

FARM-AG INTERNATIONAL (Pty) Ltd

P.O. Box 1523, Durban 4000

Head Office : 61 Marshall Dr., Old Mill Industrial Park, Mount Edgecombe **South Africa**

Registration Number: 2005/011761/07

Tel + 27 31 003 3486 • Fax + 27 31 502 5825

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION**Product Name:** FARMAG MSMA 720 SL**Creation Date:** April 2009**Revision Date:** March 2021**24 Hr Emergency Number:** 082 771 2712**In case of poisoning:**

Poison Information Centre: 082 446 8946

Tygerberg Hospital: (021) 931 6129

Poison Emergency Enquiries (021) 689 5227

In case of Spillage:

HAZMAT: 0800 147 112

SECTION 2 - COMPOSITION / INFORMATION ON INGREDIENTS**HAZARDOUS INGREDIENTS:** CAS NO. 2163-80-6

monosodium methylarsonate surfactant

Chemical name: sodium hydrogen methylarsonate (IUPAC)**Chemical family:** Organoarsenic (Pentavalent)**Chemical formula:** CH₄AsNaO₃ (Mol.wt:162.0)**NIOSH/RTECS:** PA2625000**UN no.:** Not regulated**Hazchem code:** Not applicable**EEC number:** Not available**Risk-phrase(s):** R22, R36/38**SECTION 3 - HAZARD IDENTIFICATION****Toxicity class:** WHO III; EPA III A moderately toxic herbicide**Main hazard:** Toxic. The pentavalent arsenicals are relatively water soluble and absorbable across mucous membranes.**Biological hazards:****Eye contact:** May cause eye irritation**Skin contact:** Minimally toxic to skin, may cause mild skin irritation**Ingestion:** Toxic by ingestion**Inhalation:** Minimally toxic**SECTION 4 - FIRST AID MEASURES AND PRECAUTIONS**

Symptoms of acute poisoning may appear within one hour of ingestion.

Inhalation: Remove source of contamination or move victim to fresh air. If breathing has stopped, perform artificial respiration and administer oxygen. Keep person warm and at rest. Treat symptomatically and supportively as and when required. Obtain medical advice if necessary.**Skin contact:** Remove contaminated clothing, shoes and leather goods. Gently wipe off excess chemical. Wash skin gently and thoroughly with water and non-abrasive soap. Seek medical attention if necessary. The product is not considered to be a dermal sensitiser, but persons who become sensitised may require specialised medical management with anti-inflammatory agents.**Eye contact:** Immediately flush the contaminated eyes with gently flowing lukewarm water or saline solution for 20 minutes, holding the eyelid(s) open. Seek medical attention if necessary.

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Ingestion: Have victim rinse mouth thoroughly with water. Remove by gastric lavage or emesis, followed by saline cathartic. Give oxygen if respiration is depressed. Administration of gastric lavage or oxygen should be performed by qualified medical personnel. Seek medical advice.

Advice to physician:

Dimercaprol is recommended as an antidote for arsenic poisoning. The antidote should only be administered by qualified medical personnel. Treat symptomatically and supportively as and when required. When large amounts have been ingested, gastric lavage or emesis, and the administration of activated charcoal with water may be indicated. Do not perform gastric lavage if patient is unconscious.

SECTION 5 - FIRE-FIGHTING MEASURES

Extinguishing Media: Small fires: Extinguish with carbon dioxide, dry powder, halon or alcohol-resistant foam.

Large fires: Carbon dioxide, dry powder, halon or alcohol-resistant foam. Water spray or fog can be used for or cooling of unaffected stock, but avoid the accumulation of polluted run-off from the site.

Fire / Explosion Hazards: Fire may produce irritating or poisonous vapours (arsenic oxides and oxides of sodium), mists or other products of combustion.

Firefighting: Remove container from fire area if possible. Contain fire control water for later disposal. Use a recommended extinguishing agent for the type of surrounding fire. Avoid inhaling hazardous vapours. Keep material away from water sources and sewers. Do not touch material and avoid breathing fumes. Keep upwind.

Fire Fighting Protective Equipment:

Fire-fighters and others that may be exposed should wear full protective clothing and self-contained breathing apparatus.

SECTION 6 - ACCIDENTAL RELEASE MEASURES (SPILLAGE)

Personal precautions: Avoid contact with skin and eyes. Do not inhale fumes. For personal protection see Section 8. In view of the toxicity induced in experimental animals on repeated exposure, proper care should be taken during occupational use to avoid ingestion of spray particles, and to prevent accidental contamination of food products and water.

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.

Methods for cleaning up: Small spills, soak up with sand or other suitable noncombustible absorbent material, such as sawdust, and place into containers for subsequent disposal. 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.

SECTION 7 - HANDLING AND STORAGE REQUIREMENTS**7.1 HANDLING:**

Harmful if swallowed. Avoid contact with eyes, prolonged contact with skin, and inhalation of 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.

7.2 STORAGE

Store in its original labelled container in a shaded, well-ventilated area, away from heat, sparks and other sources of ignition. Not to be stored next to foodstuffs and water supplies. Keep out of reach of children and animals. Local regulations should be complied with.

