

MATERIAL SAFETY DATA SHEET

4/2/14

GARLON* 480 EC HERBICIDE

Eye Contact

Irrigate immediately with water for at least 5 minutes.

Skin Contact

Immediately wash skin with soap and plenty of water. Remove contaminated clothing. Wash contaminated clothing before reuse.

Inhalation

Remove to fresh air. Consult a physician.

Note to Physician

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. Foam.

Hazardous Combustion Products

Nitrogen oxides. Hydrogen chloride. Phosgene. Dependent on the intensity of the fire.

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.

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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 eye and skin contact.

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**

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

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

For brief contact, no precautions other than clean body-covering clothing and impervious 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.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: liquid
Colour	: amber
Rel. density (water=1)	: 1.08 g/cm ³ (approx.)
Rel. vapour density (air=1)	: >1
Boiling point/range	: 150 deg.C
Water solubility	: emulsifiable
Flash point	: 64 deg.C

10. STABILITY AND REACTIVITY**Chemical Stability**

Is stable under normal storage conditions.

Conditions to Avoid

Avoid extremes of temperature. Closed containers may explode due to pressure build-up when subjected to excessive heat or intense fire.

Materials to Avoid

Strong basic, acidic or oxidising materials.

Hazardous Decomposition Products

None under normal conditions of storage and use.

11. TOXICOLOGICAL INFORMATION

Toxicity Class: WHO: III

Ingestion

Single dose oral toxicity is considered to be moderate.
The oral LD₅₀ for rats is 1378,0(female) - 1581,0(male).

Skin Contact

The dermal LD₅₀ for rats is >2000mg/kg.
A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts.
Short single exposure may cause skin irritation.

Sensitisation

Known or suspected skin sensitiser.

Eye Contact

May cause slight eye irritation.

Inhalation

No adverse effects anticipated by this route of exposure incidental to proper handling.

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12. ECOLOGICAL INFORMATION**Persistence and Degradability**

Assessment largely or completely based on data for active ingredient. 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. The half-life of one of the breakdown products (trichloropyridinol) in 15 soils ranged from 8 to 279 days. Triclopyr is not strongly adsorbed to soil particles and has the potential to be mobile

Aquatic Toxicity

Material is highly toxic to fish on an acute basis (0.1mg/L <LC50 <1.0mg/L)
Material is moderately toxic to aquatic invertebrates on a static acute basis (1mg/L <LC50 <10mg/L).

Avian Toxicity

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

Other Information

Non-toxic to bees.
Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5). Measured log octanol/water partition coefficient (Log Pow) is 4.09.

13. DISPOSAL CONSIDERATIONS

Harmful to fish. 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.:** 3082**ADR**

Proper shipping name: Environmentally hazardous substance, liquid, n.o.s (contains 61,6% d'ester de 2-butoxyethyl du triclopyr).

Class: 9
Classification code: M6
Packaging group: III
Label: 9
Hazard ID no: 90

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IMDG

Proper shipping name: Environmentally hazardous substance , liquid ,
n.o.s. (contains 61,6% d'ester de 2-butoxyethyl
du triclopyr)

Class: 9
Label: 9 Marine Pollutant
Packing Group: III

ICAO/IATA

Proper shipping name: Environmentally hazardous substance , liquid ,
n.o.s. (contains 61,6% d'ester de 2-butoxyethyl
of triclopyr)

Class: 9
Label: 9
Packing Group: III
Pack Instr. Passenger: 911
Pack Instr. Cargo: 911
Tremcard Nr. CEFIC: 30GM6-III

Remarks: Sample shipment not allowed by mail.

15. REGULATORY INFORMATION

Hazard Symbol : Xn - Harmful

Risk Phrases : Harmful if swallowed. (R22)
Irritating to skin. (R38)
May cause sensitisation by skin contact. (R43)

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 skin. (S24)
Wear suitable protective clothing, gloves and
eye/face protection. (S36/37/39)
In case of accident or if you feel unwell, seek
medical advice immediately (Show the label where
possible). (S45)

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**

- Applicable own physical and chemical, toxicity and ecotoxicity research studies.
- *The Pesticide Manual*; Eleventh Edition; Editor Clive Tomlin; Crop Protection Publications, 2003.
- *SABS 0265:1999*.
- Dangerous Goods Regulations, IATA, 47th Edition Effective 1 January 2006.
- IMDG CODE, VOL.2, 2005 Edition.
- ADR-Vol. 1, 1 January 2005.



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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.