

SAFETY DATA SHEET

9/11/06

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

Dow AgroSciences Limited

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Brand Street

Hitchin

Herts SG5 1NH

Emergency Telephone Number:

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Product Name: **GRAZON* 90 HERBICIDE: MAPP 13117 (PCS 90698)**

LV70: 104801

Issue Date: Oct. 06

Ref: PSO44

Revised: New

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

			CAS	EC No
Clopyralid	5.8 %	Xi; R41, N; R51/53	001702-17-6	216-935-4
Triclopyr-2- butoxyethyl ester	32.3 %	Xn,N; R22-43- 50/53	064700-56-7	265-024-8
N-Methyl-2-pyrrolidone	<5 %	Xi; R36/38	000872-50-4	212-828-1
Calcium dodecylbenzenesulphonate	<5 %	C; R34	26264-06-2	247-557-8
Solvent naphtha (petro- leum), heavy aromatic	<5%	Xn,N; R51/53- 65-66	64742-94-5	265-198-5
Solvent naphtha (petro- leum), light aromatic	40-50%	Xn,N; R10-37- 51/53-65-66-67	64742-95-6	265-199-0

Composition Code

GF0223

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3. HAZARDS IDENTIFICATION

Flammable. Harmful if swallowed. Irritating to eyes, respiratory system and skin. May cause sensitisation by skin contact. Toxic to aquatic organisms, may cause long-term adverse 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 and/or transport to emergency facility immediately. The decision of whether to induce vomiting or not should be made by a physician.

Eye Contact

Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist.

Skin Contact

Immediately wash skin with soap and plenty of water. Remove contaminated clothing. Consult a physician if irritation persists. Wash contaminated clothing before re-use.

Inhalation

Remove to fresh air. Consult a physician.

Note to Physician

This material contains a mixture of solvents. No specific antidote. 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 fire extinguishers. 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.

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Protection of Firefighters

Wear protective clothing and use self-contained breathing apparatus.

Additional Information

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).

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.

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. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist.

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.

Additional Information

Containers, even those that have been emptied, can contain vapours. Do not cut, drill, grind, weld or perform similar operations on or near empty containers.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Clopyralid: Dow AgroSciences IHG is 10 mg/m³.

Triclopyr butoxyethyl ester: Dow AgroSciences IHG is 2 mg/m³ (skin).

1-methyl-2-pyrrolidone: Time-Weighted Average (TWA) is 103 mg/m³ (25 ppm).

Short Term Exposure Limit (STEL) is 309 mg/m³ (75 ppm).

Can Be Absorbed Through Skin.

1-methyl-2-pyrrolidone: Irish skin designation (has capacity to penetrate intact skin on contact and be absorbed into the body). Irish 8-hour OEL Time-Weighted Average (TWA) is 101 mg/m³ (25 ppm).

Solvent naphtha (petroleum), light aromatic: Supplier recommendation for solvent is 19 ppm.

Engineering Controls

Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

Respiratory Protection

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.

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.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: clear liquid
Colour	: yellow
Rel. density (water=1)	: 1.03 g/cm ³ (approx.)
Water solubility	: emulsifiable
Flash point	: 52 deg.C (PMCC)
pH	: 1.0 (neat)
Surface tension	: 30.5 mN/m (25 deg.C) (EEC A5 METHOD)
Kinematic viscosity	: 2.53 mm ² s ⁻¹ (40 deg C)
Autoignition temperature	: >400 deg.C (EEC: A15 METHOD)
Explosive properties	: not explosive

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. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. May cause central nervous system effects. LD₅₀, Rat 1,000 - 2,000 mg/kg

Skin Contact

Brief contact may cause slight skin irritation with local redness. May cause drying and flaking of the skin. Prolonged skin contact is unlikely to result in absorption of harmful amounts. The dermal LD₅₀ for rats is >5000 mg/kg.

Sensitisation

Has caused allergic skin reactions when tested in guinea pigs.

Eye Contact

May cause severe eye irritation. May cause slight corneal injury. Effects may be slow to heal.

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Inhalation

May cause respiratory irritation and central nervous system depression. Symptoms may include headache, dizziness and drowsiness, progressing to incoordination and unconsciousness.

Additional Information

Not carcinogenic. Not mutagenic. Not toxic for reproduction.

12. ECOLOGICAL INFORMATION

Assessment largely or completely based on data for active ingredient.

Persistence and Degradability**Clopyralid:**

The principle route of degradation is microbial and will occur readily.

Half-life in soils is dependent on soil type and conditions and is approximately 12-62 days.

Triclopyr butoxyethyl ester:

Rapidly hydrolysed in soil and water (with a half-life of less than 1 day) to the parent acid, which undergoes further degradation.

Half-life of the parent acid in soil and water is dependent on conditions and is approximately 6-52 days.

Aquatic Toxicity

Based on data for the formulation.

Material is toxic to aquatic organisms (LC₅₀/EC₅₀/IC₅₀ between 1 and 10 mg/L in most sensitive species).

Avian Toxicity

Based on data for the formulation.

Material is slightly toxic to birds on an acute basis (500 mg/kg <LD₅₀ <2000 mg/kg).

13. DISPOSAL CONSIDERATIONS

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.

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14. TRANSPORT INFORMATION**Road & Rail**

Proper shipping name: FLAMMABLE LIQUID,N.O.S.(Petroleum distillate and triclopyr)

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.(Petroleum distillate and triclopyr)

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

Packing Group : III EMS : F-E,S-E

Marine Pollutant : Y (Y/N)

Air

Proper shipping name: FLAMMABLE LIQUID,N.O.S.(Petroleum distillate and triclopyr)

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**Risk Phrases** : Flammable (R10).
Harmful if swallowed (R22).
Irritating to eyes, respiratory system and skin (R36/37/38).
May cause sensitisation by skin contact (R43).
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment (R51/53).
Harmful: may cause lung damage if swallowed (R65).
Vapours may cause drowsiness and dizziness (R67).**Safety Phrases** : Avoid contact with skin (S24).
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice (S26).
This material and its container must be disposed of in a safe way (S35).
Wear suitable gloves (S37).
Use appropriate containment to avoid environmental contamination (S57).

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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.
- R22 - Harmful if swallowed.
- R34 - Causes burns.
- R36/38 - Irritating to eyes and skin.
- R37 - Irritating to respiratory system.
- R41 - Risk of serious damage to eyes.
- 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.