

# Target MSMA 6 Plus

Act No. 36 of 1947 / Wet Nr. 36 van 1947  
SA Reg. No. L5978

**READ ATTACHED PACKAGED LEAFLET BEFORE USE  
KEEP OUT OF REACH OF CHILDREN AND ANIMALS**

GROUP	Ø	HERBICIDE
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#### PRODUCT INFO:

A water-soluble concentrate selective systemic post-emergence herbicide for the control of certain weeds as indicated in sugarcane, cotton and lawns.



**WARNING**

#### PRODUK INFO:

'n Wateroplosbare konsentraat selektiewe sistemiese na-opkoms onkruidodder vir die beheer van sekere onkruid soos aangedui in suikerriet, katoen en grasperke.

#### HAZARD STATEMENTS:

May be harmful if swallowed.  
May be harmful in contact with skin.  
Harmful if inhaled.  
Harmful to Aquatic life with long lasting effects.

#### PRECAUTIONARY STATEMENTS:

Avoid breathing mist.  
Wash hands and exposed skin thoroughly after handling.

### Active Ingredient / Aktiewe Bestanddeel

**MSMA (organo arsenical) 720 g/ℓ MSMA (organiese arseen)**  
**Net (ℓ) SEE CONTAINER**

Registration Holder / Registrasiehouer



ICA International Chemicals (Pty) Ltd. • Reg. No. 2001/013319/07  
28 Planken Street • Plankenbrug Industrial • STELLENBOSCH • 7600 • SOUTH AFRICA  
Tel. +27-21 886 9812 • [www.icaonline.co.za](http://www.icaonline.co.za)

**Batch No.**  
**Date of Manufacture**

**SEE**  
**CONTAINER**

**Lot Nr.**  
**Datum van Vervaardiging**

**In case of poisoning, call the following number: Human Poison Helpline +27-861 555 777  
Emergency number: Griffon Poison Information Centre +27-82 446 8946**

UN No. Not regulated

T-MSMA-001

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## REGISTERED BY:

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28 Planken Street • Plankenbrug Industrial • Stellenbosch • 7600 • South Africa  
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## WARNINGS

May be harmful if swallowed.  
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Harmful to Aquatic life with long lasting effects.

## OBSERVE THE FOLLOWING WAITING PERIOD AFTER APPLICATION OF TARGET MSMA 6 PLUS:

CROP	Waiting period
Grazing by wildlife and stock	2 Months

Compliance with these withholding periods and application methods will ensure that residues do not exceed local maximum residue limits (MRL) but may not meet the import requirements of other countries. If the crop to be treated is intended for export, consult the relevant importer or exporting body regarding the use of this product, MRL and recommended withholding periods. Although **TARGET MSMA 6 PLUS** is regarded as crop-safe on most of the important cultivars, this does not mean that a more sensitive cultivar might be available in future. **TARGET MSMA 6 PLUS** must be tested on new cultivars prior to usage over big areas.

**RE-ENTRY INTERVAL:** Do not enter treated area until spray deposit has settled down/dried unless wearing protective clothing. Wash protective clothing after use.

Although this remedy has been extensively tested under a large variety of conditions, the registration holder does not warrant that it will be efficacious under all conditions, because the action and effect thereof may be affected by factors such as abnormal soil, climatic and storage conditions, quality of dilution water, compatibility with other substances not indicated on the label and the occurrence of resistance of the weeds against the remedy concerned as well as by the method, time and accuracy of application. The registration holder furthermore does not accept responsibility for damage to crops, vegetation, and the environment or harm to man/animal or for lack of performance of the remedy concerned, due to failure of the user to follow the label instructions or to the occurrence of conditions, which could not have been foreseen in terms of the registration. Consult the supplier in the event of any uncertainty.

