SAFETY DATA SHEET

ACCORDING TO THE SOUTH AFRICAN REGULATIONS FOR HAZARDOUS CHEMICAL AGENTS - 2021

VOEMA STARTER NT

SECTION 1: Product and Company Identification

Identification of the Product/Preparation

Product Name:	**VOEMA STARTER NT**
Trade Name/Synonyms:	**VOEMA STARTER NT**
Registration Number:	K7624
Product Description and Type:	A water soluble 2:1:2 (40) (w/v) or 2:1:2 (27) (w/w) liquid suspension fertiliser with micro elements for foliar feeding and fertigation.

Active Ingredient

Formula:	Multi-Constituent Substance
CAS Number:	Not applicable

Supplier

Company Name**:** Rolfes Agri (Pty) Ltd
Address: 288 Mundt Street
Waltloo
Pretoria
South Africa
Phone Number: +27(0)12 803 0145
E-mail Address: info@rolfesagri.co.za

Emergency Phone Numbers

Nature of Emergency	Emergency Operator	Telephone Number
Office hour poisoning helpline	Rolfes Agri (Pty)Ltd	+27 (12) 803 0145
Spill Response and Transport Incidents	Spill Tech, Oil and chemical pollution control	086 100 0366 083 253 6618 www.spilltech.co.za

Relevant identified uses of the product and uses advised against
For use in Agriculture and use as per the product label

SECTION 2: Hazards Identification

Classification of the substance or mixture
This product is classified as hazardous according to the criteria in South Africa - GHS classification and labelling of chemicals and the Regulations for Hazardous Chemical Agents - 2021.

Classification

Hazard class	Category	Hazard Statement Number
Oxidising Liquids; Oxidising Solids	3	H272
Carcinogenicity	1B	H350
Reproductive Toxicity	1B	H360
Specific Target Organ Toxicity, Repeated Exposure	2	H373

Label Elements
South Africa. GHS classification and labelling of chemicals and the Regulations for Hazardous Chemical Agents - 2021.

Pictograms

Signal Word
DANGER

Hazard Statements

Statement Number	Hazard Statement
H272	May intensify fire; oxidiser
H350	May cause cancer
H360	May damage fertility or the unborn child
H373	May cause damage to organs through prolonged or repeated exposure

Precautionary Statements:
General -

Statement Number	Precautionary Statement
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.

Prevention -

Statement Number	Precautionary Statement
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.

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P203	Obtain, read, and follow all safety instructions before use.
P260	Do not breathe fume/gas/mist/vapours/spray.

Response –

Statement Number	Precautionary Statement
P370+P378	In case of fire: Use suitable material to extinguish.
P318	IF exposed or concerned, get medical advice.
P319	Get medical help if you feel unwell.

Storage –

Statement Number	Precautionary Statement
P405	Store locked up.

Disposal -

Statement Number	Precautionary Statement
P501	Empty all contents 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.

Other Hazards
None known

SECTION 3: Composition/Information on Ingredients

Mixture

Common Name:	**VOEMA STARTER NT**
IUPAC/Chemical Name:	
Chemical Family:	
Formulation:	Liquid

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

Hazardous Component	CAS Number	Weight - %	GHS Classification
Potassium Nitrate	7757-79-1	10 to 30	Oxidizing solids (Category 3
Formaldehyde	50-00-0	<10	Carc. 1B
Boric acid	10043-35-3	<10	Repr. 1B
Ethylene Glycol	107-21-1	30 to 60	STOT RE 2

NOTE: There are no other ingredients present according to the current knowledge of the supplier (considering their concentrations present in the product) that are classified as hazardous to health or the environment and that cause/contribute to the correct GHS classification of this product. These ingredients are therefore, in terms of the South African Hazardous Chemical Agent Regulations 2021; Regulation 14(b), not listed.

SECTION 4: First-Aid Measures

Description of 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 with water as a precaution
Skin Contact	Remove all contaminated clothing and shoes. Wash contaminated clothing before re-use. Rinse the skin immediately with plenty of water.
Inhalation	Remove the affected victim from exposure to an area with fresh air as a precaution. If not breathing, administer artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Obtain immediate medical attention.
Ingestion	If exposed or concerned, get medical advice.

Most important symptoms/effects, acute and delayed
Symptoms of exposure to the product include: None

Indication of any immediate medical attention and special treatment needed
Notes to physician: None

Specific treatments: Treat symptomatically and supportively.

SECTION 5: Firefighting Measures

Suitable (and unsuitable) extinguishing media	Use carbon dioxide, dry chemical, alcohol resistant foam, or water spray. Do not use water jets.
Specific hazards arising from the chemical including thermal decomposition products	Fires involving the product may produce irritating or poisonous vapours, mists, or other products of combustion. Closed containers may explode form vapour expansion in high heat.
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 site's Internal Emergency Plan and the Workplace Specific Procedures for actions to be taken after an accident or other emergencies.

SECTION 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, soak up with damp earth or sand, or other non-Combustible absorbent material. Place into a labelled waste container subsequent reclamation or disposal. Keep the wash water out of drains, sewers, and waterways.

For large spills, contain the spillage with absorbent material (non-combustible for flammable products). Sweep up with absorbent material, contain and collect spilt product in suitable containers for proper disposal. Keep the wash water out of drains, sewers and waterways.

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

Precautions for safe handling
Always provide good ventilation in the work area. Prevent contact with eyes, skin and clothing. Do not breathe in dust/vapours/spray mists. 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 soap after handling. Keep containers 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 tightly closed when not in use. Store in a cool, dry and well-ventilated place, out of direct sunlight. Check storage containers regularly for leaks and protect containers from physical damage. Store in the original container, 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.

