SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: EASYGRO CALMAG + TRACE ELEMENTS
Other identifier: EASYGRO CALMAG + TRACE ELEMENTS
Recommended use: Fertilizer
Restrictions on use: Agriculture
Supplier **Rolfes Agri (Pty) Ltd**
288 Mundt Street
Waltloo
Pretoria, South Africa
Telephone: +27(0)12 803 0145
E-mail Address: info@rolfesagri.co.za
Emergency Phone Numbers:
Office hour poisoning helpline
Rolfes Agri (Pty) Ltd +27 (12) 803 0145
Spill Response and Transport Incidents
Spill Tech, 086 100 0366, www.spilltech.co.za
Oil and chemical pollution control 083 253 6618

2. HAZARDS IDENTIFICATION

GHS classification and labelling of chemicals and the Regulations for Hazardous Chemical Agents - 2021.		
Hazard class	**Hazard category**	**H-statement**
Physical hazards		
Oxidizing Solids	Category 3	H272
Health Hazards		
Acute Toxicity-Oral	Category 4	H302
Serious Eye Damage	Category 1	H318
Reproductive Toxicity	Category 1B	H360

The most important adverse effects:
Physiochemical effects:
May intensify fire; oxidizer. (Ox. Sol. 3)

Human health effects:
Harmful if swallowed. (Acute Tox.4)
Causes serious eye damage. (Eye Dam. 1)
May damage fertility or the unborn child. (Repr. 1B)

Pictograms:

Signal word: Danger.

Hazard statements:
H272: May intensify fire; oxidizer.
H302: Harmful if swallowed.
H318: Causes serious eye damage.
H360: May damage fertility or the unborn child.

Precautionary statements:
P101: If medical advice is needed, have product container or label at hand.
P102: Keep out of reach of children.
P103: Read carefully and follow all instructions.
P203: Obtain, read and follow all safety instructions before use.
P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P220: Keep away from clothing and other combustible materials.
P264 + P265: Wash hands and affected area thoroughly after handling. Do not touch eyes.
P270: Do not eat, drink or smoke when using this product.
P280: Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P301 + P317: IF SWALLOWED: Get medical help.
P305 + P354 + P338: IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P317: Get medical help.
P318: IF exposed or concerned, get medical advice.
P330: Rinse mouth.
P370 + P378: In case of fire: Use appropriate media to extinguish.
P405: Store locked up.
P501: Empty all pesticides from the container by placing it upside down over the spray tank and holding it there for at least 30 seconds. Puncture the rinsed container to render it useless and send to a recycler.

Special labelling of certain mixtures:
None known.
Other hazards:
None known.

Toxicity:
Classification according to GHS: Category 4.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients with Hazard Concerns (GHS): According to UN GHS criteria

Hazardous Component	CAS Number	Conc. (m/m) %	GHS Classification
$CaNO_3$	10124-37-5	>60%	Ox. Sol. 3 (H272) Acute Tox. 4 (H302) Eye Dam. 1 (H318)
$MgNO_3$	10377-60-3	10-30%	Ox. Sol. 3 (H272)
KNO_3	7757-79-1	<10%	Ox. Sol. 3 (H272)
Boric Acid	10043-35-3	<10%	Repr. 1B (H360)

4. FIRST AID MEASURES

General Advice: The symptoms resulting from direct exposure to the product could appear a while after exposure. If there is persistent discomfort, seek medical attention. Provide this SDS to medical personnel for treatment. Immediately remove contaminated clothing and remove the affected person from the contamination area. Keep the person warm, calm, and covered up. First Aid personnel should pay attention to their own safety.

Eye contact: Flush eyes immediately with large amount of flowing cold water for at least 15-20 minutes, until no evidence of chemical remains. If irritation persists, get medical help.
Skin contact: Remove all contaminated clothing and shoes. Gently wipe off residual chemical and wash skin thoroughly with water and non-abrasive soap. If irritation persists, get medical help.
Inhalation: Remove the affected victim from exposure to an area with fresh air. If breathing has stopped, administer artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If irritation persists, get medical help.
Ingestion: If exposed or concerned, rinse mouth thoroughly with large amount of water immediately and get medical help.

Most important symptoms/effects, acute and delayed: Acute and delayed effects are indicated in section 2 and 11.
Notes to physician: In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Specific treatments: No specific treatment.

