

## SAFETY DATA SHEET

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### 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### **1.1 Product Identifier:**

LiQuiDo Mn

#### **1.2 Relevant uses of the substance or mixture and uses advised against:**

For use as a Horticultural/Agricultural/Forestry

#### **1.3 Details of the supplier of the safety data sheet:**

AgraForUm South Africa (Pty) Ltd  
5 Ednau Small Holdings  
Mooiwater  
Bloemfontein  
Republic of South Africa  
9330

**Contact:** Dr. RA Buitendag  
**Phone number:** +27 (0) 51 451 9053  
**Email:** mail@agraforum-sa.com

#### **1.4 Emergency phone number**

Phone number: + 27 (0) 82 802 1093

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### 2. HAZARDS IDENTIFICATION

#### **2.1 Classification of the substance or mixture**

NONE.

#### **2.2 Label Elements**

Contains: Mn

#### **2.3 Other Hazards**

May cause eye and skin irritation. Please do not inhale, may cause cancer. May cause damage to unborn child.

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**3.2 Composition:** Manganese (Mn) 57 g/kg

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### FIRST AID MEASURES

#### **4.1 Description of first aid measures**

##### **4.1.1 Inhalation**

Irritating to the mucous membranes and upper respiratory tract.

##### **4.1.2 Skin & Eye exposure**

May cause eye and skin irritation.

##### **4.1.3 Ingestion**

Harmful and can be fatal.

#### **4.2 Most important symptoms and effects, both acute and delayed**

Prolonged contact may produce chronic eye and skin irritation, respiratory tract irritation. Get medical attention.

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### 5. FIRE-FIGHTING MEASURES

#### **5.1 Extinguishing media**

No fire or explosion hazard. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.

#### **5.2 Special Hazards arising from the substance or mixture**

Possible irritant/poisonous vapours.

#### **5.3 Advice for fire-fighters**

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

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### 6. ACCIDENTAL RELEASE MEASURES

#### **6. ACCID RELEASE MEASURES (SPILLAGE)**

**Personal Precautions:** Wear appropriate personal protective equipment.

**Spill Clean-up Methods:** Small spills: Soak up with sand or absorb with an inert dry material and place in appropriate waste disposal container. Follow local and regional authority requirements. .

**Environmental Precautions:** Avoid discharge into drains, water courses or onto the ground.

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#### 7. HANDLING AND STORAGE

**Handling:** Keep container dry. Do not breathe gas/fumes/vapour/spray. Harmful if swallowed. Use with adequate ventilation. Avoid contact with skin and eyes. Do not inhale. Use suitable respiratory equipment. Wash hands and skin with soap after contact. Keep away from oxidizing agents and acids. .

**Storage:** Store away from incompatible materials, heat, sun and sources of ignition.

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#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Engineering Controls:** Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne concentrations below an acceptable level.

**Respiratory Protection:** If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA Standard 63 FR 1152, January 8, 1998. Respirator type: Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information.

**Eye Protection:** Risk of contact: Wear approved safety goggles.

**Hand Protection:** It is a good industrial hygiene practice to prevent skin contact. Use rubber gloves.

**Skin Protection:** Apron and long sleeves are recommended.

**Hygiene Measures:** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

**Environmental Exposure Controls:** Environmental manager must be informed of all major spillages.

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#### 9. PHYSICAL AND CHEMICAL PROPERTIES

##### **9.1 Information on basic physical and chemical properties**

**Appearance:** Liquid

**Odour:** Neutral odour.

**Melting point/freezing:** no information specified

**Initial boiling point and boiling range:** No Information available

**Flash point:** No Information available

**Evaporation rate:** No Information available

**Flammability (solid, gas):** No Information available

**EC (1% solution):** 2.02 mS/cm

**Solubility(ies):** Soluble in water

**pH:** 7.14

**Density:** 1.31

**Ash content:** 17.75%

**Moisture content:** 57.29%

##### **9.2 Other Information**

No other relevant information available

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#### 10. STABILITY AND REACTIVITY

##### **10.1 Reactivity**

**Stability:** Stable under normal warehouse conditions.

**Conditions to Avoid:** None known.

**Incompatible Materials:** None known.

**Hazardous Decomposition Products:** Toxic fumes are released after product decomposes on heating.

**Possibility of Hazardous Reactions:** No Information.

**Corrosivity:** Non-corrosive in presence of glass.

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#### 11. TOXICOLOGICAL INFORMATION

##### **11.1 Information on toxicological effects**

**Acute Toxicity:** No information currently available. Harmful by ingestion and inhalation.

**Other toxic effects on humans:** No information currently available. Prevent absorption via skin.

**Chronic Toxicity:** No Information available.

**Carcinogenicity:** May cause cancer by inhalation.

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#### 12. ECOLOGICAL INFORMATION

**Ecotoxicity:** No data available.

**Mobility:** No data available.

**Persistence and Degradability:** No data available.

**Other Adverse Effects:** May be toxic to aquatic life.

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#### 13. DISPOSAL CONSIDERATIONS

**General Information:** Do not discharge into drains, water courses or onto the ground. Discharge, treatment or disposal may be subject to national, state, or local laws. Empty containers may contain product residues.

**Disposal Methods:** No specific disposal method required.

**Container:** Since emptied containers retain product residue, follow label warnings even after container is emptied.

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#### 14. TRANSPORT INFORMATION

**DOT** Not regulated.

**TDG** Not regulated.

**IATA** Not regulated.

**IMDG** Not regulated.

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#### 15. REGULATORY INFORMATION

**Symbol:** Xi

**Risk Phrases:**

R22 – Harmful if swallowed.

R36/38 – Irritating to eyes and skin.

**Safety phrases:**

S2 – Keep out of reach of children.

S36/37/39 – Wear suitable protective clothing, gloves and eye/face protection.

S46 – If swallowed seek medical attention immediately.

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#### 16. OTHER INFORMATION

This Material Safety data sheet is compiled using data submitted for raw materials and practical experience. This product is intended for professional users only.

#### **MSDS information:**

To the best of our knowledge, the information contained herein is accurate and is based on the present state of our knowledge and does not therefore guarantee specific properties. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for any accuracy or completeness of the information contained herein.

Final determinations of suitability of any material are sole responsibility of the users, who must take responsibility for observing existing laws and regulations. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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