SECTION 8: Exposure Controls and Personal Protection

National Occupational Exposure Limits – Restricted limits for hazardous chemical agents

Component	Type	Control Parameter	Update	Basis
Ethylene Glycol	OEL-eight hour TWA	50(V)	2021	South African RELs*
	OEL-STEL/C	100(V)	2021	South African RELs*

*REL: Recommended Exposure Limit.
OEL-eight-hour TWA: Occupational Exposure Limit- Time Weighted Average. Calculated over an eight-hour working day, for a five-day working week.
OEL-STEL/C: Occupational Exposure Limit – short Term Exposure Limit /Ceiling Limit. Peak airborne concentration determined over the shortest analytically practicable period of time, which does not exceed 15 minutes.

National Biological Exposure Indices (BEIs) for hazardous chemical agents

Component	Sample Matrix	Sample Time	Value
Not applicable	N/A	N/A	N/A

Appropriate engineering controls
Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

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/or 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.

Environmental exposure controls
In accordance with the local legislation for the protection of the environment it is recommended to avoid environmental spillage or releases of both the product and its container.

SECTION 9: Physical and Chemical Properties

Data applicable to mixture

Appearance	Appearance/physical state	Suspension Concentrate (Liquid)
	Odour characteristics	Pungent odour
	Colour	Green
Volatility	Boiling point (°C)	Not applicable
	Vapour pressure (Pa)	Not applicable
	Evapouration Rate at 20 ºC	Not applicable
Product Description	Relative density (kg/m3, relative density of water =1)	1.42 g/ml
	Solubility in water (g/100mL)	Soluble in water
	Decomposition temperature (°C)	Not applicable
	Melting point/freezing point (°C)	Not applicable
	pH	4.2 – 5.5
	Density/relative density(g/cm3)	1.42 g/ml
	Particle characteristics	Not applicable
Flammability	Flammable (Y/N)	N
	Flash point (°C)	Not flammable (>60°C)
	Flammable limits-LEL	Not applicable
	Auto-ignition Temperature (°C)	Not applicable

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

Other Hazard Information
None Known.

SECTION 10: STABILITY AND REACTIVITY

Reactivity
The product is stable under normal ambient conditions.

Chemical Stability
Stable under normal ambient conditions of use, storage, and transport.

Possibility of Hazardous Reactions
None known under conditions of normal use.

Conditions to Avoid
Avoid extreme temperatures (>50°C). Keep away from heat and ignition sources.

Incompatible Materials
Incompatable with: Avoid strong oxidizing agents and acids.

Hazardous Decomposition Products
Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological Information

Information on likely routes of exposure

Toxicokinetics, metabolism and distribution
Non-human toxicological data: No Information available.
Method: No Information available.
Dosage: No Information available.
Routes of administration: No Information available.
Results: No Information available.
Absorption: No Information available.
Distribution: No Information available.
Metabolism: No Information available.
Excretion: No Information available.

Information on toxicological effects
Acute oral toxicity: Does not meet the GHS Classification criteria.
Acute dermal toxicity: Does not meet the GHS Classification criteria.
Acute inhalation toxicity: Does not meet the GHS Classification criteria.
Skin corrosion/irritation: Does not meet the GHS Classification criteria.
Serious eye damage/irritation: Does not meet the GHS Classification criteria.
Respiratory or skin sensitization: Does not meet the GHS Classification criteria.
Germ cell mutagenicity: Does not meet the GHS Classification criteria.
Carcinogenicity: Formaldehyde <10%
Danger! This substance may cause cancer. Category 1B.
Reproductive toxicity: Boric Acid <10%
Danger! This substance may damage fertility and may damage the unborn child. Category 1B.
STOT-single exposure: Does not meet the GHS Classification criteria.
STOT-repeated exposure: Ethylene Glycol 30 to 60%
Warning! This substance may cause damage to organs through prolonged or repeated exposure. Category 2.
Aspiration hazard: Does not meet the GHS Classification criteria.

Symptoms related to the physical, chemical, and toxicological characteristics
No information available.

SECTION 12: Ecological Information

Ecotoxicity
Short-term (Acute) hazard Aquatic: Does not meet the GHS Classification criteria.
Long-term (Chronic) hazard Aquatic: Does not meet the GHS Classification criteria.
Bio-degradability in the aquatic environment: No information available.

Toxicity to other species
Birds: No information available.
Bees: No information available.

Other Environmental and Adverse Effects
Persistence and Degradability
No information available.

Bioaccumulative Potential:

No information available.

Mobility in Soil:
No information available.

Other Adverse Effects:
None known.

SECTION 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.

General container handling
Empty all contents 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. Do not use empty containers for any other purpose.

SECTION 14: Transport Information

	Land Transport (ADR/RID)	Inland Waterways (AND/ADNR)	Sea Transport (IMDG)	Air Transport (ICAO-TI / IATA-DGR)
UN Number	Not regulated	Not regulated	Not regulated	Not regulated
UN Proper Shipping Name	-	-	-	-
Transport Hazard Class	-	-	-	-
Transport Hazard Class Pictogram	-	-	-	-
Packing Group	-	-	-	-
Environmental Hazard	-	-	-	-

*Not classified as dangerous goods

SECTION 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.

SECTION 16: Other Information

Indication of changes
Alignment to the GHS.

Relevant classification and H-Statements (Number and full text):
Oxidising Liquids; Oxidising Solids- Category 3
H272: May intensify fire; oxidiser
Carcinogenicity- Category 1B
H350: May cause cancer
Reproductive Toxicity- Category 1B
H360: May damage fertility or the unborn child
Specific Target Organ Toxicity, Repeated Exposure- Category 2
H373: May cause damage to organs through prolonged or repeated exposure

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
LD50	Lethal Dose 50
LC50	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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