5. FIRE FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media:
Use carbon dioxide, dry chemical for small fires and alcohol resistant foam or water fog for large fires. Do not use water jets.
Specific hazards arising from the chemical including thermal decomposition products: Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Special protective equipment and precautions for fire-fighters: Firefighters must wear emergency equipment including positive pressure self-contained breathing apparatus with a full-face mask. Remove unaffected containers from fire area if possible.
Additional provisions: Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Destroy any source of ignition. In case of fire, refrigerate the storage containers and tanks for products susceptible to inflammation, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures:
Ventilate the area of the spill or leak, especially when in confined areas. Do not touch or walk through spilled material as slippery when spilt. Contain spills if it can be done without risk and clean-up immediately.
Wear appropriate protective clothing recommended in Section 8 of the SDS.
Environmental Precautions:
Prevent spillage or further leakage if safe to do so.
Do not allow the spilt product to enter water courses and drains and avoid contact with soil. Do not allow the spilt product to spread to other areas - keep the spilt material contained and isolated. Report spills and releases as required to appropriate authorities if the spilt product has caused environmental pollution (sewers, water ways, soil, or air).
Methods for cleaning up:
For small spills, sweep up with damp earth or sand or other suitable absorbent, such as sawdust, taking care not to raise a dust cloud. Place the material into a clean, dry container and cover for subsequent disposal. All contaminated cleaning materials should be placed in closeable receptacles. 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 and upwind.
For large spills, for large spills, DO NOT wash away into sewer. Sweep spilled substance into sealable containers; if appropriate, moisten first to prevent dusting. Carefully

collect remainder, then remove to safe place (extra personal protection: P2 filter respirator for harmful particles).

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.

7. HANDLING AND STORAGE REQUIREMENTS

Precautions for safe handling

Always provide good ventilation in the work area. Prevent contact with eyes, skin, and clothing. Wear protective clothing and equipment during handling as described in Section 8 of the SDS.
Do not eat or drink during use. Wash the hands and face thoroughly with water and soap after handling. Keep containers/bags closed when not in use. Do not permit smoking in use or storage areas. Locate emergency showers and eye-rinsing facility near the work/handling area. Maintain good normal industrial hygiene and housekeeping practices in areas where the product is used/handled.

Conditions for safe storage, including any incompatibilities

Always store locked up and keep containers/bags tightly closed when not in use. Store in a cool, dry, and well-ventilated place, out of direct sunlight. Check storage containers/bags regularly for leaks and protect it from physical damage. Store in the original container/bag, avoid cross contamination with other agricultural products. Keep out of reach of children, uninformed persons, and animals. Do not contaminate water, food, or feed by storage or disposal.

It is recommended to have appropriate spill control kits equipped with absorbent material in close proximity to storage areas (see Section 6).

Specific end use(s)

Use as directed. Use original container or bag.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

8.1 Control parameters

Substances whose occupational exposure limits have to be monitored in the work environment. Nuisance dust: Inhalable dust 10 mg/m3 // Respirable dust 4 mg/m3.

DNEL (Workers):

Nitric acid, ammonium calcium salt		
DNEL Type	**Value**	**Remark**
Long-Term – dermal, systemic effects	13.9 mg/kg	None
Long-Term – inhalation, systemic effects	98 mg/m3	None

Magnesium Nitrate Hexahydrate		
DNEL Type	**Value**	**Remark**
Long-Term – dermal, systemic effects	20.8 mg/kg	None
Long-Term – inhalation, systemic effects	147 mg/m3	None

Potassium Nitrate		
DNEL Type	**Value**	**Remark**
Long-Term – dermal, systemic effects	20.8 mg/kg	None
Long-Term – inhalation, systemic effects	36.7 mg/m3	None

Boric acid		
DNEL Type	**Value**	**Remark**
Long-Term – inhalation, systemic effects	8.3 mg/m3	None

DNEL (Consumer / General Population):

Nitric acid, ammonium calcium salt		
DNEL Type	**Value**	**Remark**
Long-term – oral, systemic effects	8.33 mg/kg	None
Long-Term – dermal, systemic effects	8.33 mg/kg	None
Long-Term – inhalation, systemic effects	29 mg/m3	None

Magnesium Nitrate Hexahydrate		
DNEL Type	**Value**	**Remark**
Long-term – oral, systemic effects	12. mg/kg	None
Long-Term – dermal, systemic effects	12.5 mg/kg	None
Long-Term – inhalation, systemic effects	147 mg/m3	None

Potassium Nitrate

DNEL Type	Value	Remark
Long-Term – dermal, systemic effects	20.8 mg/kg	None
Long-Term – inhalation, systemic effects	36.7 mg/m3	None

PNEC:

