

SAFETY DATA SHEET

11/1/07

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

Dow AgroSciences Limited

Latchmore Court
Brand Street
Hitchin
Herts SG5 1NH

Emergency Telephone Number:

+44(0)1553 761 251

Product Name: **TREFLAN*EC HERBICIDE (GF-353) MAPP 13232 / PCS No. 91438.**

LV70: 107765

Issue Date: July 02

Ref: GGB19

Revised: Nov. 04 (Section(s) 16)

2. COMPOSITION/INFORMATION ON INGREDIENTS**Dangerous components (see section 16 for complete R-phrases):**

			CAS	EC No
Trifluralin	480 g/L	Xi,N; R36-43-50/53	001582-09-8	216-428-8

Surfactants

plus

Aromatic hydrocarbon solvent	Balance	Xn,N; R10-37-51/53-65-66-67	064742-95-6	265-199-0
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Composition Code GF0353

3. HAZARDS IDENTIFICATION

Flammable. Irritating to respiratory system and skin. May cause sensitization by skin contact. Very toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment. Harmful: may cause lung damage if swallowed.

SAFETY DATA SHEET

11/1/07

TREFLAN*EC HERBICIDE (GF-353) MAPP 13232/PCS No. 91438

4. FIRST-AID MEASURES

Never give fluids or induce vomiting if patient is unconscious or is having convulsions.

Ingestion

Do not induce vomiting. Call a physician. The decision of whether to induce vomiting or not should be made by a physician.

Eye Contact

Irrigate with flowing water immediately and continuously for 15 minutes. Consult medical personnel immediately.

Skin Contact

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing. Seek medical attention if symptoms occur or irritation persists. Wash clothing before re-use.

Inhalation

Remove to fresh air. Consult a physician.

Note to Physician

This material contains a solvent. If lavage is performed, suggest endotracheal and/or oesophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. Supportive care. Treatment based on judgement of physician in response to symptoms of patient.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Water fog or fine spray. Carbon dioxide. Dry chemical powder. Foam.

Hazardous Combustion Products

During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating.

Protection of Firefighters

Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. If protective equipment is not available or not used, fight fire from a protected location or a safe distance.

Additional Information

Cool containers exposed to fire or heat with water spray. Contain run-off to prevent entry into water or drainage systems.

SAFETY DATA SHEET

11/1/07

TREFLAN*EC HERBICIDE (GF-353) MAPP 13232/PCS No. 91438

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

Wear appropriate safety clothing and eye/face protection (see Section 8).

Environmental Precautions

Do not wash into sewers or into any body of water. Advise water authority if spillage has entered water course or drainage system.

Methods of Cleaning Up

Soak up with sand or other non-combustible absorbent material and place into containers for disposal.

For large spills, barricade area and consult manufacturer.

If further assistance is required, telephone the emergency contact number.

Additional Information

Eliminate all ignition sources. Work upwind of any spill.

7. HANDLING AND STORAGE

Handling

Use good personal hygiene. Do not consume or store food in the work area.

Wash hands and exposed skin before eating, drinking or smoking and after work.

Storage

Product should be stored in compliance with local regulations.

Store in a cool, dry, well-ventilated place in the original container.

Protect from excessive heat and cold. Do not store near food, drink, animal feeding stuffs, pharmaceuticals, cosmetics or fertilisers. Keep out of reach of children.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

None established.

Engineering Controls

Good general ventilation should be sufficient for most conditions.

Local exhaust ventilation may be necessary for some operations.

Respiratory Protection

For most conditions, no respiratory protection should be needed.

However, when airborne exposure guidelines and/or comfort levels may be exceeded use an approved air-purifying respirator.

For emergency conditions, use an approved positive-pressure self-contained breathing apparatus.

SAFETY DATA SHEET

11/1/07

TREFLAN*EC HERBICIDE (GF-353) MAPP 13232/PCS No. 91438

Hand/Skin Protection

For brief contact, no precautions other than clean body-covering clothing and chemical resistant gloves should be needed. When prolonged or frequently repeated contact could occur, use protective clothing impervious to this material.

For emergency conditions: Use protective clothing impervious to this material. Selection of specific items will depend on operation.

Eye/Face Protection

Use safety glasses. Where contact with the liquid is likely, chemical goggles are recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: liquid
Colour	: red/orange
Odour	: faint aromatic
Rel. density (water=1)	: 1.056 g/cm ³ (20 deg.C)
Flash point	: 55 deg.C (EEC: A9 METHOD (CC))
Explosive properties	: not explosive
pH	: 5.68 (1% dilution)
Surface tension	: 27.4 mN/m (25 deg.C) (neat)
Self-ignition temperature	: 312 deg.C
Water solubility	: emulsifiable

10. STABILITY AND REACTIVITY**Chemical Stability**

Is stable under normal storage conditions.

