

FARM AG INTERNATIONAL (Pty) Ltd

P.O. Box 1523, Durban 4000 Co. Reg. No. 2005/011761/07

Head Office : 61 Marshall Drive., Old Mill Industrial Park, Mount Edgecombe South Africa
Tel + 27 31 0033486 • Fax + 27 31 502 5825

SECTION 1 - PRODUCT & COMPANY IDENTIFICATION

Product Name: S-METAMAX+S 915 EC
Product Use: Herbicide
Effective Date: July 2018
Revision Date: (0)

Company Name: FarmAg International (Pty) Ltd.
Mount Edgecombe,
4300, South Africa.

Address: P. O. Box 1523 61 Marshall Drive,
Durban Old Mill Industrial Park
4000 Mount Edgecombe
Phone No: [031] 003 3486

In case of Poisoning:

Griffon Poison Information Centre : 082 446 8946
Western Cape Poison telephone service: 0861 555 777

SECTION 2 - COMPOSITION / INFORMATION ON INGREDIENTS

Common Name: S-Metolachlor
Chemical Name: A mixture of (aRS,1S)-2-chloro-6'-ethyl-N-(2-methoxy-1-methylethyl) aceto-o-toluidide and (aRS, 1R)-2-chloro-6'-ethyl-N-(2-methoxy-1-methylethyl)aceto-o-toluidide in the proportion 80 – 100% to 20 – 0%.**(IUPAC)**
CAS No.: [87392-12-9] (S) – isomer; [178961-20-1] (R) – isomer
Chemical family: Chloroacetamide
Molecular formula: C₁₅H₂₂ClNO₂
Use: Selective herbicide, absorbed predominantly by the hypocotyls and shoots
Formulation: S-METOLACHLOR 915 g/ℓ + a (safener) Benoxacor 30.5 g/ℓ EC Emulsifiable Concentrate

Hazardous ingredients of toxicological concern:

<u>Inert:</u>	<u>concern:</u>
S-Metolachlor	harmful
Inerts	No concern

Symbol: X_i, X_n,
N

Indication of Danger: Irritating, harmful and toxic to aquatic organisms may cause long-term adverse effects in the aquatic environment.

RISK-PHASE(S) R20/22, R36/38, R43, R 50/53

SECTION 3 - HAZARD IDENTIFICATION

Toxicity class:
WHO III;

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Likely routes of exposure:

Eye contact, skin contact, ingestion, and inhalation.

Ingestion: Harmful if swallowed.**Eye contact:** Irritating to eyes.**Skin contact:** Irritating to skin. Allergic skin reaction is possible.**Inhalation:** Exposure to high vapour levels may cause headache, dizziness, numbness, nausea, incoordination, or other nervous system effects.**Ingestion:** Toxic if ingested in large amounts.**SECTION 4 - FIRST AID MEASURES AND PRECAUTIONS****General advice:** Have the product container, label or Material Safety Data Sheet with you when calling the Syngenta emergency number, a poison control center or physician, or going for treatment.**Inhalation:** Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Keep patient warm and at rest. Call a physician or Poison Control Centre immediately.**Skin contact:** Take off all contaminated clothing immediately. Wash off immediately with plenty of water. If skin irritation persists, call a physician. Wash contaminated clothing before re-use.**Eye contact:** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Immediate medical attention is required.**Ingestion:** If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting.**Medical advice:** There is no specific antidote available. Treat symptomatically.**SECTION 5 - FIRE-FIGHTING MEASURES****Flash point: Not Flammable****Extinguishing agents:**

Extinguish fires with carbon dioxide, dry powder, or alcohol-resistant foam. Water spray as a fog can be used for cooling of unaffected stock, but avoid water coming in contact with the product. Contain water used for fire-fighting for later disposal. Avoid the accumulation of polluted run-off from the site.

Specific hazards during fire fighting: As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see section 10). Exposure to decomposition products may be a hazard to health.**Extinguishing media:**

Carbon dioxide, dry chemical powders, foam and water spray.