## PRECAUTIONS

If medical advice is needed, have product container or label at hand.  
Avoid breathing mist.  
Wash hands and exposed skin thoroughly after handling.  
Do not eat, drink, or smoke when using this product.  
Use only outdoors or in a well-ventilated area.  
Avoid release to the environment.  
IF SWALLOWED: Rinse Mouth. Get medical help.  
IF ON SKIN: Get medical help.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical help.  
Dispose of contents and container in accordance with national regulations.  
Do not eat, drink or smoke during mixing or application of the product or before washing hands and face and before change of clothing.  
Wash contaminated clothes after use.  
Prevent contamination of food, feed, drinking water and eating utensils.  
Wash immediately after accidental skin contact with soap and clean water. In case of eye contact, immediately flush with plenty of clean water and get medical attention if necessary.  
Wear protective clothing: overalls, respirator, goggles, gloves and rubber boots when handling the concentrate and when applying the diluted spray mixture.  
Prevent drift onto other crops, grazing, rivers, dams and areas not under treatment.

**CLEAN APPLICATOR AFTER USE:** Special care and attention must be taken in cleaning all equipment used in the mixing and application of **TARGET MSMA 6 PLUS** to avoid damage to other crops:

- i. Drain the tank completely and flush the tank, boom, hoses and nozzles with ample amount of clean water.
- ii. Drain tank again and fill with clean water.
- iii. Add household ammonia to the rate of 1-litre (ℓ) to every 100 ℓ water in the tank and flush the tank, boom, hoses and nozzles with the ammonia solution.
- iv. Leave the solution in the tank for approximately 1 hour before draining the tank.
- v. Repeat steps ii to iv, and ensure tank is completely empty before reuse.
- vi. Remove nozzles and filters, and place in an ammonia solution (1 ℓ ammonia to 100 ℓ water) for an hour minimum.
- vii. Contaminated mixing equipment should be washed with ammonia solution and any contamination on the outside spraying equipment can be removed with clean water.
  - The applicator used should only be dedicated to applying herbicides.
  - Dispose of wash water in a responsible manner. Do not contaminate boreholes, rivers, dams, food and grazing.

**TRIPLE RINSE THE EMPTY CONTAINER AS FOLLOWS:** Invert the empty container over the spray or mixing tank and drain for at least 30 seconds after the flow has slowed down to a drip. Thereafter, rinse the empty container three times in succession with one quarter of the container volume fresh water and decant the rinsate into the spray or mixing tank. Puncture the triple rinsed container and dispose of via an approved collector or recycler (www.croplife.co.za). Do not bury, burn or donate the container to any other parties that may use it as a container for food or beverages.

**RELEVANT SUBSTANCES:**

MSMA, Monosodium methane arsonate (Cas no: 2163-80-6) Acute Oral Toxicity Category 3, H301; Acute Inhalation Toxicity Category 3, H331; Aquatic Acute Category 1, H400; Aquatic Chronic Category 1, H410 (72% w/v).

**FIRST AID MEASURES**

**In case of accident or if you feel unwell seek medical advice immediately and show this LABEL where possible.**

<b>INHALATION:</b>	Remove the victim from immediate source of exposure. Move victims to fresh air, if it can be done safely, and keep comfortable. If victim's breathing has stopped, perform artificial respiration. Wash victims face and mouth before giving artificial respiration. Use a pocket mask equipped with a one-way valve or other proper respiratory medical device. Administer oxygen if victim's breathing is difficult or irregular. Get medical help.
<b>SKIN:</b>	Remove and isolate contaminated clothing, shoes, and leather goods immediately and take a shower. Rinse affected areas (skin) immediately with non-abrasive soap or mild detergent and large amounts of running water for 15 – 20 minutes. Wash contaminated clothing before reuse. Get medical help if irritation develops and persists.
<b>EYES:</b>	Rinse eyes with clean running water for at least 15 – 20 minutes, while holding eyelids apart. Remove contact lenses after 5 minutes if present and easy to do. Continue rinsing while holding eyelids apart. Seek medical help if irritation continues.
<b>INGESTION:</b>	If swallowed, get medical help. DO NOT induce vomiting, unless instructed to do so by poison control center or doctor. Have person sip a glass of water if able to swallow. Never give anything by mouth to an unconscious person. If vomiting does occur, keep on giving fluids.
<b>NOTE TO PHYSICIAN:</b>	There is no specific antidote. All treatment should be based on observed signs and symptoms of distress in the patient.
<b>POTENTIAL HEALTH EFFECTS, ACUTE AND DELAYED:</b>	If ingested, gastric lavage may be indicated. Literature recommendations for arsenic poisoning calls for chelation therapy with BAL or d-penicillamine. Persons with sensitivity to penicillin may suffer an allergic reaction. BAL is recommended for people allergic to penicillin. Effects associated with acute MSMA exposure: Gastrointestinal (GI) adverse effects predominate, with vomiting, abdominal pain and rice-water or bloody diarrhoea being the most common. Other GI effects include inflammation, vesicle formation and eventual sloughing of the mucosa in the mouth, pharynx and oesophagus. Symptoms related to the central nervous system may begin with headache, dizziness, drowsiness and confusion.

