SAFETY DATA SHEET
ACCORDING TO 1907/2006/EC, 453/2010/EU, 2015/830/EU (REACH)

QUALIMAX

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier
   Product Name: Qualimax
   Product description: Fertiliser
   Product Type: Soluble Liquid

1.2 Relevant identified uses of the substance or mixture and uses advised against
   Relevant uses: Fertiliser
   Uses advised against: All uses not specified in this section or in section 7.3

1.3 Details of the supplier of the safety data sheet
   Rolfes Agri (Pty) Ltd
   288 Mundt Street
   Waltloo
   Pretoria
   South Africa
   Tel: +27(0)12 803 0145
   Fax: +27(0)12 803 8418

1.4 Emergency telephone number
   National advisory body/Poison Centre
   Telephone number: SOUTH AFRICA
   Griffon Poison Information Centre
   (24 Hour Poisoning Emergency Helpline)
   +27(0)82 446 8946
SECTION 2: Hazards identification

2.1 Classification of the substance or mixture according to CLP Regulation (EC) no 1272/2008:

Eye Dam. 1: Serious eye Irritation, Category 2A, H319

2.2 Label elements

CLP Regulation (EC) no 1272/2008:

Hazard pictogram(s) :  
Signal word : Warning
Hazard statement(s) : H319 Causes serious eye irritation.

Precautionary statement(s) : 
P101 - If medical advice is needed, have product container or label at hand.  
P102 - Keep out of reach of children.  
P103 - Read label before use.  
P264 - Wash … thoroughly after handling.  
P280 – Wear protective gloves/protective clothing/ eye protection/face protection  
P310 – Immediately call a POISON CENTER or doctor/physician  
P305 + P351 + P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337+P313P - If eye irritation persists: Get medical advice/attention.  
P501 - Dispose of the contents/containers in accordance with the current legislation on waste treatment.

2.3 Other hazards

Non-applicable

SECTION 3: Composition/information on ingredients

3.1 Substance:

Non-applicable

3.2 Mixture:

Chemical description: Multi-Constituent Substance

Components:

<table>
<thead>
<tr>
<th>Chemical Name:</th>
<th>Calcium chloride</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS:</td>
<td>10035-04-8</td>
</tr>
<tr>
<td>EC:</td>
<td>233-140-8</td>
</tr>
<tr>
<td>Concentration:</td>
<td>&lt; 40 %</td>
</tr>
</tbody>
</table>

SECTION 4: First Aid Measures

4.1 Description of first aid measures

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

By inhalation:
Remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, get immediate medical attention
QUALIMAX

By skin contact:
In case of contact, immediately flush skin with plenty of water for at least 15 minutes. Get medical attention. Wash with soap and water. Remove contaminated clothing and launder before reuse.

By eye contact:
In case of contact, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing.

By ingestion / aspiration:
Do NOT induce vomiting. Never give anything by mouth to an unconscious or convulsing person. Seek immediate medical attention. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs.

4.2 Most important symptoms and effects, both acute and delayed
No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician: Treatment based on sound judgment of physician and individual reactions of patient. Any material aspirated during vomiting may cause lung injury. Therefore, emesis should not be induced mechanically or pharmacologically. If it is considered necessary to evacuate the stomach contents, this should be done by means least likely to cause aspiration (e.g. gastric lavage after endotracheal intubation).

SECTION 5: Firefighting measures

5.1 Fire Extinguishing Media

Suitable extinguishing media: Use any means suitable for extinguishing surrounding fire.

Unsuitable extinguishing media: None known.

5.2 Special hazards arising from the substance or mixture

Hazard from the substance or mixture:
Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products:
During fire, irritating and toxic gases will be released due to thermal decomposition or combustion.

5.3 Additional provisions:
Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. In the event of a fire, wear full protective clothing and self-contained breathing apparatus with full-face piece operated in the pressure demand or other positive pressure mode.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:
Ventilate area of leak or spill. Wear appropriate personal protective equipment.

6.2 Environmental precautions:
Keep product away from drains, surface and underground water.

6.3 Methods and materials for containment and cleaning up

Spills:
Absorb with sand or other non-combustible absorbent material and put in a suitable container for reclamation or disposal.
Large Spills:
Dyke far ahead of liquid spills for later disposal. Prevent entry of the substance into waterways, sewers, basements or confined areas.

