

**MATERIAL SAFETY DATA SHEET**

**SUBJECT:** MAMBA MAX 480 SL  
**DOCUMENT NO:** PS 057  
**EFFECTIVE DATE:** OCTOBER 2004  
**REVISION DATE:**  
**REVISION NO:**  
**PAGE:** 1 of 4  
**PRODUCT CODE:** -

**1. PRODUCT AND COMPANY IDENTIFICATION**

**SUPPLIER:** DOW AGROSCIENCES (PTY) LTD  
 Private Bag X160  
 Bryanston,  
 2021.

**EMERGENCY TELEPHONE NUMBERS**
**SPILLAGES:**

**Emergency telephone** (+27) 032 5330716 or  
 082 887 8079  
**Fax** (+27) 032 5336134

**POISONINGS:**

**National Poison Centre** 021-9386084 (office hours),  
 021-9316129 (after hours).  
 0800 333 444 (24 H)

**UOFS Pharmacology/Toxicology information centre:**  
 082 491 0160

**Trade Name** MAMBA MAX 480 SL  
 HERBICIDE.

**Use** A soluble concentrate, non-selective, systemic post-emergence herbicide with slight or no soil activity for the control of perennial and annual weeds in agriculture as well as in non-crop and industrial areas. Can also be used as a growth regulator to increase sucrose content of sugarcane or reduce growth of weeds.

**2. COMPOSITION / INFORMATION ON INGREDIENTS**

**Active ingredient** Glyphosate IPA Salt(480 g a.e/l)  
**Chemical Name** N-(phosphono methyl)glycine, Isopropyl-amine Salt.  
**CAS No.** 38641-94-0  
**Chemical Formula** C<sub>6</sub>H<sub>17</sub>N<sub>2</sub>O<sub>5</sub>P (Mol. wt.: 228.2)  
**NIOSH/RTECS no.** MC1075000  
**UN no.** 3082  
**SYMBOLS** N  
**RISK-PHRASE(S)** R51/53

**3. HAZARD IDENTIFICATION**

**Main hazard:** Dangerous for the environment.  
**Toxicity class:**  
 WHO Table 5; EPA III.  
 A low toxicity herbicide.

UNRESTRICTED - May be shared with anyone

**Flammability:** Not flammable

**Biological hazards:**

Dangerous for the environment.

**Eye contact:**

May cause mild eye irritation.

**Skin contact:**

No skin irritation.

**Ingestion:**

Minimally toxic.

**Inhalation:**

Minimally toxic by inhalation.

**Reproductive hazard:** See section 11.

**Carcinogenicity:** See section 11.

**Mutagenicity:** See section 11.

**Neurotoxicity:** See section 11.

**4. FIRST AID MEASURES**

Obtain the MSDS, and if available, the product container or label with you when calling a poison control center or doctor, or going for treatment.

**Eye:**

Wash immediately and continuously with flowing water for at least 30 minutes. Remove contact lenses after the first 5 minutes and continue washing. Obtain prompt medical consultation, preferably from an ophthalmologist.

**Skin:**

Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**Ingestion:**

High oral doses can cause central nervous system effects in animals.

Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Never give anything by mouth to an unconscious person.

**Inhalation:**

Prolonged excessive exposure may cause adverse effects. May cause respiratory irritation and central nervous system depression.

Move person to fresh air. If not breathing, call an ambulance, and then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask etc). Call a poison control center or doctor for treatment advice. If breathing is difficult, oxygen should be administered by qualified personnel.

**Advice to physician:**

There is no specific antidote.

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Maintain adequate ventilation and oxygenation of the patient. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

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**5. FIRE FIGHTING MEASURES**

**Flash Point:** Not applicable (when tested the water vapors extinguished the flame)

**Flammable Limits**

LFL: Not determined

UFL: Not determined

**Extinguishing Media:**

Foam, CO<sub>2</sub>, or Dry chemical

**Fire and Explosion Hazards:**

Foam fire extinguishing system is preferred because uncontrolled water can spread possible contamination. Toxic irritating gases may be formed under fire conditions.

**Fire-Fighting Equipment:**

Use positive-pressure, self-contained breathing apparatus and full protective equipment.

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**6. ACCIDENTAL RELEASE MEASURES****Personal precautions:**

Avoid contact with skin and eyes. Do not inhale fumes. For personal protection see Section 8.

