

MATERIAL SAFETY DATA SHEET

4/2/14

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**SUPPLIER: DOW AGROSCIENCES (PTY) LTD**Private Bag X160,
Bryanston.
2021**SPILLAGES:****Emergency telephone** (+27) 32 5330716 or 082 887 8079
Fax (+27) 32 5336134**POISONINGS:****National Poison Centre** 021-9386084 (office hours).
021-9316129 (after hours).**Product Name: MAMBA* DMA 480 SL HERBICIDE**

LV70: 106647

Issue Date: Jan 08

Ref:

Revised: March 2010

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

			CAS	EC No
Glyphosate dimethylammonium salt	50.2 %	N; R51-53	34494-04-7	
Tallow alkylamine ethoxylate	<5 %	Xn,N; R22-41 -50/53	61791-26-2	
Inert ingredients	Balance			
Formulation code:	GF1280			

3. HAZARDS IDENTIFICATION

Irritating to eyes. May cause sensitization by skin contact. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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.

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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

Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly.

Inhalation

Remove to fresh air; if effects occur consult a physician.

Note to Physician

No specific antidote. Treatment based on judgement of physician in response to symptoms of patient.

5. FIRE-FIGHTING MEASURES**Extinguishing Media**

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.

Protection of Firefighters

Wear protective clothing and use self-contained breathing apparatus.

Additional Information

Contain runoff to prevent entry into water or drainage systems. Foam fire extinguishing system is preferred because uncontrolled water can spread possible contamination.

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.

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 preparation.

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.

Hand/Skin Protection

Wear clean, long-sleeved, body-covering clothing. Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Use chemical resistant gloves classified under standard EN 374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Nitrile. Polyvinyl chloride ("PVC" or "vinyl"). Examples of acceptable glove barrier materials include: Neoprene. Avoid gloves made of: PVA. 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.



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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	: yellow
Odour	: waxy
Rel. density (water=1)	: 1.21 g/cm ³ (20 deg.C)
pH	: 4.6 (1% aq.soln.)
Flash point	: >100 deg C

10. STABILITY AND REACTIVITY

Chemical Stability

Is stable under normal storage conditions.

Conditions to Avoid

None determined.

Materials to Avoid

Strong basic, acidic or oxidising materials.
Galvanized or unlined steel (except stainless steel) containers or spray tanks may produce hydrogen gas which may form a highly combustible gas mixture.

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 >5000mg/kg. No hazard anticipated from swallowing small amounts incidental to normal handling operations.

Skin Contact

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

Sensitisation

Has caused allergic skin reactions when tested in mice.

Eye Contact

May cause moderate eye irritation. Corneal injury is unlikely.

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Inhalation

No adverse effects are anticipated from single exposure to vapor. The aerosol LC₅₀ for rats is >5.63 mg/L for 4 hours.

Additional Information

Not classified for carcinogenicity, mutagenicity or reproduction toxicity.

12. ECOLOGICAL INFORMATION**Persistence and Degradability**

Assessment largely or completely based on data for active ingredient.

Tightly bound to soil and is extremely resistant to leaching and elution. 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 60 days.

Aquatic Toxicity

Based on data for the formulation.

Material is harmful to fish on an acute basis (10<LC₅₀<100mg/L).

Material is harmful to aquatic invertebrates on an acute basis (10<EC₅₀<100mg/L).

Material is toxic to algae (1<LC₅₀<10mg/L).

Avian Toxicity

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

Additional Information

LD₅₀ for bees is >100 microgram/bee. Material is practically non-toxic to bees on an acute basis.

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.

14. TRANSPORT INFORMATION

UN NO.: 3082

ADR-RID**Road & Rail**

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Glyphosate)

Class : 9

Label : 9

Classification Code : M6

Packing Group : III

Kemler Code : 90

Tremcard Nr. CEFIC : 90GM6-III

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IMDG (Sea)

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Glyphosate)

Sea - IMO/IMDG Class: 9 UN Nr : 3082 Label: 9
Packing Group : III EMS : F-A, S-F
Marine Pollutant : Yes

IATA (Air)

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Glyphosate)

Air-ICAO/IATA Class : 9 UN Nr : 3082 Label: 9
Sub Class :
Packing Group : III Pack Instr. Passenger : 914
Pack Instr. Cargo : 914

Remarks : Sample shipment not allowed by mail.

15. REGULATORY INFORMATION

Hazard Symbol : Xi - Irritant
N - Dangerous for the Environment

Risk Phrases : Irritating to eyes (R36).
May cause sensitization by skin contact (R43).
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment (R51/53).

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).

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 to own physical and chemical, toxicity and eco-toxicity research studies.
- UK DAS MSDS
- Pesticide Manual, C.D.S. Tomlin, Eleventh Edition, 1997
- Dangerous Goods Regulations, IATA, 48th Edition Effective 1 January 2007.
- IMDG CODE, VOL.2, 2005 Edition.
- ADR-Vol. 1, 1 January 2005.
- SABS 0265:1999.

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Risk-phrases in Section 2

R22 - Harmful if swallowed.

R41 - Risk of serious damage to eyes.

R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R51 - Toxic to aquatic organisms.

R53 - May cause long-term adverse effects in the aquatic environment.

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.