

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product Identifier

SDS # GREEN-018-EU
Product Name Grotek Solo-Tek Grow™

Contains Nitric acid, ammonium calcium salt, Zinc EDTA

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended Use Plant Fertiliser

1.3. Details of the Supplier of the Safety Data Sheet

Supplier

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

For further information, please contact

Email Address regulatory@hydrofarm.com

1.4. Emergency telephone number

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

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

Regulation (EC) No 1272/2008

Acute toxicity - Oral	Category 4 - (H302)
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2.2. Label Elements

Product Identifier

Contains Nitric acid, ammonium calcium salt, Zinc EDTA



Signal Word

Warning

Hazard statements

H302 - Harmful if swallowed

Precautionary Statements - EU (§28, 1272/2008)

P264 - Wash face, hands and any exposed skin thoroughly after handling

P270 - Do not eat, drink or smoke when using this product

P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell

P330 - Rinse mouth

P501 - Dispose of contents/ container to an approved waste disposal plant

2.3. Other Hazards

No information available

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS**3.2 MIXTURES**

Chemical name	EC No	CAS No	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH Registration Number
Fe EDTA	Present	15708-41-5	0.5-1.5	Not determined	Not determined
Sodium tetraborate pentahydrate	-	12179-04-3	0.1-1	Repr. 1B (H360FD)	Not determined
Ethylenediaminetetraacetic acid copper salt, tetrahydrate	Present	14025-15-1	0.1-1	Not determined	Not determined
Citric Acid	Present	77-92-9	0.1-1	Not determined	Not determined

Full text of H- and EUH-phrases: see section 16

This product contains one or more candidate substance(s) of very high concern (Regulation (EC) No. 1907/2006 (REACH), Article 59)

Chemical name	CAS No	SVHC candidates
Sodium tetraborate pentahydrate	12179-04-3	X

Section 4: FIRST AID MEASURES**4.1. Description of First Aid Measures**

General Advice	Provide this SDS to medical personnel for treatment.
Eye Contact	Rinse immediately with plenty of water and seek medical advice.
Skin Contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Inhalation	Remove to fresh air.
Ingestion	Call a poison center or doctor/physician if you feel unwell. Rinse mouth.

4.2. Most Important Symptoms and Effects, Both Acute and Delayed

Symptoms	Harmful if swallowed. May be harmful in contact with skin.
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4.3. Indication of any Immediate Medical Attention and Special Treatment Needed

Notes to Physician	Treat symptomatically.
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Section 5: FIREFIGHTING MEASURES**5.1. Extinguishing Media****Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media

Not determined.

5.2. Special Hazards Arising from the Substance or Mixture

Thermal decomposition can lead to release of irritating and toxic gases and vapours.

5.3. Advice for Firefighters

Wear self-contained breathing apparatus and protective suit. Use personal protective equipment as required.

Section 6: ACCIDENTAL RELEASE MEASURES**6.1. Personal Precautions, Protective Equipment and Emergency Procedures****Personal Precautions**

Use personal protective equipment as required.

For Emergency Responders

Use personal protection recommended in Section 8.

6.2. Environmental Precautions

See Section 12 for additional Ecological Information.

6.3. Methods and Material for Containment and Cleaning Up**Methods for Containment**

Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up

Place in appropriate containers for disposal.

6.4. Reference to Other Sections

See Section 13: DISPOSAL CONSIDERATIONS.

Section 7: HANDLING AND STORAGE**7.1. Precautions for Safe Handling****Advice on Safe Handling**

Handle in accordance with good industrial hygiene and safety practice. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product.

General Hygiene Considerations

Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for Safe Storage, Including any Incompatibilities**Storage Conditions**

Keep containers tightly closed in a dry, cool and well-ventilated place.

7.3. Specific End Use(s)**Specific Use(s)**

Plant Fertiliser.

Risk Management Methods (RMM)

The information required is contained in this Safety Data Sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

Chemical name	European Union	United Kingdom	France	Spain	Germany
Fe EDTA 15708-41-5	-	TWA: 1 mg/m ³	-	TWA: 1 mg/m ³	-
Citric Acid 77-92-9	-	-	-	-	TWA: 2 mg/m ³
Sodium tetraborate pentahydrate 12179-04-3	-	STEL: 3 mg/m ³ TWA: 1 mg/m ³	TWA: 1 mg/m ³	STEL: 6 mg/m ³ TWA: 2 mg/m ³	-
Ethylenediaminetetraacetic acid copper salt, tetrahydrate 14025-15-1	-	-	-	TWA: 0.1 mg/m ³	-
Chemical name	Italy	Portugal	Netherlands	Finland	Denmark
Fe EDTA 15708-41-5	-	TWA: 1 mg/m ³	-	TWA: 1 mg/m ³	TWA: 1 mg/m ³
Sodium tetraborate pentahydrate 12179-04-3	-	STEL: 6 mg/m ³ TWA: 2 mg/m ³	-	-	TWA: 1 mg/m ³
Ethylenediaminetetraacetic acid copper salt, tetrahydrate 14025-15-1	-	-	-	TWA: 0.02 mg/m ³	-
Chemical name	Austria	Switzerland	Poland	Norway	Ireland
Fe EDTA 15708-41-5	-	TWA: 1 mg/m ³	-	TWA: 1 mg/m ³ STEL: 3 mg/m ³	TWA: 1 mg/m ³ STEL: 2 mg/m ³
Citric Acid 77-92-9	-	STEL: 4 mg/m ³ TWA: 2 mg/m ³	-	-	-
Sodium tetraborate pentahydrate 12179-04-3	-	-	-	-	TWA: 1 mg/m ³ STEL: 6 mg/m ³
Ethylenediaminetetraacetic acid copper salt, tetrahydrate 14025-15-1	STEL 4 mg/m ³ STEL 0.4 mg/m ³ TWA: 1 mg/m ³ TWA: 0.1 mg/m ³	-	-	-	-

8.2. Exposure Controls

Engineering Controls

Apply technical measures to comply with the occupational exposure limits.

