

MATERIAL SAFETY DATA SHEET

6/8/02

1. PRODUCT AND COMPANY IDENTIFICATION

Supplier DOW AGRO SCIENCES (PTY) LTD
Private Bag X160,
Bryanston.
2021

EMERGENCY TELEPHONE NUMBERS**SPILLAGES:**

Emergency telephone (+27) 32 533 0716 or 082 887 8079
Fax (+27) 32 533 6134

POISONINGS:

National Poison Centre 021-9386084 (office hours).
021-9316129 (after hours).

UOFS Pharmacology/Toxicology information centre:
0824910160

Product Name: **STARANE* 200 EC HERBICIDE**

LV70: 81007

Issue Date: Aug. 92

Ref: A8T13

Revised: March 2010

2. COMPOSITION/INFORMATION ON INGREDIENTS**Components contributing to hazard:**

		CAS	EINECS
Fluroxypyr 1-methylheptyl ester	288 g/L	081406-37-3	279-752-9
Solvent plus inert ingredients	Balance		
Composition Code	EF0689		
Un no:	1993		

3. HAZARDS IDENTIFICATION

Flammable.

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 an attending physician.

Eye Contact

Irrigate immediately with water for at least 5 minutes.

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Skin Contact

Wash thoroughly with soap and water.

Inhalation

Remove to fresh air. Consult a physician.

Note to Physician

No specific antidote. Signs and symptoms of excessive exposure may be central nervous system effects such as headache, dizziness or anaesthesia. 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. Foam.

Hazardous Combustion Products

During a fire, smoke may contain the original material in addition to unidentified toxic and/or irritating compounds.

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.

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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 breathing vapours.

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.

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

Wear clean, long-sleeved, body-covering clothing. Use gloves impervious to this material.
For emergency conditions: Use protective clothing impervious to this material.

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	: dark brown
Rel. density (water=1)	: 0.97 g/cm ³ (approx.)
Water solubility	: emulsifiable
Flash point	: 47 deg.C (PMCC)

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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**Acute toxicity**

Based on data for similar formulation.

Ingestion

Single dose oral toxicity is considered to be low.
The estimated oral LD50 for rats is 3738.0 mg/kg male and 3162.0 females.

Skin Contact

The estimated dermal LD50 for rats is >2000 mg/kg.
A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts.
Essentially non-irritating to skin.

Eye Contact

May cause slight but prolonged irritation.

Inhalation

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

12. ECOLOGICAL INFORMATION

Assessment largely or completely based on data for active ingredient.

Persistence and Degradability

Rapidly hydrolysed to the parent acid. 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 14-56 days. There is no evidence of any significant leaching, therefore it is unlikely to contaminate ground water.

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Aquatic Toxicity

Acute LC50 for fish is reported to be greater than the maximum saturation level.
Acute LC50 for daphnids is reported to be greater than the maximum saturation level.

Avian Toxicity

Non-toxic to birds.
Acute oral LD50 for mallard duck is >2000 mg/kg.

13. DISPOSAL CONSIDERATIONS

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**UN no.:** 1993**ADR**

Proper shipping name: Flammable liquid, n.o.s. (contains petroleum distillate)

Class: 3

Classification code: F1

Packaging group: III

Label: 3

Hazard ID: 30

IMO/IMDG

Proper shipping name: Flammable liquid, n.o.s. (contains petroleum distillate)

Class: 3.3

Label: 3

Packing Group: III

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STARANE* 200 EC HERBICIDE**Air**

Proper shipping name: Flammable liquid, n.o.s. (contains petroleum distillate)

Class: 3
Label: 3
Packing Group: III
Pack Instr. Passenger: 309
Pack Instr. Cargo: 310
Tremcard Nr. CEFIC: 30GF1-III**Remarks:** Sample shipment not allowed by mail.**15. REGULATORY INFORMATION****Hazard Symbol :** None required**Risk Phrases :** Flammable. (R10)**Safety Phrases :** Keep out of reach of children. (S2)
Keep away from food, drink and animal feeding stuffs.
(S13)
When using do not eat, drink or smoke. (S20/21)
Avoid contact with eyes. (S25)**National Legislation:**

In accordance with the South African National Road Traffic Act, 1996 (Act 93 of 1996), the Fire Brigade Act, 1987 (Act 99 of 1987) and the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993).

16. OTHER INFORMATION**REFERENCES**

- The Pesticide Manual; Thirteenth Edition; Editor Clive Tomlin; Crop Protection Publications, 2003.
- IATA, Dangerous Goods Regulations, 47th Edition, Effective 1 January 2006.
- IMDG CODE, Vol. 2, 2004 Edition.
- ADR, Vol.1 1 January 2005
- SABS 0265:1999.
- ECB-ESIS (European chemical Substances Identification System).

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and is presented in good faith and believed to be correct. This information applies to the PRODUCT AS SUCH. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons in receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produces formulations(s) containing this product, it is the recipient's sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.

END OF MSDS.