

SAFETY DATA SHEET

9/2/04

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

Dow AgroSciences Limited	Latchmore Court Brand Street Hitchin Herts SG5 1NH
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Emergency Telephone Number:	UK: 0870 600 2999
	Eire: 01 821 4999

Product Name: **TREFLAN* HERBICIDE : MAFF 05817 (PCS 91438)**

LV70: 20251	Issue Date: April 95	Ref: H891E
Revised: Feb. 04 (Section(s) 1, 14 & 15)		

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

			CAS	EC No
Trifluralin	45.9 %	Xi,N; R36-43-50/53	001582-09-8	216-428-8
Surfactant	<5 %	Xn; R20/21/22, Xi;R36/38,R10		
Methanol	<1 %	T; R23/24/25 - 39/23/24/25, F; R11	000067-56-1	200-659-6
Aromatic hydrocarbon solvent	40-50 %	Xn,N; R10-37-51/53-65-66-67	064742-95-6	265-199-0
Composition Code	000284			

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SAFETY DATA SHEET

9/2/04

TREFLAN* HERBICIDE : MAFF 05817 (PCS 91438)

3. HAZARDS IDENTIFICATION

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

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

Flush eyes thoroughly with water for several minutes. Remove contact lenses after initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

Skin Contact

Wash skin thoroughly with soap and water. Remove contaminated clothing. Wash contaminated clothing before reuse.

Inhalation

Remove to fresh air. Consult a physician.

Note to Physician

No specific antidote. Supportive care. Treatment based on judgement of physician in response to symptoms of patient. If lavage is performed, suggest endotracheal and/or oesophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach.

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

Wear protective clothing and use self-contained breathing apparatus.

SAFETY DATA SHEET

9/2/04

TREFLAN* HERBICIDE : MAFF 05817 (PCS 91438)

Additional Information

Violent eruption of containers may occur under fire conditions. Keep containers cool by spraying with water. Contain runoff to prevent entry into water or drainage systems.

6. ACCIDENTAL RELEASE MEASURES**Personal Precautions**

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

Environmental Precautions

Do not wash into sewers or into any body of water. Contain runoff to prevent entry into water or drainage systems. 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.

7. HANDLING AND STORAGE**Handling**

Use good personal hygiene. Avoid eye and skin contact. Do not consume or store food in the work area. Wash hands and exposed skin before eating, drinking or smoking and after work. Remove contaminated clothing immediately and wash skin area with plenty of water.

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 for the Active Ingredient(s).
Supplier recommendation for solvent is 50 ppm

Engineering Controls

Good general ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operations.

SAFETY DATA SHEET

9/2/04

TREFLAN* HERBICIDE : MAFF 05817 (PCS 91438)

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.

Hand/Skin Protection

For brief contact, no precautions other than clean body-covering clothing and chemical resistant gloves should be needed. Use chemical resistant gloves classified under standard EN 374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Nitrile. Examples of acceptable glove barrier materials include: Polyvinyl chloride ("PVC" or "vinyl"). Neoprene. Avoid gloves made of: Natural rubber ("latex").

When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374) is recommended.

NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all requisite workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), as well as the instructions/specifications provided by the glove supplier.

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	: clear liquid
Colour	: orange
Rel. density (water=1)	: 1.04 approx. (20 deg.C)
Boiling point/range	: >160 deg.C
pH	: 7.0 (50 % aq. sol.)
Water solubility	: emulsifiable
Flash point	: 49 deg.C
Surface tension	: 29.5 mN/m (25 deg.C)

SAFETY DATA SHEET

9/2/04

TREFLAN* HERBICIDE : MAFF 05817 (PCS 91438)

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

Low toxicity if swallowed. The oral LD50 for rats is >5000 mg/kg.

Skin Contact

The dermal LD50 for rats is >4000 mg/kg.

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

Prolonged or repeated exposure may cause skin irritation.

Sensitisation

Based on information for component(s):

Known or suspected skin sensitiser.

Eye Contact

May cause slight eye irritation.

Inhalation

No adverse effects anticipated by this route of exposure, but excessive exposure should be avoided.

Additional Information

Not carcinogenic. Not mutagenic. Not toxic for reproduction.

SAFETY DATA SHEET

9/2/04

TREFLAN* HERBICIDE : MAFF 05817 (PCS 91438)

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. Degradation occurs by volatilisation, photodegradation, aerobic and anaerobic mechanisms, as the more usual routes. 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<1mg/L).
Material is very toxic to aquatic invertebrates on an acute basis (EC50<1mg/L).

Avian Toxicity

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

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: 1993,FLAMMABLE LIQUID, N.O.S.(CONTAINS PETROLEUM DISTILLATE)
Truck/Rail ADR/RID : 3 Label :< >
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. (CONTAINS TRIFLURALIN 46.1% W/W AND PETROLEUM DISTILLATE)
Sea - IMO/IMDG Class: 3 UN Nr : 1993 Label: 3
Packing Group : III EMS : 3-07
Marine Pollutant : Y (Y/N)

SAFETY DATA SHEET

9/2/04

TREFLAN* HERBICIDE : MAFF 05817 (PCS 91438)

16. OTHER INFORMATION

Risk-phrases in Section 2

- R10 - Flammable.
- R11 - Highly flammable.
- R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed.
- R23/24/25 - Toxic by inhalation, in contact with skin and if swallowed.
- R36 - Irritating to eyes.
- R36/38 - Irritating to eyes and skin.
- R37 - Irritating to respiratory system.
- R39/23/24/25 - Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
- 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.