

ADAMA S-METOLACHLOR




Reg. no. L11118 Act/Wet 36 of/van 1947
N-AR 2251

**READ THE LABEL BEFORE USE
KEEP OUT OF REACH OF CHILDREN AND ANIMALS**

GROUP	15	HERBICIDE
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An emulsifiable concentrate weed killer for the control of broad-leaved weeds and grasses in crops as indicated.	'n Emulgeerbare konsentraat onkruiddoder vir die beheer van breëblaaronkruid in gewasse soos aangedui.
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 <p>WARNING</p>	<p>Hazard statements Harmful if swallowed. Harmful in contact with skin. Harmful if inhaled. Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction. Toxic to aquatic life. Toxic to aquatic life with long lasting effects.</p>
	<p>Precautionary statements Wash body thoroughly after handling. Avoid release to the environment.</p>

ACTIVE INGREDIENT/AKTIEWE BESTANDDEEL

S-Metolachlor (chloroacetanilide) 960 g/L S-Metolachlor (chloorasetanalied)

NET VOLUME/NETTO VOLUME

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REGISTRATION HOLDER/REGISTRASIEHOUER

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UN no.:3082

EMERGENCY NUMBERS:

Griffon Poison Information Centre: +27 82 446 8946
Tygerberg Poison Information Centre: +27 861 555 777

Batch number
Date of manufacture
Expiry date

Lotnommer
Datum van vervaardiging
Vervaldatum

WARNINGS

- Harmful if swallowed.
 - Harmful in contact with skin.
 - Harmful if inhaled.
 - Causes skin irritation.
 - Causes serious eye damage.
 - May cause an allergic skin reaction.
 - Toxic to aquatic life.
 - Toxic to aquatic life with long lasting effects.
- Handle with care.
 - Poisonous by swallowing, inhalation and skin contact.
 - Toxic to fish and aquatic invertebrates.
 - Store under lock and key in a cool, dry place, away from food, feeds, seed and fertilizers.
 - Keep out of reach of children, uninformed persons and animals.
 - **Re-entry:** Do not enter treated area until spray deposit has dried unless wearing protective clothing.
 - Aerial application: Notify all inhabitants in the immediate vicinity of the area to be sprayed and issue the necessary warnings. Do not spray over or allow drift to contaminate water or adjacent areas.
 - In case of poisoning, take the patient immediately to a doctor and make this label available to him/her.

Although this remedy has been extensively tested under a large variety of conditions, the registration holder does not guarantee that it will be effective under all conditions. The activity and effect thereof may be affected by factors such as abnormal soil, climatic and storage conditions, quality of dilution water and growing medium, compatibility with other substances not indicated on the label and the occurrence of resistance of pest against the remedy, as well as by the method, time and accuracy of application. The registration holder furthermore does not accept responsibility for damage to crops, vegetation, the environment or harm to man or 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

- Avoid breathing dust/fume/gas/mist/vapors/spray.
- Avoid release to the environment.
- Wash hands thoroughly after handling. Do not touch eyes.
- Do not eat, drink or smoke when using this product.
- Use only outdoors or in a well-ventilated area.
- Contaminated work clothing should not be allowed out of the workplace.

- Wear protection gloves.
 - IF SWALLOWED: Rinse mouth. Get medical help
 - IF ON SKIN: Wash with plenty water. Specific treatment (see on this label). Get medical help.
 - If skin irritation or rash occurs: Get medical help.
 - Take off contaminated clothing and wash it before reuse.
 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical help
 - IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical help.
 - Collect spillage.
 - Dispose of contents/container in accordance with local/regional/national/international Regulations.
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- Do not inhale the spray mist or fumes.
 - Avoid eye and skin contact.
 - Wear protective overalls, rubber gloves, gumboots and face shield when the concentrate is handled and during mixing.
 - Wash with soap and water after use and after accidental skin contact.
 - Wash contaminated clothing after use.
 - Do not eat, drink or smoke whilst mixing or applying the product or before washing hands and face and change of clothing.
 - Prevent drift onto other crops, grazing, rivers, dams or areas not under treatment or to nearby water sources.
 - Thoroughly clean spraying equipment directly after use and dispose of wash water where it will not contaminate food, grazing, boreholes, rivers or dams.
 - Containers and packages must be completely emptied before being disposed of. Shake out thoroughly into the applicator and destroy the empty container thereafter in the described manner.
 - Destroy the empty container by perforation and dispose of it in a safe manner.
 - Never re-use the empty container for any other purpose.
 - Prevent contamination of food, feed, drinking water and eating utensils.