Personal protective equipment:

Fire-fighters and others that may be exposed should wear full protective impervious clothing, including gloves and eye protection, and self-contained breathing apparatus. Contact with the fumes and vapours should be avoided by staying upwind. Clean all clothing before re-use. Severely contaminated clothing cannot be adequately decontaminated, and must be disposed as a hazardous waste. Shower with soap and water after contact with this product.

SECTION 6 - ACCIDENTAL RELEASE MEASURES (SPILLAGE)**Personal precautions:**

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

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Do not allow entering drains or watercourses. Spillage or uncontrolled discharges into water courses (or public waters) to be reported immediately to the Police and to the Department of Water/Environmental Affairs.

Occupational spill:

For small liquid spills, soak up with lime, damp earth or sand, or other non-combustible absorbent material and place into containers for later disposal. For large liquid spills, contain the liquid for later disposal. In situations where product comes in contact with water, contain contaminated water for later disposal. Do not flush spilled material into drains. Keep spectators away.

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

Harmful if swallowed. Irritant to eyes and skin. Avoid contact with eyes and skin, and inhalation of dust, spray and vapour. Use with adequate ventilation. Wash hands before eating, drinking, chewing gum, smoking, or using the toilet. Remove clothing immediately if the product 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:

Requirements for storage areas and containers: No special storage conditions required. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep away from food, drink and animal feeding stuffs.

SECTION 8 - EXPOSURE CONTROL/PERSONAL PROTECTION

Comply with occupational safety, environmental, fire, and other applicable regulations.

PERSONAL PROTECTIVE EQUIPMENT:**Respirator:**

Where exposure through inhalation may occur when handling and/or when preparing the spray mixture, wear a face mask. If the product is used in dusty or confined conditions or spillage and fire conditions a respirator suitable for protection from dusts and mists of pesticides is adequate.

Clothing:

Employee must wear appropriate protective (impervious) clothing, boots, hat and equipment to prevent repeated or prolonged skin contact with this substance. Do not wear leather clothing.

Gloves:

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

Eye protection:

The use of safety goggles (full-face shield) 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.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Form: Liquid
Odour: Aromatic odour
Colour: Light brown
pH: 4.1

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Flash point: Non flammable**Density:** 1.115 g/cm³ (at 20 °C)**Persistence foam:** Max. 60 ml.**Emulsion stability:** The emulsion is stable, there are no separate layers.**SECTION 10 - STABILITY AND REACTIVITY****Storage stability:**

Stable at elevated temperatures and at low temperatures. Do not store near crop protection chemicals, feed, fertilizers or seed.

Hazardous decomposition products:

Can decompose at high temperatures forming toxic gases.

Hazardous reactions:

None known. Hazardous polymerization does not occur. Stable under normal conditions.

SECTION 11 - TOXICOLOGICAL INFORMATION**Formulation calculated**

Acute oral LD₅₀ :	1855 mg/kg,
Acute dermal LD₅₀:	>2240 mg/kg
Acute inhalation LC₅₀ (4h):	> 2.91 mg/l (4 h), [technical]
Acute skin irritation:	Slightly irritating
Acute eye irritation:	Moderately irritating
Dermal sensitisation:	May cause mild skin sensitisation (Guinea pig).
Reproduction:	S-Metolachlor: none observed.
S-Metolachlor tech.: ADI:	0.1 mg/kg b.w. [2005].

SECTION 12 - ECOLOGICAL INFORMATION**Mobility, Degradability & Accumulation:**

Animals: rapidly and efficiently absorbed, fairly uniformly distributed and rapidly excreted in urine and faeces. Rapidly oxidised by rats liver oxygenases via dechlorination, O-demethylation and side-chain oxidation; conjugation by glutathione S-transferases. **Plants:** Metabolism involves dechlorination and conjugation to glutathione-S-transferases, followed by further degradation to polar, water-soluble, non-volatile metabolites. **Soil/Environment:** in the aerobic soil, dissipates rapidly due to microbial activity by degradation to two major metabolites (oxanilic and sulfonic acids), the formation of non-extractable residues (3.5 – 44%) and its mineralisation to CO₂ (3 – 30 %). Geomean DT₅₀ (lab, aerobic) 21.2 d (7 – 96 d, (198 soils): Geomean DT₅₀ (field) 30 d (6 – 49 d, 12 soil sites); DT₉₀ (field) 36 – 165 d (12 soils). Adsorption (15 soils, PH 3.4 – 8.0 o.c. 0.2 – 19.8).