Conditions to Avoid

Avoid high temperatures (at or near flash point), open flame, sparks and direct sunlight.

Materials to Avoid

Strong basic, acidic or oxidising materials.

Hazardous Decomposition Products

None under normal conditions of storage and use.

11. TOXICOLOGICAL INFORMATION**Ingestion**

Based on data for similar formulation.

Low toxicity if swallowed. The estimated oral LD₅₀ for rats is >2000 mg/kg.

SAFETY DATA SHEET

11/1/07

TREFLAN*EC HERBICIDE (GF-353) MAPP 13232/PCS No. 91438

Skin Contact

Based on data for similar formulation.
The estimated dermal LD₅₀ for rats is >2000 mg/kg.
Prolonged skin contact is unlikely to result in absorption of harmful amounts.

Based on data for the formulation.
May cause moderate and prolonged irritation.

Sensitisation

Assessment largely or completely based on data for active ingredient.
Skin contact may cause an allergic skin reaction.

Eye Contact

Based on data for the formulation.
May cause moderate eye irritation.

Inhalation

Assessment largely or completely based on information about the major ingredient(s).
No adverse effects anticipated by this route of exposure, but excessive exposure should be avoided.

Additional Information

Components: Not carcinogenic. Not mutagenic. Not toxic for reproduction.

12. ECOLOGICAL INFORMATION

Assessment largely or completely based on data for active ingredient.

Persistence and Degradability

Tightly bound to soil and is extremely resistant to leaching and elution.
Half-life in soils is dependent on soil type and conditions and is approximately 25-289 days.

Aquatic Toxicity

Material is very toxic to fish on an acute basis (LC₅₀ <1 mg/L).
Material is very toxic to aquatic invertebrates on an acute basis (EC₅₀ <1 mg/L).
Material is very toxic to algae (IC₅₀ <1.0 mg/l).

Avian Toxicity

Material is practically non-toxic to birds on an acute basis (LD₅₀ >2000 mg/kg).

SAFETY DATA SHEET

11/1/07

TREFLAN*EC HERBICIDE (GF-353) MAPP 13232/PCS No. 91438

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13. DISPOSAL CONSIDERATIONS

Very toxic to aquatic organisms. Do not contaminate ponds, waterways or ditches with chemical or used container. Wash out thoroughly. Container and washings must be disposed of safely and in accordance with applicable regulations. The preferred options are to send to licensed reclaimer or to permitted incinerators. Do not re-use container for any purpose.

14. TRANSPORT INFORMATION**Road & Rail**

Proper shipping name: FLAMMABLE LIQUID,N.O.S. (Aromatic Hydrocarbon and Trifluralin 48%)

Truck/Rail ADR/RID : 3 Label : 3

Classification Code : F1

Packing Group : III

Kemler Code : 30 UN Number: 1993

Tremcard Nr. CEFIC : 30GF1-III

Sea

Proper shipping name: FLAMMABLE LIQUID,N.O.S. (Aromatic Hydrocarbon and Trifluralin 48%)

Sea - IMO/IMDG Class: 3 UN Nr : 1993 Label: 3

Packing Group : III EMS : 3-07

Marine Pollutant : Y (Y/N)

Air

Proper shipping name: FLAMMABLE LIQUID,N.O.S. (Aromatic Hydrocarbon and Trifluralin 48%)

Air-ICAO/IATA Class : 3 UN Nr : 1993 Label: 3

Sub Class :

Packing Group : III Pack Instr. Passenger : 309

Pack Instr. Cargo : 310

Remarks : Sample shipment not allowed by mail.

15. REGULATORY INFORMATION

Hazard Symbol : Xn - Harmful
N - Dangerous for the Environment

SAFETY DATA SHEET

11/1/07

TREFLAN*EC HERBICIDE (GF-353) MAPP 13232/PCS No. 91438

Risk Phrases : Flammable (R10).
Irritating to respiratory system and skin (R37/38).
May cause sensitisation by skin contact (R43).
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment (R50/53).
Harmful: may cause lung damage if swallowed (R65).

Safety Phrases : Keep out of reach of children (S2).
Avoid contact with eyes (S25).
This material and its container must be disposed of in a safe way (S35).
Wear suitable protective clothing and gloves (S36/37).

Use appropriate containment to avoid environmental contamination (S57).
If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label (S62).

Refer to the Product Label for full local Regulatory Authority label precautions.

16. OTHER INFORMATION

Risk-phrases in Section 2

R10 - Flammable.
R36 - Irritating to eyes.
R37 - Irritating to respiratory system.
R43 - May cause sensitisation by skin contact.
R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65 - Harmful: may cause lung damage if swallowed.
R66 - Repeated exposure may cause skin dryness or cracking.
R67 - Vapours may cause drowsiness and dizziness.

The information herein is given in good faith and to the best of our knowledge but no warranty, express or implied is made