**RESISTANCE WARNING**

**For resistance management:** TARGET MSMA 6 PLUS is a group code Ø herbicide. Any weed population may contain individuals naturally resistant to TARGET MSMA 6 PLUS and other group code Ø herbicides. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds may not be controlled by TARGET MSMA 6 PLUS or any other group code Ø herbicides.

To prevent or delay herbicide resistance:

- Avoid exclusive repeated use of herbicides from the same herbicide group code. Alternate or tank mix with registered products from different herbicide group codes.
- For tank mixing or alternation with products in other herbicide group codes, refer to individual product labels.
- Integrate other forms of control methods (chemical, cultural, biological) into weed control programmes.
- Where weed resistance has been confirmed or previously suspected do not apply TARGET MSMA 6 PLUS alone but in combination with a suitable partner from different herbicide group codes.
- The directions for use must be accurately followed as sub-standard applications of TARGET MSMA 6 PLUS or (group Ø) herbicides will lead to inferior weed control and may assist in development of herbicide resistance.
- For specific information on resistance management contact the registration holder of this product or contact your local supplier.

**MODE OF ACTION**

MSMA (Organo arsenical) is part of the chemical family "other" (HRAC group Ø), which includes active ingredients for which the mode of action is unknown. After application, it is quickly taken up by the leaves and stems of the broadleaf weed and grass, resulting in death within 10 days.

**USE RESTRICTIONS**

Apply during warm, sunny weather when weeds are actively growing.

**DIRECTIONS FOR USE – use only as directed**

COMPATIBILITY:

The compatibility of TARGET MSMA 6 PLUS with other products depends on the formulations of the respective products as well as the quality of the spray water to be used. It is possible that formulations may change from time to time. It is therefore recommended that a small-scale physical compatibility test be done prior to the tank mixture being made.

MIXING INSTRUCTIONS:

**SUGARCANE:**

When used in tank mixtures, TARGET MSMA 6 PLUS and the respective additional herbicide products must be thoroughly mixed with water in separate containers. Fill the spray tank with half the required amount of water and with the pump and agitator operating, add the recommended amount of premixed diuron or ametryn. Refer to the respective labels for the correct mixing procedure of diuron or ametryn. TARGET MSMA 6 PLUS should be premixed in 15 to 25 ℓ of water in a clean, open headed bucket. The premix should be added to the spray tank after the diuron or ametryn. Rinse the pre-mixing bucket with water and pour the rinsate into the spray tank and fill the spray tank to the desired volume. The spray solution should not be left in the tank overnight.

**COTTON:**

Avoid spraying cotton foliage by using flood jet nozzles at low pressure mounted on drop arms or skids. The use of shields running on either side of the crop row is recommended. Foliage of cotton plants which comes into contact with the spray, may turn red but should develop normally.

**Avoid contact of the spray mixture with the growing points of the cotton plants at all times.**

**LAWNS (*Cynodon dactylon* only):**

Do not use on kikuyu or swazigrass as bad scorching may occur. Do not treat new lawns until they have been mowed at least three times. Under hot and dry conditions grass may temporarily turn yellow. These symptoms will disappear with mowing. Apply to young actively growing weeds.

**CLEAN APPLICATOR AFTER USE:** Spraying equipment must be thoroughly flushed out at the end of the spraying operation as per the method described under **PRECAUTIONS**.