**Environmental precautions:**

Do not allow to enter drains or water courses. When the product contaminates public waters, inform appropriate authorities in accordance with local regulations.

**Small spills:**

For small liquid spills, soak up with sand or other suitable noncombustible absorbent material, such as sawdust, and place into containers for subsequent disposal.

**Large spills:**

For large spills, contain liquid far ahead of spill. Contain spillage and contaminated water for subsequent disposal. Do not flush spilled material into drains. Keep spectators away.

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**7. HANDLING AND STORAGE****Handling:**

Harmful by inhalation or if swallowed. Avoid contact with eyes, prolonged contact with skin, and inhalation of spray and fumes. Use with adequate ventilation. Wash hands before eating, drinking, chewing gum, smoking or using the toilet. Remove clothing immediately if the herbicide gets inside.

Then wash skin thoroughly using a non-abrasive soap and put on clean clothing. Do not apply directly to areas where surface water is present, or to intertidal areas below the mean high water mark. Water used to clean equipment must be disposed of correctly to avoid contamination.

**Storage:**

Store in its original labeled container in shaded, well-ventilated area, away from heat. Do not store in galvanized steel or unlined steel containers. Not to be stored next to foodstuffs and water supplies. Keep out of reach of children and animals. Local regulations should be complied with.

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**8. EXPOSURE CONTROL / PERSONAL PROTECTION****Occupational exposure limits:**

TLV not established.

**Engineering control measures:**

It is essential to provide adequate ventilation. The measures appropriate for a particular worksite depend on how this material is used and on the extent of exposure. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire and other applicable regulations. If engineering controls and work practices are not effective in controlling exposure to this material, then wear suitable personal protective equipment including approved respiratory protection.

**PERSONAL PROTECTIVE EQUIPMENT:****Respirator:**

An approved respirator suitable for protection from dusts and mists of pesticides is adequate. Limitations of respirator use specified by the approving agency and the manufacturer must be observed.

**Clothing:**

Employee must wear appropriate protective (impervious) clothing and equipment to prevent repeated or prolonged skin contact with this substance.

**Gloves:**

Employee must wear appropriate synthetic protective gloves to prevent contact with this substance.

**Eye protection:**

The use of safety goggles is recommended.

*Emergency eye wash:* Where there is any possibility that an employee's eyes may be exposed to this substance; the employer should provide an eye wash fountain or appropriate alternative within the immediate work area for emergency use.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

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**Appearance:**

A clear golden yellow to amber liquid.

**Odour:**

Mild halide odour.

**Explosive properties:**

No thermal sensitivity.

**Oxidising properties:**

None.

**pH:**

4.77 (1 % solution).

**Relative density:**

1, 207 g/cm<sup>3</sup> at 20 °C

**Solubility in water:**

Will mix with water.

**Partition-coefficient in n-octanol / water:**

(Data for 62 % technical concentrate)

P<sub>ow</sub>: 0.0189 ± 0.0000629.

**Flash point:**

None. The product contains water.

**10. STABILITY AND REACTIVITY****Storage stability:**

Stable for 2 years under normal warehouse conditions.

**Incompatibility:**

Mixing with other products may reduce the activity of glyphosate.

**Hazardous decomposition products:**

Toxic oxides of carbon, nitrogen and phosphorus are released when the product decomposes on heating.

**11. TOXICOLOGICAL INFORMATION****Acute oral LD<sub>50</sub>:**

> 5 000 mg/kg in rats.

**Acute dermal LD<sub>50</sub>:**

> 5 000 mg/kg in rats.

**Acute inhalation LC<sub>50</sub> (4 h):**

> 5,23 mg/ℓ air for rats.

**Acute skin irritation:**

The product is non-irritating to skin (rabbit).

**Acute eye irritation:**

Mild irritant.

**Dermal sensitisation:**

The product is not considered to be a dermal sensitizer.

**Carcinogenicity:**

Animal studies did not detect any carcinogenic effects.

**Teratogenicity:**

Animal studies did not detect any teratogenic effects.

**Mutagenicity:**

Animal studies did not detect any mutagenic effects.

**12. ECOLOGICAL INFORMATION****ECOTOXICOLOGY:****Birds:**

Low toxicity to birds.

Acute oral LD<sub>50</sub>: > 2 000 mg/kg (bobwhite quail).

