

Safety Data Sheet

Issue Date: 09-Feb-2023

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Version 1

1. IDENTIFICATION

Product identifier

Product Name Grotek Solo-Tek Grow

Other means of identification

SDS # GREEN-040-CA

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Plant Fertiliser

Details of the supplier of the safety data sheet

Initial supplier identifier

Greenstar Plant Products, INC.
9430 198th Street
Langley, BC V1M 3C8
Canada
Phone: 604-882-7699
www.getgreenstar.com

Emergency telephone number

Emergency Telephone INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)
(24/7, 365 days/year)

2. HAZARDS IDENTIFICATION

Appearance Dark brown to black liquid **Physical state** Liquid

Classification

Acute toxicity - Oral	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4

Label elements

Signal word

Warning

Hazard statements

Harmful if swallowed
Harmful if inhaled

**Precautionary Statements - Prevention**

Wear protective gloves/protective clothing/eye protection/face protection
 Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Avoid breathing dust/fume/gas/mist/vapours/spray
 Use only outdoors or in a well-ventilated area

Precautionary Statements - Response

IF INHALED: Remove person to fresh air and keep comfortable for breathing
 IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell
 Rinse mouth

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable.

Mixture

Chemical name	CAS No	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
Nitric acid, ammonium calcium salt	15245-12-2	7-13	-	-
Potassium Nitrate	7757-79-1	5-10	-	-
Magnesium nitrate (hexahydrate)	13446-18-9	1-5	-	-
Ammonium Nitrate	6484-52-2	1-5	-	-
Fe EDTA	15708-41-5	0.1-1	-	-
Sodium tetraborate pentahydrate	12179-04-3	0.1-1	-	-
Sodium Molybdate	10102-40-6	0.1-1	-	-

4. FIRST AID MEASURES

Description of first aid measures

Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a doctor.
Skin contact	Wash skin with soap and water.
Inhalation	Remove person to fresh air and keep comfortable for breathing.
Ingestion	Call a POISON CENTRE/doctor/physician if you feel unwell. Rinse mouth.

Most important symptoms and effects, both acute and delayed

Symptoms Harmful if swallowed. Harmful if inhaled.

Indication of any immediate medical attention and special treatment needed

Note to doctors Treat symptomatically.

5. FIREFIGHTING MEASURES

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	CAUTION: Use of water spray when fighting fire may be inefficient.
Specific hazards arising from the chemical	No information available.
Explosion Data	
Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	None.
Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation. Avoid breathing vapours or mists. Use personal protective equipment as required.

Other Information Refer to protective measures listed in sections 7 and 8.

Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labelled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Wear protective gloves/protective clothing and eye/face protection. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid breathing dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Store locked up.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters**Exposure Limits**

Chemical name	Canada - Alberta - Occupational Exposure Limits - Ceilings	Canada - British Columbia - Occupational Exposure Limits - Ceilings	Canada - Ontario - Occupational Exposure Limits - Ceilings	Quebec
Fe EDTA 15708-41-5	TWA: 1 mg/m ³	TWA: 1 mg/m ³ STEL: 2 mg/m ³	TWA: 1 mg/m ³	TWA: 1.0 mg/m ³
Sodium Molybdate 10102-40-6	TWA: 0.5 mg/m ³	TWA: 0.5 mg/m ³	TWA: 0.5 mg/m ³	TWA: 0.5 mg/m ³
Sodium tetraborate pentahydrate 12179-04-3	TWA: 1 mg/m ³ STEL: 3 ppm	TWA: 2 mg/m ³ STEL: 6 mg/m ³	TWA: 2 mg/m ³ STEL: 6 mg/m ³	TWA: 2 mg/m ³ STEL: 6 mg/m ³

Appropriate engineering controls

Engineering controls	Showers Eyewash stations Ventilation systems.
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Individual protection measures, such as personal protective equipment

Eye/face protection	No special protective equipment required.
Hand protection	Wear suitable gloves.
Skin and body protection	Wear suitable protective clothing.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
General hygiene considerations	Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES
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Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Dark brown to black liquid
Colour	Dark brown to black
Odour	Not determined
Odour Threshold	Not determined

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	2.7-3.3	
Melting point / freezing point	No data available	
Initial boiling point and boiling range	No data available	
Flash point	No data available	
Evaporation Rate	Not determined	
Flammability (Solid, Gas)	Liquid-Not applicable	
Flammability Limit in Air		
Upper flammability or explosive limits	No data available	

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Lower flammability or explosive limits	No data available	

Vapour Pressure	Not determined
Vapour Density	No data available
Relative Density	1.25
Water Solubility	Fully soluble
Solubility in other solvents	Not determined
Partition Coefficient	Not determined
Autoignition temperature	No data available
Hyphen	Not determined
Kinematic Viscosity	Not determined
Dynamic Viscosity	Not determined
Explosive properties	Not determined.
Oxidising properties	Not determined.

