

## VITRO

## MATERIAL SAFETY DATA SHEET

### 1. IDENTIFICATION OF PRODUCT AND COMPANY

**Product Name:** VITRO  
 Adjuvant  
**UN No.:** NOT REGULATED  
**Supplier:** Villa Crop Protection (Pty) Ltd.  
 PO Box 801, Kempton Park  
 1620, South Africa  
**Telephone:** (011) 396 2233  
**Fax:** (011) 396 4666  
**Website:** [www.villacrop.co.za](http://www.villacrop.co.za)

#### Emergency telephone numbers:

#### 24 Hr Transport / Spill emergency no:

Envirosure. +27 31 205 4918  
 (Hazcall24) +27 86 044 4411  
 (Client: Villa Crop Protection)  
 Griffon Poison Information Centre +27 82 446 8946  
 (Client: Villa Crop Protection)

#### Poisoning Emergency telephone numbers:

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

#### Villa Crop Protection Emergency number:

**National Safety, Health and Environmental Manager:**  
 +27 63 698 0668

### 2. COMPOSITION / INFORMATION ON INGREDIENTS

**Common Name:** Ammonium sulphate  
**TSCA/CAS No.:** 7783-20-2  
**Chemical family:** Ammonium salt  
**Formula:** (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>  
**Use:** Enhances activity and compatibility of  
**Glyphosate**  
**Formulation:** Ammonium sulphate 517 g/l

### 3. HAZARD IDENTIFICATION

#### 3.1 Human health

**Poisoning signs and symptoms:** Sore throat, abdominal pain, nausea or vomiting.

**Skin contact:** Prolonged contact may cause some irritation.

**Eye contact:** Direct eye contact has been shown to cause temporary eye irritation.

**Ingestion:** If swallowed may cause gastro-intestinal irritation, sore throat, nausea or vomiting.

**Inhalation:** Not considered a hazard though inhalation of spray mist but should be avoided.

**Long term effects:** No adverse effects are known.

#### 3.2 Environment

**Hazards:** Avoid spillage into watercourses or water bodies. Does not pose a hazard to animal life.

**Biodegradability:** Breaks down very rapidly in the soil.

**Disposal Method:** Approved landfill site or use as a fertilizer in agricultural situation.

#### 3.3 Other

**Fire, heating and detonation:** Not combustible. Thermal decomposition products include sulphur oxides and ammonia. Exposure to high temperatures could result in emission of toxic nitrogen oxide gases (NO<sub>3</sub>, NH<sub>3</sub> and SO<sub>4</sub>). Can produce thermally sensitive mixtures with potassium chlorate and potassium nitrate and can enhance the explosive properties of ammonium nitrate.

### 4. FIRST AID MEASURES AND PRECAUTIONS

Remove the victim from the area of exposure. Wash off remaining material with plenty of water. In the event of any complaints or symptoms, avoid further exposure. Immediately consult a doctor.

**Skin contact:** Remove contaminated clothing, rinse skin with plenty of soap and water.

**Eye contact:** Flush for 15 minutes with plenty of water. If irritation continues, get medical attention.

**Ingestion:** Seek medical advice.

**Inhalation:** Remove patient to fresh air.

**Emergency antidote:** None applicable treat symptomatically.

**Medical advice:** Treat symptomatically

### 5. FIRE FIGHTING MEASURES

**Corrosiveness:** Slightly corrosive

**Flammability:** Not flammable

**Flash point:** None

**Explosivity:** Not explosive

**Extinguishing media:** Non-combustible. May give rise to dangerous fumes of NO<sub>3</sub>, NH<sub>3</sub> and SO<sub>4</sub> if strongly heated.

Fire fighters should wear protective clothing and breathing apparatus.

Avoid breathing toxic vapours. Keep up-wind.

Call the Fire brigade. Avoid any fumes (toxic). Stand up-wind of the fire. Wear self-containing breathing apparatus if fumes are being entered. Use plenty of water. Open doors and windows of the store to give maximum ventilation. If spillage enters any drains or watercourse, inform the local authorities immediately.

