14. TRANSPORT INFORMATION

International transport regulations
UN number : 3082
Land - Road/Railway
   Proper shipping name : Environmentally hazardous substance, liquid, N.O.S. (Tau-fluvalinate
                         24%).
   ADR/RID Class : 9
   ADR/RID Item number : 11 (c)
   Packing group : III
Inland waterways
Sea
Proper shipping name: Environmentally hazardous substance, liquid, N.O.S. (Tau-fluvalinate 24%).
IMDG Class: 9
Packing group: III
Medical First Aid Guide (MFAG): None.
Emergency Schedules (EmS): None.

Sea
Proper shipping name: Environmentally hazardous substance, liquid, N.O.S. (Tau-fluvalinate 24%).
IATA-DGR Class: 9

National transport regulations
No additional national transport regulations are known to the supplier

15. REGULATORY INFORMATION

Classification: This product is provisionally labelled by the supplier in accordance with the suppliers understanding of the EU regulations.
Hazard symbol(s): N

Risk phrases: R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Safety phrases: S29: Do not empty into drains. S57: Use appropriate containment to avoid environmental contamination.
Contains: 240 g/l Tau-fluvalinate.

16. OTHER INFORMATION

Recommended use: Insecticide

The information contained in the Safety Data sheet is correct to the best of our knowledge at the date of issue. It is intended as a guide for the safe use, handling, disposal, storage and transportation and is not intended as a warranty or as a specification. The information relates only to the product specified and may not be suitable for combinations with other materials or in processes other than those specifically described herein.
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