RELEVANT SUBSTANCES

Chemical name	w/w %	CAS no.
S-Metolachlor	>60%	87392-12-9
Calcium dodecylbenzene sulfonate	<10%	26264-06-2
Nonylphenoxy poly (ethyleneoxy) ethanol	<10%	9016-45-9
Aromatic hydrocarbon	<10%	64742-94-5

FIRST AID

Remove the patient from the exposure area and keep the patient warm and at rest.

Take the container label or product name with you when seeking medical attention.

Eye contact: Rinse eyes immediately with large amounts of gently flowing cold water or normal saline solution, for approximately 15 to 20 minutes. Occasionally lift the upper and lower lids. If irritation persists, get medical attention.

Skin contact: Remove contaminated clothing, shoes and leather goods immediately. Wash skin gently and thoroughly with non-abrasive soap and large amounts of water. Seek medical advice if necessary.

Inhalation: Immediately remove source of contamination or move victim to fresh air. Perform artificial respiration and administer oxygen if necessary. Keep person warm and at rest. Seek medical advice immediately.

Ingestion: Do not induce vomiting. Get medical attention immediately. Qualified medical personnel should perform administration of gastric lavage or oxygen.

Advice to doctors

Treat according to symptoms.

NOTICE TO THE USER: This agricultural remedy is to be used only according to the directions of this label. It is an offense under the Act to use this product inconsistent with the directions on the label.

RESISTANCE MANAGEMENT

ADAMA S-METOLACHLOR is a group code 15 Herbicide. Any weed population may contain individuals naturally resistant to **ADAMA S-METOLACHLOR** and other group code 15 Herbicide. The resistant individuals can eventually dominate the weed population if these Herbicides are used repeatedly and exclusively in programs. **ADAMA S-METOLACHLOR** or any other group code 15 Herbicide may not control these resistant weeds.

To delay herbicide resistance:

- Avoid exclusive repeated use of herbicides from the same herbicide group code. Alternate or tank mix with products from different herbicide group codes.
- Integrate other control methods (chemical, cultural, biological) into weed control programs.

For specific information on resistance management contact the registration holder of this product.

MODE OF ACTION

15: Inhibition of very long-chain fatty acid synthesis.

USE RESTRICTIONS

- Do not apply **ADAMA S-METOLACHLOR** to poorly drained soils or soils with a compaction layer, as waterlogging and herbicide injury may occur.
- Heavy rain (25 mm per day or 50 mm over a 3- to 7-day period) on very sandy soils (< 15% clay) low in organic matter (< 1%), as well as flood irrigation can reduce weed control performance.
- Use restrictions for any herbicides used in combination with **ADAMA S-METOLACHLOR**, must be adhered to.

DIRECTIONS FOR USE

Use only as directed.

COMPATIBILITY

- **ADAMA S-METOLACHLOR** can be used in tank mixtures with various products. However, any tank mixtures are performed; small quantities of the products in the correct ratio should be mixed with the appropriate quantity of water, to determine compatibility.
- Water-quality and formulation of other products may influence compatibility.