6.4 Reference to other sections:
See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling:
A. - Precautions for safe manipulation
   Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

B. - Technical recommendations for the prevention of fires and explosions
   Due to its non-flammable nature, the product does not present a fire risk under normal conditions of storage, manipulation and use.

C. - Technical recommendations to prevent ergonomic and toxicological risks
   Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D. - Technical recommendations to prevent environmental risks
   It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3)

7.2 Conditions for safe storage, including any incompatibilities:
A. - Technical measures for storage
   Minimum Temp.: 5 ºC
   Maximum Temp.: 30 ºC
   Maximum time: 36 Months

B. - General conditions for storage
   Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

7.3 Specific end use(s)
Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8: Exposure controls/personal protection

8.1 Engineering Controls:
Local exhaust ventilation as necessary to maintain exposures to within applicable limits.
Respiratory Protection: In misty atmospheres, use an approved mist respirator. Respirator should not contain any metals corrodeable by these solutions.

8.2 Individual protection measures
Gloves: Impervious gloves.
Skin Protection: The selection of personal protective equipment varies depending upon conditions of use. Apron, coveralls and/or other resistant protective clothing. Impervious boots. As a minimum, wear long-sleeve shirts, trousers, and gloves for routine product use.
Eyes: Chemical goggles; also wear a face shield if splashing hazard exists. Do NOT wear contact lenses.
Other Personal Protection Data: Ensure that eyewash stations and safety showers are proximal to the work-station location.
SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
For complete information, please refer to product datasheet.

**Appearance**
- Physical state: Soluble Liquid
- Colour: Green
- Odour: Odourless

**Volutility:**
- Boiling point at atmospheric pressure: 105-125°C
- Vapour pressure at 20 °C: Non-applicable *
- Vapour pressure at 50 °C: Non-applicable *
- Evaporation rate at 20 °C: Non-applicable *

**Product description:**
- Density at 20 °C: 1.24 – 1.26
- Relative density at 20 °C: Non-applicable *
- Dynamic viscosity at 20 °C: Non-applicable *
- Kinematic viscosity at 20 °C: Non-applicable *
- Kinematic viscosity at 40 °C: Non-applicable *
- pH: 7.8 – 8.2
- Vapour density at 20 °C: Non-applicable *
- Partition coefficient n-octanol/water 20 °C: Non-applicable *
- Solubility in water at 20 °C: Soluble in water.
- Solubility properties: Non-applicable *
- Decomposition temperature: Non-applicable *
- Melting point/freezing point: Non-applicable *
- Explosive properties: Non-explosive in the presence of the following materials or conditions: open flames, sparks and static discharge, heat, shocks and mechanical impacts, oxidizing materials, reducing materials, combustible materials, organic materials, metals, acids, alkalis and moisture.

Oxidising properties: Non-applicable *

**Flammability:**
- Flash Point: Non-applicable
- Auto ignition temperature: Non-applicable *
- Lower flammability limit: Non-applicable *
- Upper flammability limit: Non-applicable *

*Not relevant due to the nature of the product, not providing information property of its hazards.

9.2 Other information
No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity:
Fumes of Chlorides are given off at temperatures above 1600°C

10.2 Chemical stability:
Chemically stable under normal temperature conditions.

10.3 Possibility of hazardous reactions:
None
10.4 **Conditions to avoid:**
Reacts violently with bromine trifluoride or a mixture of boron trioxide and calcium oxide. Sulfuric acid yields hydrogen chloride gas, which is corrosive, irritating and reactive. Water-reactive aterials, such as sodium causes an exothermic reaction. Methyl vinyl ether starts runaway polymerization reaction. Zinc as in galvanized iron yields hydrogen gas with solutions which may explode under these conditions. Corrosive to some metals.

10.5 **Incompatible materials:**
Reactive or incompatible with the following materials: oxidizing materials and acids

10.6 **Hazardous decomposition products:**
None

SECTION 11: Toxicological information

11.1 **Information on toxicological effects**
The experimental information related to the toxicological properties of the product itself is not available.

11.2 **Dangerous health implications:**
In case of exposure that is repetitive, prolonged or at concentrations higher than recommended by the occupational exposure limits, it may result in adverse effects on health depending on the means of exposure:

**A. Ingestion (acute effect):**
Single dose oral toxicity is low. Small amounts swallowed incidental to normal handling operations are not likely to cause injury. Swallowing larger amounts may cause injury. Ingestion may cause gastrointestinal irritation or ulceration.