ECOTOXICOLOGY (technical material):

Birds: Oral LD₅₀: for bobwhite quail >2510 mg/kg. Dietary LC₅₀ (8 D) for Mallard ducks > 5620 ppm. (Practically non-toxic)

Fish: Slightly to moderately toxic to fish. LC₅₀ (48 hours): rainbow trout: 1.23 mg/l, bluegill sunfish 3.16 mg/l.

Daphnia: LC₅₀: 48 hours: 11.24 mg/l.

Algae: E_bC₅₀ (120 h) for *Selenastrum carpicornutum* 0.008, *Navicula pelliculosa* E_bC₅₀ (96 h) 17 mg/l.

Bees: LD₅₀ (oral) >193 µg/bee, (contact) >0.200 g/bee. (Practically non-toxic)

Worms: LC₅₀ (14 d) for earthworms 570 mg/kg soil.

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SECTION 13 - DISPOSAL CONSIDERATION**Pesticide and container disposal:**

Open dumping or burning of this pesticide is prohibited. Never pour untreated waste or surplus products into public sewers or where there is any danger of run-off or seepage into water systems. Do not contaminate rivers, dams or any other water sources with the product or used containers. Emptied containers retain vapour and product residues. Observe all labelled safeguards until container is destroyed.

TRIPLE RINSE empty containers in the following manner:

Invert the empty container over the spray or mixing tank and allow draining for at least 30 seconds after the flow has slowed down to a drip. Thereafter rinse the container three times with a volume of water equal to a third of the volume of the container. Add the rinsing to the contents of the spray tank before destroying the container in the prescribed manner.

Do not re-use the empty container for any other purposes but destroy it by perforation, flattening and bury in an approved dumpsite. Prevent contamination of food, feedstuffs, drinking water and eating utensils. Comply with local legislation applying to waste disposal.

SECTION 14 - TRANSPORT INFORMATION

UN NUMBER: 3082

Road Transport ADR/IRD:

Class: 9

Packing group: III

Shipping name: Environmentally hazardous substance, Liquid, N.O.S. (**S-Metolachlor**)

Air Transport ICAO/IATA:

Class: 9

Packing group: III

Shipping name: Environmentally hazardous substance, Liquid, N.O.S. (**S-Metolachlor**)

Maritime Transport IMDG/IMO:

Class: 9

Packing group: III

Shipping name: Environmentally hazardous substance, Liquid, N.O.S. (**S-Metolachlor**)

SECTION 15 - REGULATORY INFORMATION

Symbol: X_i, X_n, N

Indication of danger: Irritating substance, harmful, Environmentally Hazardous Substance

Risk phrase(s):

R 20/22 Harmful by inhalation and if swallowed.

R 36/38 Irritating to eyes and skin.

R 43 May cause sensitization by skin contact.

R 50/53 Very to aquatic organisms, may cause long-term adverse effects in aquatic environment

Safety phrases:

S 1/2 Keep out of reach children.

S 13 Keep away from food, drink and animal feeding stuffs.

S 22 Do not breathe dust.

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- S 24/25** Avoid contact with skin and eyes.
S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

SECTION 16 - OTHER INFORMATION

Packaging:

Packed in 1, 5, 10, 20 and 25 litres plastic containers and labeled according to South African regulations and guidelines.

Disclaimer:

The information on this sheet is not a specification; it does not guarantee specific properties. The information is intended to provide general guidance as to health and safety based upon our knowledge of the handling, storage use of the product. It is not applicable to unusual or non-standard uses of the product or where instructions or recommendations are not followed.

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

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