Nitric acid, ammonium calcium salt		
PNEC Type	**Value**	**Remark**
PNEC aquatic, freshwater	0.45 mg/L	None
PNEC aquatic, marine water	0.045 mg/L	None
PNEC aquatic, intermittent release	4.5 mg/L	None
PNEC sewage treatment plant	18 mg/L	None

Magnesium Nitrate Hexahydrate		
PNEC Type	**Value**	**Remark**
PNEC aquatic, freshwater	0.45 mg/L	None
PNEC aquatic, marine water	0.045 mg/L	None
PNEC aquatic, intermittent release	4.5 mg/L	None
PNEC sewage treatment plant	18 mg/L	None

Potassium Nitrate		
PNEC Type	**Value**	**Remark**
PNEC aquatic, freshwater	0.45 mg/L	None
PNEC aquatic, marine water	0.045 mg/L	None
PNEC aquatic, intermittent release	4.5 mg/L	None
PNEC sewage treatment plant	18 mg/L	None

8.2 Exposure controls

Appropriate engineering controls: Ventilate as needed to control airborne dust. Use explosion-proof ventilation equipment if airborne dust levels are high.

PERSONAL PROTECTIVE EQUIPMENT:

Respiratory protection: Respiratory protection selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Use a properly fitted and well-maintained particulate filter respirator, complying with an approved standard. Respirator selection and use should be based on contaminant type, form, and concentration. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus.

Skin and Hand Protection: Select skin and hand protection based on the task being performed and the risks involved with the task. The gloves should be replaced immediately in case of damage or signs of wear. The personal protective clothing must be properly fitted and well maintained.

Eye/Face Protection: Select safety eye/face protection based on the task being performed and the risks involved with the task. Wear tightly fitted and well-maintained safety eyewear compliant with an approved standard.

Hygiene Measures: Wash the hands and face before breaks, eating, smoking, or using the lavatory and at the end of the shift/working period. Eye wash fountains and safety showers should be available and easily accessible. Wash contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance/physical state: Crystalline powder.
Odour: Faint odour.
Colour: White.
Boiling Point: Not applicable.
Vapour Pressure (mm Hg): Not applicable.
Evaporation Rate: Not applicable.
Relative Vapour Density: Not applicable.
Partition coefficient n-octanol/water: Not applicable.
Solubility in water: Soluble in water.
Decomposition temperature: Not applicable.
Melting point/freezing point: Not applicable.
pH: Not applicable.
Density/relative density(g/cm3): Not applicable.
Flammability: Not flammable.
Flash Point: Not applicable.
Flammable limits-LEL: Not applicable.
Upper/Lower flammability limit: Not applicable.
Auto-ignition temperature: Not applicable.
Viscosity: Not available.

10. STABILITY AND REACTIVITY

Reactivity: No hazardous reactions are expected because the product is stable at normal conditions. Decomposes on heating.

Chemical Stability: This product is stable for 2 years at ambient temperature and pressure, under normal storage and handling conditions. Avoid storage under extreme temperatures and conditions. Store below 50°C, preferably below 30°C, and not for prolonged periods in direct sunlight.

Possibility of Hazardous Reactions: Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

Conditions to Avoid: Avoid heat, sparks, flames.

Incompatible Materials: Avoid direct impact with combustible materials. Avoid oxidising agents, bases and metals.

Hazardous Decomposition Products: See subsection Possibility of Hazardous Reactions, Conditions to Avoid and Incompatible Materials to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO_2), carbon monoxide and other organic compounds.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY: Calculated.
Acute Toxicity Oral LD_{50}: >400 mg/kg.
Acute Toxicity Dermal LD_{50}: >2800 mg/kg
Acute Toxicity Inhalation: Not classified.
Skin Corrosion/Irritation/: Not classified.
Eye Damage/Irritation: Causes serious eye damage.
Skin Sensitization: Not classified.
Respiratory Sensitization: Not classified.
Germ cell mutagenicity: Not classified.
Carcinogenicity: Not classified.
Reproductive toxicity: May damage fertility or the unborn child.
Specific target organ toxicity – single exposure: Not classified.
Specific target organ toxicity – repeated exposure: Not classified.
Aspiration hazard: Not classified.
Symptoms related to the physical, chemical, and toxicological characteristics.
No information available.

12. ECOLOGICAL INFORMATION

ECOTOXICITY DATA: Potassium Nitrate
Toxicity to fish
LC_{50} *Poecilia reticulada*: 1378 mg/L (96 h)

Toxicity to Crustacean
EC_{50} *Daphnia magna*: 490 mg/L (48 h)

ENVIRONMENTAL EFFECTS:
Persistence and degradability: Readily biodegradable, follows normal nitrification/denitrification cycle.
Bio-accumulative Potential: Not available.
Mobility in soil: Product is soluble in water. Ammonium ion is absorbed by soil.
Other adverse effects: No known significant effects or critical hazards.