**APPLICATION:**

- **TARGET MSMA 6 PLUS** should be applied by means of a tractor mounted boom sprayer or knapsack sprayer equipped with Teejet-type flat fan nozzles or Spraying Systems TK5 type flood jets which should deliver 300 to 500 ℓ spray mixture per hectare (3 to 5 ℓ/100 m<sup>2</sup>). Efficient agitation of the spray mixture is essential.
- Ensure that application equipment is correctly calibrated and that only clean water is used. A uniform and even distribution of the spray material and thorough wetting of the weed foliage is essential for good results.
- Apply during warm, sunny weather when weeds are actively growing. Best results are obtained at air temperatures above 21 °C.
- Do not apply if the weeds are wet or if rain is expected within 24 hours after application as the effect may be diminished.
- Prevent overdosing by ensuring that swaths do not overlap and by closing the nozzles when starting, moving slowly, turning and stopping.

All spray applications must be made with suitable equipment that is in good working order and correctly calibrated to give the desired coverage for that particular method of application.

APPLICATION TABLE		
CROP	DOSAGE RATE	REMARKS
SUGARCANE	6 ℓ/ha or 4 ℓ/ha plus 3 ℓ/ha diuron 800 g/ℓ or 4 ℓ/ha plus 3 – 4 ℓ/ha ametryn 500 g/ℓ	Apply as directed post-emergence inter row spray over the weeds. The treatment can cause cane scorch, but the danger of this occurring will be minimized if the spray is directed to avoid wetting of the leaves of the canes. Use higher rates of mixtures for severe weed infestation or less susceptible weed stages.
COTTON	3 ℓ/ha	Apply in 300 ℓ water/ha as a directed spray when cotton is 8 cm high up to first bloom. Should re-growth occur, a second application may be necessary at the same rate, 1 – 3 weeks after the first application.  Do not apply <b>TARGET MSMA 6 PLUS</b> more than twice per season.
LAWNS ( <i>Cynodon dactylon</i> only)	70 mL/10 ℓ water	Lawns should not be mowed for four (4) days prior to treatment. Apply 1 ℓ of mixture per 10 m <sup>2</sup> lawn. Repeat after 21 days if necessary.

WEEDS CONTROLLED BY TARGET MSMA 6 PLUS:	
<b>Young broadleaf weeds</b>	
<i>Acanthospermum hispidum</i>	Upright starbur
<i>Amaranthus hybridus</i>	Cape pigweed
<i>Bidens bipinnata</i>	Spanish blackjack
<i>Bidens pilosa</i>	Blackjack
<i>Commelina benghalensis</i>	Bengal wandering Jew
<i>Portulaca oleracea</i>	Purslane
<b>Nutsedges</b>	
<i>Cyperus esculentus</i>	Yellow nutsedge = Yellow watergrass
<i>Cyperus rotundus</i>	Purple nutsedge = Red watergrass (in lawns and turf only)
<b>Grasses</b>	
<i>Digitaria sanguinalis</i>	Crab fingergrass
<i>Digitaria didactyla</i>	Swaziland fingergrass
<i>Eleusine indica</i>	Goose grass
<i>Panicum schinzii</i>	Sweet buffalo grass
<i>Panicum maximum</i>	Common buffalo grass
<i>Sorghum verticilliflorum</i>	Common wild sorghum
<i>Stenotaphrum secundatum</i>	St. Augustine grass
<i>Urochloa panicoides</i>	Herringbone grass
<i>Rottboelia exaltata</i>	Guinea-fowl grass
<b>NOTE: For maximum effect weeds should be sprayed at the following growth stages:</b>	
<i>Rottboelia exaltata</i>	Between 10 cm and 50 cm
<i>Panicum</i> spp, <i>Digitaria</i> spp. & <i>Sorghum</i> spp.	Between 10 cm and 30 cm
<i>Eleusine</i> spp. and <i>Urochloa panicoides</i>	Less than 3 cm
<i>Cyperus</i> spp.	Pre-flowering to flowering stage. A repeat application may be necessary when chlorotic leaves turn green after the first application.