SECTION 8 - EXPOSURE CONTROL/PERSONAL PROTECTION

Occupation exposure limits: TLV (as As): 0.2 ppm; mg/m³ (ACGIH 1991-1992)

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Engineering 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 regulation. 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:**Respiratory system:**

An approved respirator suitable for protection from dusts and mists 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.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: A light brown liquid
Odour	: Slight sweetish odour
Flammability	: Non flammable. The product contains water
Explosive properties	: Non explosive
Flash point	: Not applicable
Corrosive properties	: Corrosive to mild steel, aluminium, copper and tin
pH	: 6
Density	: 1.50 g/ml
Storage stability	: Stable for up to 2 years under normal warehouse storage conditions. The product is stable after 14 days at 54°C (accelerated storage test), and after 3 months at both 25°C and - 3°C
Suspensibility	: Not applicable
Dilution stability	: Excellent

Foaming:

Does not foam unless large volumes of air are introduced into the spray mix with hydraulic or mechanical agitation. Foaming tests at various dilutions (667 – 3225 ml/100l) in distilled water and standard hard water showed maximum 5 ml foam after standing for 5 minutes.

Solubility in water	: Readily soluble in water
Solubility in organic solvents	: (data as for active ingredient) The product is soluble in methanol, but is insoluble in most organic solvents

SECTION 10 - STABILITY AND REACTIVITY**Stability:**

The product is stable to hydrolysis, but is decomposed by strong oxidising and reducing agents.

Incompatibility:

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Spray solutions containing this product should be mixed, stored or applied using aluminium, fibreglass or plastic-lined containers and equipment. The product is corrosive to mild steel. The product is compatible with many herbicides when used at normal rates.

However, a compatibility test is required before using with other products. Do not physically mix concentrate directly with other herbicides concentrates; always dilute first.

Hazardous decomposition:

Toxic fumes of arsenic oxides and toxic oxides of sodium are released when the product decomposes on heating

SECTION 11 - TOXICOLOGICAL INFORMATION

Mild Acute oral LD₅₀:	2000 mg/kg in rats
Acute dermal LD₅₀:	3150 mg/kg in rats
Acute inhalation LC₅₀ (4 h):	>20 mg/l of air
Acute skin irritation:	The product may cause mild skin irritation (rabbits). Probably of transient nature.
Acute eye irritation:	The product may cause mild eye irritation (rabbits)
Dermal sensitisation:	The product does not have any dermal sensitisation properties
Carcinogenicity:	Inadequate data available on organoarsenic products to determine product carcinogenicity. No human information available.

Teratogenicity / Reproductive hazard:

Animal studies did not detect teratogenic effects. No human information available.

Mutagenicity:

Animal studies did not detect mutagenic activity. No human information available.

SECTION 12 - ECOLOGICAL INFORMATION

MSMA can be highly toxic to grazing stock and wildlife. It must only be used with the utmost caution and under supervision. The user is therefore warned that stock (or wildlife) must not be allowed to graze treated areas until at least one month has passed after treatment of jointed and other cacti and two months after treatment of prickly pear. Do not treat prickly pear during dry periods when no other source of fresh food is available (usually June to September –in South Africa).

Degradability:

The product is metabolised by micro-organisms in the soil, the metabolites being CO₂ and arsenate. Product half-life is 55 days. Product degradation due to photodecomposition and volatilisation is negligible.

Mobility:

The product is absorbed by clay soils, but downward leaching may occur.

Accumulation:

The product shows little or no tendency to bioaccumulate

(Data for formulations containing higher amounts of the active ingredient i.e. 960 g/l)

ECOTOXICOLOGY:

Birds:	Low toxicity to birds LD ₅₀ : 425.2 g/kg (quail) LC ₅₀ (5 day dietary): 1667 ppm (quail) > 2866 ppm (mallard ducks)
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Fish:	Non toxic to fish LC ₅₀ (96 hr): > 100 mg/l (Common carp-Cyprinus carpio)
Daphnia: (data for MSMA active)	LC ₅₀ (48 h): 77.5 mg/l
Bees:	Toxic to bees. LD50 : 12.7061 µg a.i./bee
Earthworms:	LC50 (14 day): >2388.89 mg/kg silicon of MSMA 720 SL
Single cell green alga (Scenedesmus subspicatus):	Growth rate ErC50 : 55.4 Biomass EbC50 : 167.3

SECTION 13 - DISPOSAL CONSIDERATION**Disposal:**

Contaminated absorbents, surplus product (in diluted form), etc., should be buried in approved landfill. The disposal area should not be subjected to flooding and must be sited well away from streams, springs, dams and wells. The waste area must be securely fenced off and labelled with warning signs. Comply with any local legislation applying to waste disposal.

Package product wastes:

Emptied containers retain vapour and product residues. Observe all labelled safeguards until container is cleaned, recondition, or destroyed. Containers must be triple rinsed with water and should not be reused. Puncture and transport to a scrap metal facility for disposal in approved landfill site. Comply with any local legislation applying to disposal.

14. TRANSPORT INFORMATION

UN NUMBER:	3082
Packaging Group:	III
Class:	6.1
Shipping name:	Organoarsenic compound, N.O.S. (MSMA 720 g/l)

15. REGULATORY INFORMATION

Symbol	: X _n Xi
Indication of danger	: Harmful, Irritant
Risk phrases	: R 22 Harmful if swallowed R 36/38/38 Irritating to eyes, skin and respiratory system R 55 Toxic to fauna
Safety phrases	: S 2 Keep out of reach of children S 22 Do not breathe spray S 36/37/38 Wear suitable protective clothing, gloves and eye/face protection S 46 If swallowed, seek medical advice immediately and show this container and label

National legislation : In accordance with 91/155/EEC Directive and with French standard T 01-102 and the South African Occupational Health and Safety Act, 1993 (act. No. 85 of 1993)

16. OTHER INFORMATION

FARMAG MSMA 720 SL is the property of FARMAG INTERNATIONAL (PTY) LTD

Read the label before use or buy.

All information is given in good faith but without guarantee in respect of accuracy, and no responsibility is accepted for errors or omissions or the consequence thereof.

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