

**SECTION 1 - PRODUCT & COMPANY IDENTIFICATION**

**ARYSTA LifeScience South Africa (Pty) Ltd**  
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**Product Name:** CROP FOLIAR REPRODUCTIVE  
**Product Use:** Liquid fertilizer  
**Creation Date:** August 2012  
**Revision Date:** October 13

**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**

**Use:** To supplement calcium and magnesium in balanced quantities. This ensures optimal chlorophyll formation and fruit quality. The bore content increases crop fertility by promoting pollen tube growth and pollination.

**Chemical composition:**

N:	128 g/l	(88 g/kg)
Ca:	124 g/l	(85 g/kg)
Mg:	23 g/l	(16 g/kg)
Amino acids	3,1 g/l	(2,1 g/kg)
Fe:	507 mg/l	(347 mg/kg)
Mn:	507 mg/l	(347 mg/kg)
Zn:	511 mg/l	(350 mg/kg)
B:	2460 mg/l	(1685 mg/kg)
Mo:	2370 mg/l	(1623 mg/kg)

**Formulation:** Soluble Liquid

**Information on Ingredients:**

<u>Inert:</u>	<u>concern:</u>	<u>% present:</u>
Calcium nitrate	oxidizer, irritant	> 44 %
Magnesium nitrate	oxidizer, irritant	> 17 %
Water	no hazard	> 36 %

**Symbol:** O, Xi  
**Indication of danger:** Irritant, Oxidizing substance  
**Risk Phrases:** R8, R20/21/22, R36/37/38

**SECTION 3 - HAZARD IDENTIFICATION**
**Likely routes of exposure:**

Skin contact, ingestion and inhalation.

**Skin:** Mild irritant. Depending on duration of contact, symptoms will include reddening, discomfort and irritation.

**Eye contact:** Cause moderate eye irritation. Cause mild discomfort, or pain and redness of the eyes.

**Ingestion:** Harmful. Cause irritation to mouth, throat, esophagus and possibly to digestive tract. Can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**Inhalation:** Harmful. Irritant to respiratory system. Can cause sneezing, coughing and difficulty breathing.

**Fire hazard:** Strong oxidizer. In contact with other material, may cause fire.

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**SECTION 4 - FIRST AID MEASURES AND PRECAUTIONS****Inhalation:**

Remove source of contamination, or move victim to fresh air. Keep affected person warm and at rest. Treat symptomatically and supportively. If breathing is difficult, a qualified person should apply oxygen. Get medical attention if effects persist.

**Skin contact:**

Move the victim to fresh air and remove all contaminated clothing, shoes and leather goods. Gently wipe off excess chemical. Wash affected skin areas gently and thoroughly with water and non-abrasive soap. Do not rub the skin. If irritation persists, seek medical advice.

**Eye contact :**

Immediately flush the eyes with clean, gently flowing water for 20 minutes, holding the eyelid(s) open. If irritation persists, seek medical advice.

**Ingestion:**

Do not induce vomiting. Have victim rinse mouth thoroughly with water. Give large quantities of water to drink. Seek medical advice immediately showing container and label. Never give anything by mouth to an unconscious person.

**Advice to physician:**

There is no specific antidote. Treat symptomatically and supportively as and when required. Gastric lavage could be considered but not if victim is unconscious. Give oxygen if respiration is depressed.

**SECTION 5 - FIRE-FIGHTING MEASURES****Fire and explosion hazard:**

**Flash point:** None – water based. **Not flammable.**

**Not combustible, but product is strong oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.**

**Extinguishing agents:**

Extinguish fires with carbon dioxide, dry powder, or alcohol-resistant foam. Water spray can be used for cooling of unaffected stock, but avoid water coming in contact with the product. Use as little water as possible. Use spray or fog. Solid stream may cause spreading. Contain water used for fire fighting for later disposal.

**Hazardous products of combustion:**

Decomposition may yield various toxic oxides.

**Fire fighting:**

Remove spectators from surrounding area. Remove container from fire area if possible. Contain fire control agents for later disposal. Use a recommended extinguishing agent for the type of surrounding fire. Avoid inhaling hazardous vapours and fumes from burning materials. Keep upwind.

**Personal protective equipment:**

**Fire may produce irritating or poisonous vapours, mists or other products of combustion. 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 breathe in spray or fumes. For personal protection see Section 8.

**Environmental precautions:**

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:**

Remove all sources of flames and sparks.

For small liquid spills, soak up with damp earth or sand, or other non-combustible absorbent material. Place the material into a clean, dry container and cover for subsequent disposal.