MIXING INSTRUCTIONS

- Shake container well before use. Close container after use.
- Half fill the spray tank with clean water; add the required amount of **ADAMA S-METOLACHLOR**, while maintaining agitation. Then complete the filling operation
- When mixing **ADAMA S-METOLACHLOR** with other herbicides, use the following procedure:
 1. fill the spray tank three quarters with clean water. Add the required amount of complementary herbicide to the water, agitating continuously,
 2. continue filling the spray tank with water, and add the required amount of **ADAMA S-METOLACHLOR** just before the tank is filled, to its full level
- Ensure thorough agitation of the mixture in the tank during mixing and spraying.
- Spray mixtures must be sprayed out immediately and not allowed to stand in the spray tank overnight.
- Thoroughly flush out spraying equipment at the end of the spraying operation.

APPLICATION RECOMMENDATION

- Use accurately calibrated equipment with properly arranged, suitable nozzles and an efficient agitation mechanism.
- Prepare a fine, even and firm seedbed free of weeds, trash and clods.
- Apply **ADAMA S-METOLACHLOR** or its tank mixtures preferably at planting or immediately after planting, but not later than three days after planting. Use 200 litres spray mixture per hectare for overall ground application and 30 to 40 litres per hectare for aerial application.
- **ADAMA S-METOLACHLOR** can also be shallowly incorporated early in the season to improve reliability of weed control.
- 10 to 20 mm rain within 7 to 10 days after application is necessary for good results.
- Under dry conditions, weed seedlings may emerge. These are usually stunted and can be controlled with a shallow cultivation, which also mixes the herbicide with the top 10 to 20 mm of soil.
- If soil crusting becomes a problem, rotary harrow in the same direction that the rows are planted, to assist emergence.
- Harrowing after application may reduce weed control, if untreated soil is thrown into deep planter furrows.
- **ADAMA S-METOLACHLOR** has no post-emergence activity and can be applied post-emergence to the crop after a cultivation, when no weeds are present.
- Ensure that sufficient fertilizer is placed near the seed at planting, to promote vigorous seedling growth.

Aerial application

Aerial application of **ADAMA S-METOLACHLOR** may only be done by a registered aerial application operator using a correctly calibrated, registered aircraft according to the instructions of SANS Code 10118 (Aerial Application of Agricultural Pesticides). It is important to ensure that the spray mixture is distributed evenly over the target area and that the loss of spray material during application is restricted to a minimum. It is therefore essential that the following criteria be met:

- **Flying height:** The height of the spray boom should be maintained at 3 to 4 metres above the target. Do not spray when aircraft is in a climb, at the top of, or during a dive, or when banking.
- Use suitable atomizing equipment (hydraulic nozzles or rotary atomizers) that will produce the desired droplet size and coverage, but which will ensure the minimum loss of product either through endodrift (within target field) or exodrift (outside target field). The operator must use a setup that will produce a droplet spectrum with the lowest possible Relative Span. All nozzles/atomizers should be positioned within the inner 60% to 75% of the wingspan to prevent droplets from entering the wingtip vortices.
- The difference in temperature between the wet and dry bulb thermometers, of a whirling hygrometer, should not exceed 8°C.
- Stop spraying if the wind speed exceeds 15 km per hour.
- Aerial application of this product must not be done under turbulent, unstable conditions during the heat of the day when rising thermals and downdraughts occur.
- Also note that the application of this product under temperature inversion conditions (spraying in or above the inversion layer) and/or high humidity conditions (relative humidity 80% and above) may lead to the following:

- reduced efficacy due to suspension and evaporation of small droplets in the air (inadequate coverage),
- damage to other sensitive crops and/or non-target areas through the movement of the suspended spray cloud away from the target field.
- Ensure that the fields are accurately marked and that the aerial spray operator knows exactly which fields to spray.

Obtain an assurance from the aerial spray operator that the above requirements will be met and that relevant data will be compiled in a spray log and kept for future reference.

APPLICATION DIRECTION

Sugarcane

Table1: ADAMA S-METOLACHLOR can be used as Pre-emergence application.