**B. Inhalation (acute effect):**
Inhalation may cause nose bleeds and irritation of the upper respiratory passages with coughing and discomfort. May cause nose and throat irritation. May irritate the lungs.

**C. Contact with the skin and the eyes (acute effect):**
- Contact with the skin: May cause skin irritation. Under conditions of prolonged contact or when moisture is present, superficial burns may result. Contact with abraded or broken skin can cause severe necrosis
- Contact with the eyes: Contact with liquid may irritate or burn eyes

**D. CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):**
- Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect.
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect.
- Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect.

**E. Sensitizing effects:**
- Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect.
- Cutaneous: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect.

**F. Specific target organ toxicity (STOT)-time exposure:**
Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect.

**G. Specific target organ toxicity (STOT)-repeated exposure:**
- Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect.
**SECTION 12: Ecological information**

The experimental information related to the eco-toxicological properties of the product itself is not available.

12.1 **Toxicity:**
This product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

12.2 ** Persistence and degradability:**
There is no data available.

12.3 **Bio accumulative potential:**
There is no data available.

12.4 **Mobility in soil:**
Not available

12.5 **Other adverse effects:**
No known significant effects or critical hazards.

**SECTION 13: Disposal considerations**

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 **Waste treatment methods**

**Product**

**Methods of disposal:**
The generation of waste should be avoided or minimised wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

**Hazardous waste:**
Non-hazardous waste.

**Packaging**

**Methods of disposal:**
The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions:**
This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of split material and runoff and contact with soil, waterways, drains and sewers.
SECTION 14: Transport information

<table>
<thead>
<tr>
<th></th>
<th>Land transport (ADR/RID)</th>
<th>Inland waterway transport (AND/ADNR)</th>
<th>Sea Transport (IMDG)</th>
<th>Air transport (ICAO-TI / IATA-DGR)</th>
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<tr>
<td><strong>14.2 UN proper shipping name</strong></td>
<td>-</td>
<td>-</td>
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<td>-</td>
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<tr>
<td><strong>14.3 Transport hazard class(es)</strong></td>
<td>-</td>
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<tr>
<td><strong>14.4 Packing group</strong></td>
<td>-</td>
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<tr>
<td><strong>14.5 Environmental hazards</strong></td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
</tr>
<tr>
<td><strong>14.6 Special precautions for user</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:</strong></td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:
- Candidate substances for authorisation under the Regulation (EC) 1907/2006 (REACH): Not applicable
- Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Not applicable
- Regulation (EC) 1005/2009, about substances that deplete the ozone layer: Not applicable
- Article 95, REGULATION (EU) No 528/2012: Not applicable
- Regulation (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Not applicable

Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc. ....): Not applicable

Specific provisions in terms of protecting people or the environment:
- It is recommended to use the information included in this safety data sheet as data used in a risk evaluation of the local circumstances in order to establish the necessary risk prevention measures for the manipulation, use, storage and disposal of this product.

Other legislation:
- The product could be affected by sectorial legislation

15.2 Chemical Safety Assessment: Not available.

SECTION 16: Other information

LEGISLATION RELATED TO SAFETY DATA SHEETS:
- This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) Nº 1907/2006 (Regulation (EU) Nº 453/2010, Regulation (EC) Nº 2015/830)
Texts of the legislative phrases mentioned in section 3:
The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3.

CLP Regulation (EC) nº 1272/2008 (refer to section 3):
Eye Dam. 1: Serious eye Irritation, Category 2A, H319

Principal bibliographical sources:
http://echa.europa.eu
www.dguv.de/ifa/gestis-dnel
http://eur-lex.europa.eu

Advice related to training:
Minimal training is recommended to prevent industrial risks for staff using this product, in order to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Relevant P-, H- and EUH-phrases (number and full text)
H319 Causes serious eye irritation.
P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P103 - Read label before use.
P264 - Wash .... thoroughly after handling.
P280 – Wear protective gloves/protective clothing/ eye protection/face protection
P310 – Immediately call a POISON CENTER or doctor/physician
P305 + P351 + P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313P - If eye irritation persists: Get medical advice/attention.
P501 - Dispose of the contents/containers in accordance with the current legislation on waste treatment

Abbreviations and acronyms:
ADR - European agreement concerning the international carriage of dangerous goods by road
IMDG - International maritime dangerous goods code
IATA - International Air Transport Association
ICAO - International Civil Aviation Organisation

Date of revision : 19/07/2019
Version : 2

Notice to reader

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