For large liquid spills, contain the liquid by damming in with absorptive material and pump into containers. Soak up remainder with absorbent material.

Label containers with its content and dispose it in accordance with local regulations. Open burning or dumping of this material is prohibited. Do not flush spilled material into drains. Keep spectators away. In situations where product comes in contact with water, contain contaminated water for disposal.

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

Avoid contact with eyes, prolonged contact with skin, and inhalation of spray and fumes. Handle product with caution. 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. Operators should change and wash clothing after use. 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.

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**Storage:**

Store in its original, labelled and closed container in dry, cool, shaded, well-ventilated area, away from heat, sparks and other sources of ignition. Do not store with other pesticides, strong oxidizers, seeds, foodstuffs and water supplies. Store away from incompatible substances. Product is incompatible with galvanized steel or unlined mild steel. Keep out of reach of unauthorized persons, children and animals. Local regulations should be complied with.

**SECTION 8 - EXPOSURE CONTROL/PERSONAL PROTECTION**

It is essential to provide adequate ventilation. The measures appropriate for a particular work site 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.

**PERSONAL PROTECTIVE EQUIPMENT:**

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.

**Respirator:**

It is usually safe to use the product without a mask or respirator. If the product is used in dusty or confined conditions, a mask or 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:**

Wear safety goggles or face shield.

**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**

<b>Appearance:</b>	Clear yellowish liquid.
<b>Odour:</b>	Slight nitric acid odour.
<b>Relative density:</b>	1.46 ± 0.05 g/cm <sup>3</sup>
<b>Solubility in water:</b>	Completely miscible.
<b>Flash point:</b>	None. Water based. Does not flash. Product is strong oxidizer and its heat of reaction with reducing agents or combustibles may cause fire.
<b>pH:</b>	4,17

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

Stable under normal temperatures and storage conditions.

**Storage stability:**

Stable for 2 years under normal warehouse conditions. Store at temperatures below 50 °C and above -15 °C.

**Incompatibility:**

Incompatible with flammable and combustible materials, strong reducing agents, metals powders, metallic sulfides, sulfur, copper, cyanides, organic materials and strong acids.

Avoid heat, flames, ignition sources and incompatibles.

**Hazardous Decomposition:**

Various oxides and toxic metal fumes may form from when heated to decomposition.

**SECTION 11 - TOXICOLOGICAL INFORMATION**

<b>Acute oral LD<sub>50</sub>:</b>	> 2000 mg/kg (calculated).
<b>Acute dermal LD<sub>50</sub>:</b>	Harmful. Mild irritant.
<b>Inhalation:</b>	Harmful. Mild irritant.
<b>Acute skin irritation:</b>	Mild irritant.
<b>Acute eye irritation:</b>	Moderate irritant.
<b>Carcinogenicity:</b>	None of this product's components are listed..

**SECTION 12 - ECOLOGICAL INFORMATION****Accumulation:**

The product is not expected to significantly bioaccumulate.

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**ECOTOXICOLOGY:**

May be toxic to terrestrial and aquatic plant or animal life.

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

Open dumping or burning of this fertilizer is prohibited. Waste resulting from the use of this product that cannot be reused or reprocessed. 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.

Comply with local legislation applying to waste disposal.

**Container disposal:**

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 to drain 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 minimum of 10 % of that of the container. Add the rinsings 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 purpose but destroy it by perforation and flattening and bury in an approved dump site. Prevent contamination of food, feedstuffs, drinking water and eating utensils.

Comply with local legislation applying to waste disposal.

**SECTION 14 - TRANSPORT INFORMATION**

UN NUMBER: 3139

**Road Transport ADR/IRD:**

Class: 5.1

Packing group: III

Shipping name: Oxidizing Liquid, N.O.S. (calcium nitrate and magnesium nitrate based fertilizer)

**Maritime Transport IMDG/IMO:**

Class: 5.1

Packing group: III

Shipping name: Oxidizing Liquid, N.O.S. (calcium nitrate and magnesium nitrate based fertilizer)

**SECTION 15 - REGULATORY INFORMATION**

Symbol: Xi, O

Indication: Irritant, Oxidizing Substance.

**Risk phrases:**

R 8 Contact with combustible material may cause fire.

R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

R 36/37/38 Irritating to eyes, respiratory system and skin.

**Safety phrases:**

S 2 Keep out of reach children.

S 17 Keep away from combustible material.

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 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 60 This material and its container must be disposed of as hazardous waste.

**SECTION 16 - OTHER INFORMATION****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 nor 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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