13. DISPOSAL CONSIDERATIONS

Waste handling and disposal: Dispose product related waste in accordance with all local regulations and prevent the contamination of water, food, or feed by storage or disposal of the waste. The product container/bags may be taken to a registered waste disposal site or incineration plant.
General container handling: Empty all pesticides from the container by placing it upside down over the spray tank and holding it there for at least 30 seconds. Puncture the rinsed container to render it useless and send to a recycler.

14. TRANSPORT INFORMATION

	Land Transport (ADR/RID)	Inland Waterways (AND/ADNR)	Sea Transport (IMDG)	Air Transport (ICAO-TI / IATA-DGR)
UN Number	1477	1477	1477	1477
UN Proper Shipping Name	NITRATES, INORGANIC, N.O.S.	NITRATES, INORGANIC, N.O.S.	NITRATES, INORGANIC, N.O.S.	NITRATES, INORGANIC, N.O.S.
Transport Hazard Class	5.1	5.1	5.1	5.1
Transport Hazard Class Pictogram				
Packing Group				

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation for the mixture.
South Africa
Regulations for Hazardous Chemical Agents – 2021 – SA Occupational Health and Safety Act. - Handling, labelling and Safety Data Sheets for hazardous and GHS classified substances and mixtures. Occupational Exposure Limits. Hazardous Substances Act, 1973 (Act No.15 of 1973) - Requirements on the prohibition and control of the importation, manufacture, sale, use, operation, application, modification, disposal or dumping of hazardous substances. Occupational Health and Safety Act No. 85 of 1993.- Occupational Health and Safety Standards for employers and users working with and around hazardous chemical substances. National Road Traffic Act, 1996 (ACT NO. 93 of 1996). - The identification and classification of dangerous goods for transport by road and rail modes.
Botswana
Pesticides and Toxic Substances Regulations. 1994 (2006) - Control and management of pesticides and other

toxic substances. Environmental and Pollution Control Act. 1990 - Hazardous waste disposal, hazardous substances, pesticides, and effluent wastewater/discharge.

Namibia

Labour Act 11 of 2007 - Hazardous substances classification, labelling, Chemical Safety Data Sheets and Occupational Exposure Limits. Notification of the use of carcinogens and other controlled substances.
Regulations relating to the Health and Safety of Employees at Work Government Notice 156 of 1997.
Labour Act 11 of 2007 schedule, item 2(2). - Occupational Health and Safety Standards for employers and users working with and around hazardous chemical substances.

16. OTHER INFORMATION

Packaging: Packed in 1, 5 and 25 kg plastic containers or plastic bottles and labelled according to South African regulations and guidelines.

Relevant classification and H-Statements:
Oxidizing Solids - Category 3
H272: May intensify fire; oxidizer.

Acute Toxicity- Oral - Category 4
H302: Harmful if swallowed.

Serious Eye Damage - Category 1
H318: Causes serious eye damage.

Reproductive Toxicity - Category 1B
H360: May damage fertility or the unborn child.

Key to Abbreviations

AND	European Provisions concerning the International Carraige od Dangerous Goods by inland Waterways
ADR	The European Agreement concerning the International Carraige of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
COD	Chemical Oxygen Demand
GHS	Globally Harmonised System of Classification and Labelling of Chemicals
IATA	International Air Transport Association
ICAO	International Civil Aviation Organisation
IMDG	International Maritime Dangerous Goods
Log_{Pow}	Logarithm of the octanol/water partition coefficient
LD_{50}	Lethal Dose 50
LC_{50}	Lethal Concentration 50
RID	The Regulations concerning the International Carraige of Dangerous Goods by Rail
SDS	Safety Data Sheet
UN	United Nations

Notice to Reader

The information contained in this Safety Data Sheet relate only to the specific product and do not relate to the use of the product in combination with any other product or process. Information in the SDS is supplied to the best of **ROLFES AGRI (PTY) LTD's** knowledge and are believed to be current and correct as of the date on this SDS. All reasonable efforts were exercised to compile this SDS in accordance with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

The SDS only provides information applicable to the health, safety and environmental hazards of this product at the date of issue in order to facilitate the safe use, handling, storage and transport of this product and does not replace any product information or product specifications.
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END OF SAFETY DATA SHEET