Other information

Softening Point	Not determined
Molecular weight	Not determined
VOC content	No data available
Liquid Density	Not determined
Bulk density	Not determined

10. STABILITY AND REACTIVITY

Reactivity	Not reactive under normal conditions.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to Avoid	Excessive heat.
Incompatible materials	None known based on information supplied.
Hazardous decomposition products	None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure**Product Information**

Eye contact	Avoid contact with eyes.
Skin contact	Avoid contact with skin.
Inhalation	Harmful if inhaled.
Ingestion	Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	Please see section 4 of this SDS for symptoms.
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Acute toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	1,628.30
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ATEmix (dermal) 6,320.00
ATEmix (inhalation-dust/mist) 2.59

Unknown acute toxicity No information available

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Nitric acid, ammonium calcium salt 15245-12-2	300 - 2000 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
Potassium Nitrate 7757-79-1	= 3015 mg/kg (Rat)	> 5000 mg/kg (Rat)	> 0.527 mg/L (Rat) 4 h
Potassium Phosphate 7778-77-0	= 3200 mg/kg (Rat)	-	> 0.83 mg/L (Rat) 4 h
Ammonium Nitrate 6484-52-2	= 2217 mg/kg (Rat)	> 5000 mg/kg (Rat)	> 88.8 mg/L (Rat) 4 h
Humic Acid 68514-28-3	-	> 2000 mg/kg (Rat)	-
Magnesium nitrate (hexahydrate) 13446-18-9	= 5440 mg/kg (Rat)	-	-
Fe EDTA 15708-41-5	= 5 g/kg (Rat)	> 2000 mg/kg (Rat)	> 2.75 mg/L (Rat) 4 h
Zinc EDTA 14025-21-9	= 1750 mg/kg (Rat)	-	-
Sodium tetraborate pentahydrate 12179-04-3	= 2403 mg/kg (Rat)	-	-
Potassium sorbate 24634-61-5	= 3200 mg/kg (Rat)	-	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity Nitrate or nitrite (ingested) under conditions that result in endogenous nitrosation are considered carcinogens.

Chemical name	ACGIH	IARC	NTP	OSHA
Nitric acid, ammonium calcium salt 15245-12-2	-	Group 2A	-	X
Potassium Nitrate 7757-79-1	-	Group 2A	-	X
Ammonium Nitrate 6484-52-2	-	Group 2A	-	X
Magnesium nitrate (hexahydrate) 13446-18-9	-	Group 2A	-	X
Sodium Molybdate 10102-40-6	A3	-	-	-

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 2A - Probably Carcinogenic to Humans

OSHA (Occupational Safety and Health Administration of the US Department of Labour)

X - Present

Reproductive toxicity

Sodium Borate: Sodium borate and boric acid interfere with sperm production, damage the testes and interfere with male fertility when given to animals by mouth at high doses. Boric acid produces developmental effects, including reduced body weight, malformations and death, in the offspring of pregnant animals given boric acid by mouth.

The above mentioned animal studies were conducted under exposure conditions leading to doses many times in excess of those that could occur through product use or inhalation of dust in occupational settings. Moreover, a human study of occupational exposure to sodium borate and boric acid dusts showed no adverse effect on fertility.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Humic Acid 68514-28-3	-	LC50: >128mg/L (96h, Poecilia reticulata)	-	-
Fe EDTA 15708-41-5	-	LC50: >100mg/L (96h, Oncorhynchus mykiss)	-	-
Zinc EDTA 14025-21-9	-	LC50: =685mg/L (96h, Lepomis macrochirus)	-	-
Potassium sorbate 24634-61-5	-	LC50: =1250mg/L (96h, Brachydanio rerio)	-	EC50: =750mg/L (48h, Daphnia magna)

Persistence/Degradability No information available.

Bioaccumulation No information available.

Component Information

Chemical name	Partition coefficient
Ammonium Nitrate 6484-52-2	-3.1

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Waste from residues/unused products Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations.

Contaminated packaging Do not reuse empty containers.

14. TRANSPORT INFORMATION

Note Transport within user's premises: Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage

DOT Not regulated

TDG Not regulated

MEX Not regulated

IATA Not regulated

IMDG Not regulated

15. REGULATORY INFORMATION

REGULATORY INFORMATION**International Regulations**

Ozone-depleting substances (ODS) Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories

Chemical name	TSCA	DSL/NDSL	EINECS/ELI NCS	ENCS	IECSC	KECL	PICCS	AIC
Nitric acid, ammonium calcium salt	X	X	X			X		
Potassium Nitrate	X	X	X	X	X	X	X	X
Magnesium nitrate (hexahydrate)				X	X		X	X
Ammonium Nitrate	X	X	X	X	X	X	X	X
Fe EDTA	X	X	X		X	X	X	X
Sodium tetraborate pentahydrate	X			X	X		X	
Sodium Molybdate				X	X		X	X

Legend:**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances**ENCS** - Japan Existing and New Chemical Substances**IECSC** - China Inventory of Existing Chemical Substances**KECL** - Korean Existing and Evaluated Chemical Substances**PICCS** - Philippines Inventory of Chemicals and Chemical Substances**AICS** - Australian Inventory of Chemical Substances**16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION****NFPA**
HMISHealth hazards -
Health hazards -Flammability -
Flammability -Instability -
Physical hazards -Special hazards -
Personal Protection -**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA TWA (time-weighted average)
 STEL STEL (Short Term Exposure Limit)
 Ceiling Maximum limit value
 * Skin designation

Revision Date: 09-Feb-2023

Revision Note: New format.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