**Fish:**

Hazardous to fish.

LC<sub>50</sub> (96 hr): 35.9 mg/ℓ (rainbow trout)

**Bees:**

Non-toxic to bees.

Oral LD<sub>50</sub> (72 h): > 180 µg formulation/bee.

Dermal LD<sub>50</sub> (72 h): > 200 µg formulation/bee.

**Daphnia:**

Very low toxicity to *Daphnia magna*.

EC<sub>50</sub> (48 h): > 71.8 mg/ℓ.

**Algae:**

Toxic to *Selenastrum capricornutum*.

E<sub>b</sub>C<sub>50</sub> (72 h): 1.4 mg/ℓ.

E<sub>r</sub>C<sub>50</sub> (72 h): 1.8 mg/ℓ.

**Earthworms:**

Not toxic to earthworms.

LC<sub>50</sub> (14 d): > 1000 mg/kg of soil.

**Degradability:**

Microbial degradation is the major cause of loss from soil, with liberation of carbon dioxide. The principal metabolite is aminomethylphosphonic acid. In soil the half life of the product is less than 60 days.

**Mobility:**

Bioconcentration potential is low;

(B Bio-concentration potential is low (BCF is <100 or Low Pow <3).

The product is practically immobile and is unlikely to leach.

**Accumulation:**

The product shows little or no tendency to bioaccumulate and poses no long term threat to wildlife.

**13. DISPOSAL CONSIDERATIONS****Pesticide disposal:**

Waste resulting from the use of this product that cannot be reused or reprocessed should be disposed of in a landfill approved for pesticide disposal or in accordance with

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applicable local procedures. Hydrolysis under alkaline conditions is a suitable method to dispose of small quantities of the product. After hydrolysis, dilute and dispose of in pits or landfill. Comply with any local legislation applying to waste disposal.

**Package product wastes:**

Emptied containers retain vapour and product residues. Observe all labeled safeguards until container is cleaned, reconditioned or destroyed. Combustible containers should be disposed of in pesticide incinerators. Non-combustible containers must first be triple-rinsed with water, punctured and recycled or disposed of.

**14. TRANSPORT INFORMATION**

**UN NUMBER** 3082

**ADR/RID:**

Shipping name: Environmentally hazardous substance, liquid, n.o.s. (Glyphosate 480 g/l).

Substance ID no.: 3082

Hazard ID no.: 90

Label: 9

Item no.: 11<sup>0</sup>(c)

**IMDG/IMO:**

Packaging group: III

Label of class: 9

Shipping name: Environmentally hazardous substance, liquid, n.o.s. (Glyphosate 480 g/l).

**ICAO/IATA:**

Proper Shipping name: Environmentally hazardous substance, liquid, n.o.s (Glyphosate 480 g/l).

Class: 9

Hazard Label: Miscellaneous.

Packaging group: III

Passenger Aircraft: Y914 (max 30 kg)

914 (No Limit)

Cargo Aircraft: 914 (No Limit)

**Tremcard no:** 90GM6-III

**15. REGULATORY INFORMATION**

**Symbol :** N

**Indication of danger:** Dangerous to the environment.

UNRESTRICTED - May be shared with anyone

**Risk phrases :**

**R 51/53** Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Safety phrases:**

**S 2** Keep out of reach children.

**S 26** In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

**S 39** Wear eye/face protection.

**S 61** Avoid release to the environment.

**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).

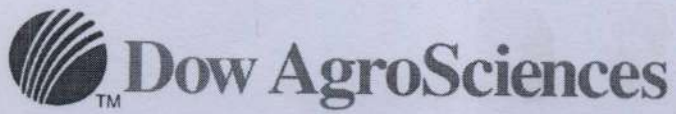
**16. OTHER INFORMATION**

**Compiled by:** Danie Fourie

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 are 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 recipients sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.

**REFERENCES**

- Applicable own physical and chemical, toxicity and ecotoxicity research studies.
- SABS 0265:1999
- The Pesticide Manual; Thirteenth Edition; Editor Clive Tomlin; Crop Protection Publications, 2003.
- ESIS: European Chemical Substance Information System.
- IMDG Code, Vol. 2, 2000 Edition.
- IATA Dangerous Goods Regulations, 45<sup>th</sup> Edition, Effective 1 January 2004.



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END OF MSDS.