RATES AND MIXTURES	REMARKS
1.0 to 1.6 L/ha	Apply higher rates if clay content > 35%, to improve control of <i>Panicum maximum</i> and <i>Cyperus esculentus</i> and for longer residual control.
2.0 L/ha	Apply on soils with > 35 % clay and > 1% organic matter.

Maize

Post-emergence applications of **ADAMA S-METOLACHLOR** that can be used after a pre-emergence application of S-metolachlor 915g/L EC are given in Table 2. (Consult the S-metolachlor 915g/L EC label for detail).

Table 2: S-metolachlor 915g/L EC applied pre-emergence followed by ADAMA S-METOLACHLOR plus atrazine 300g/L + terbuthylazine 300g/L SC early post-emergence.

Soil type	% Clay	S-metolachlor 915 g/L EC L/ha	ADAMA S- METOLACHLOR 960 EC L/ha	PLUS	Atrazine 300 g/L + terbuthylazine 300 g/L SC
					L/ha
Sand	0 to 10	0.4 to 0.5	0.3	+	2.2
Loamy sand / sandy loam	11 to 20	0.5 to 0.7	0.3	+	2.5
Sandy clay loam	21 to 30	0.7 to 0.8	0.35	+	3.0
Sandy clay loam / sandy clay	31 to 40	0.8 to 0.9	0.35 to 0.5	+	3.0
Sandy clay / turf	41 to 50	0.9 to 1.0	0.35 to 0.5	+	3.0

NOTE:

- Use the higher application rates of S-metolachlor 915g/L EC for improved control of *Cyperus esculentus* (Yellow nutsedge), or for improved control of heavy infestations of *Digitaria sanguinalis*

(Crabfinger- grass), or where S-metolachlor 915g/L EC is pre-plant incorporated, or where organic matter in the soil exceeds 1.0%.

- Apply **ADAMA S-METOLACHLOR** + atrazine 300 g/L + terbuthylazine 300 g/L SC (Table 2) early post-emergence, after the first cultivation.
- Early post-emergence treatments give more effective broadleaf weed control on soils with > 30% clay.
- Under adverse weather conditions or with poor initial control, on soils with 31 to 40% and 41 to 50 % clay, the application rates of atrazine 300 g/L + terbuthylazine 300 g/L SC can be increased to 4.0 and 5.0 litres per hectare, respectively.
- If heavy rain occurs on light, sandy soils (< 15% clay and < 0.5% organic matter) poor weed control may result and a split application is preferred.
- Use a suitable penetrant with all post-emergence applications, with the exception of mixtures containing 2,4-D amine 480 g/L SL.

WEEDS CONTROLLED BY ADAMA S-METOLACHLOR

Botanical name	Common name
<i>Ageratum conizoides</i>	Billy Goat weed
<i>Bidens pilosa</i>	Blackjack
<i>Coronopus didymus</i>	Swinecress
<i>Erigeron bonariensis</i>	Flax-leaf fleabane
<i>Digitaria sanguinalis</i>	Crabfinger-grass
<i>Panicum maximum</i>	Common buffalo grass
<i>Panicum schinzii</i>	Sweet buffalo grass
<i>Portulaca oleracea</i>	Purslane

WEEDS VARIABLY CONTROLLED BY ADAMA S-METOLACHLOR

Botanical name	Common name
<i>Amaranthus hybridus</i>	Common pigweed
<i>Amaranthus spinosus</i>	Thorny pigweed
<i>Cyperus esculentus</i>	Yellow nutsedge
<i>Cyperus rotundus</i>	Purple nutsedge
<i>Datura stramonium</i>	Thorn apple
<i>Nicandra physaloides</i>	Apple of Peru

NOTE:

- The control of Yellow nutsedge (*Cyperus esculentus*) is dependent on a thorough ploughing immediately before planting, application 1 to 2 days after planting, which is followed by about 10 to 20 mm rain within 7 to 10 days after ploughing. More rain is required on heavy soils.