### 6. ACCIDENTAL RELEASE MEASURES (SPILLAGE)

Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area).

Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Prevent entry into waterways, sewers, basements or confined areas.

**DO NOT GET WATER INSIDE BAGS.**

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Absorb or cover with dry earth sand and place into containers for disposal.

Welding or hot work to equipment and pipelines or plant which may have contained fertilizer without first washing thoroughly to remove all fertilizer.

### 7. HANDLING AND STORAGE REQUIREMENTS

**Handling:** Relatively safe to handle, but avoid contact with eyes and skin. Treat with usual precautions due for crop protection chemicals.

Separation of at least 3 meters from the following classes is recommended: Flammable liquids, flammable solids, and spontaneously combustibles. Fire separation of at least 5 meters or 4 meters fire resistant wall from the following classes is recommended: Flammable gasses, Dangerous when wet oxidizing agents and organic peroxides. Do not mix, store or apply in galvanised or unlined steel drum.

**Storage:** Original storage containers.

**Materials to avoid:** Alkalis, strong acids, copper and its alloys.

**Hazardous reaction / decomposition products:**

May emit toxic fumes of nitrous oxides if heated in a fire.

**Incompatibility:** Containers may be stored together with most other storage items.

### 8. EXPOSURE CONTROL / PERSONAL PROTECTION

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 regulations.

**Precautionary and engineering measures:**

Provide ventilation where necessary. Use a non-sparking, grounded ventilation system separate from other exhaust ventilation systems. Exhaust directly to the outside. Supply sufficient replacement air to make up for air removed.

**Personal Protection:** Have a safety shower/eye wash fountain readily available in the immediate work area. Wear suitable gloves when handling the product over long periods. Also wear safety goggles & face shield, boots, gloves, and / or respiratory protection. After handling product, wash hands and observe good hygiene practice.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** Clear brown soluble concentrate  
**Odour:** Odourless.  
**Flash point:** Not applicable  
**pH:** 6.8  
**pH (1% aqueous dilution):** 6.4  
**Density:** 1.188 g/ml

### 10. STABILITY AND REACTIVITY

**Stability:** Stable in original closed drum. Decomposes rapidly in soil.

**Conditions to avoid:** Contamination by incompatible materials.

### 11. TOXICOLOGICAL INFORMATION

**Acute oral LD<sub>50</sub>:** >3500 mg a.i./kg

**Acute dermal LD<sub>50</sub>:** >5000 mg a.i./kg /kg in rabbits

**Eye contact:** Mild irritant.

**Skin contact:** Mild skin irritant.

**Special hazards:** Acute exposure may cause upper respiratory tract irritation/damage.

**Occupational exposure limits:** Other target organs are the lungs.

**Chronic toxicity:** Repeated or prolong exposure is not known to aggravate medical conditions.

**Carcinogenic effect:** No carcinogenic effect

### 12. ECOLOGICAL INFORMATION

**Persistence / Degradability:** Decomposes rapidly in soil

**Bio-accumulation:** Not persistent

**Ecotoxicity:** None known

### 13. DISPOSAL CONSIDERATION

Approved landfill or use in agricultural situation as on label.

### 14. TRANSPORT INFORMATION

Not classed i.e. considered non-hazardous material according to UN Orange Book and international transport codes e.g. RID (rail), ADR (road) and IMDG (sea).

**Transport**

Wedge drums tightly to avoid movement.

**UN No.: Not Regulated**

**IMDG-Shipping name:** Ammonium Hydrogen Sulphate

**Class:** Class 8. Corrosive Group II.

### 15. REGULATORY INFORMATION

**Risk Phases:**

**R 35** Causes severe burns

**Safety Phases:**

**S 1/2** Keep out of reach of children

**S 26** In case of contact with eyes rinse immediately with plenty of water and seek medical advice.

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### 16. OTHER INFORMATION

**Packaging:**

Packed in 1, 5, 10, 15, 20, 25 and 50 litres plastic containers and bags, labelled 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 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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**END OF DOCUMENT**

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For detailed information on revisions, contact the Registration holder.