Personal Protective Equipment

Eye/Face Protection

If necessary, refer to appropriate regulations and standards.

Hand Protection

If necessary, refer to appropriate regulations and standards.

Skin and Body Protection

If necessary, refer to appropriate regulations and standards.

Respiratory Protection

If necessary, refer to appropriate regulations and standards.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

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

Property	Values	Remarks • Method
pH	5.75	
Melting point / freezing point	Not determined	
Boiling point / boiling range	Not determined	
Flash point	Not determined	
Evaporation Rate	Not determined	
Flammability (Solid, Gas)	Not determined	
Flammability Limit in Air		

Upper flammability or explosive limits	Not determined
Lower flammability or explosive limits	Not determined
Vapour Pressure	Not determined
Vapour Density	Not determined
Relative Density	1.27
Water Solubility	Fully soluble
Solubility(ies)	Not determined
Partition Coefficient	Not determined
Autoignition temperature	Not determined
Decomposition temperature	Not determined
Kinematic viscosity	Not determined
Dynamic Viscosity	Not determined
Explosive Properties	Not determined
Oxidising Properties	Not determined

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

Not reactive under normal conditions.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of Hazardous Reactions

Possibility of Hazardous Reactions

None under normal processing.

10.4. Conditions to Avoid

Keep out of reach of children.

10.5. Incompatible Materials

None known based on information supplied.

10.6. Hazardous Decomposition Products

None under normal use conditions.

Section 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects

Acute toxicity

Product Information

Inhalation	Do not inhale.
Eye Contact	Avoid contact with eyes.
Skin Contact	May be harmful in contact with skin.
Ingestion	Harmful if swallowed.

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

ATEmix (oral)	986.4585 mg/kg
ATEmix (dermal)	3,453.30 mg/kg
ATEmix (inhalation-dust/mist)	323.80 mg/L

Unknown Acute Toxicity

81.5 % of the mixture consists of ingredient(s) of unknown toxicity.

25 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.

26 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.

81.5 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).

81.5 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapour).

74.5 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Nitric acid, ammonium calcium salt	300 - 2000 mg/kg (Rat)	> 2000 mg/kg (Rat)	
Water	> 90 mL/kg (Rat)		
Potassium Nitrate	= 3015 mg/kg (Rat)	> 5000 mg/kg (Rat)	
Humic Acid		> 2000 mg/kg (Rat)	
Ammonium Nitrate	= 2217 mg/kg (Rat)	> 5000 mg/kg (Rat)	> 88.8 mg/L (Rat) 4 h
Potassium Phosphate	= 3200 mg/kg (Rat)		
Nitric acid, magnesium salt, hexahydrate	= 5440 mg/kg (Rat)		
Fe EDTA	= 5 g/kg (Rat)	> 2000 mg/kg (Rat)	
Zinc EDTA	= 1750 mg/kg (Rat)		
Sodium tetraborate pentahydrate	= 2403 mg/kg (Rat)		
Citric Acid	= 3 g/kg (Rat)	> 2000 mg/kg (Rat)	
Diammonium Phosphate	> 2000 mg/kg (Rat)	> 5000 mg/kg (Rabbit)	

Skin corrosion/irritation Not classified.

Serious eye damage/eye irritation Not classified.

Sensitisation Not classified.

Germ cell mutagenicity Not classified.

Carcinogenicity Not classified.

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.

STOT - single exposure Not classified.

STOT - repeated exposure Not classified.

Aspiration hazard Not classified.

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

The 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.

Chemical name	Algae/aquatic plants	Fish	Crustacea
Fe EDTA		100: 96 h Oncorhynchus mykiss mg/L LC50 static	
Ethylenediaminetetraacetic acid copper salt, tetrahydrate		555: 96 h Lepomis macrochirus mg/L LC50 static	
Citric Acid		1516: 96 h Lepomis macrochirus mg/L LC50	

12.2. Persistence and Degradability

Not determined.

12.3. Bioaccumulative Potential

There is no data for this product.

Chemical name	Partition coefficient
Citric Acid	-1.72

12.4. Mobility in Soil

Mobility

12.5. Results of PBT and vPvB Assessment

Not determined.

12.6. Other Adverse Effects

Not determined.

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste Treatment Methods

Waste from residues/unused products

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging

Improper disposal or reuse of this container may be dangerous and illegal.

Section 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.

IMDG

14.2 Proper Shipping Name

Not regulated

RID

14.2 Proper Shipping Name

Not regulated

ADR

14.2 Proper Shipping Name

Not regulated

IATA

14.2 Proper Shipping Name

Not regulated

Section 15: REGULATORY INFORMATION

15.1. Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work .

Authorisations and/or restrictions on use:

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Persistent Organic Pollutants

Not applicable

Ozone-depleting substances (ODS) regulation (EC) 1005/2009

International Inventories

Chemical name	TSCA	DSL/NDSL	EINECS/ELINCS	PICCS	ENCS	IECSC	AICS	KECL
Nitric acid, ammonium calcium salt 15245-12-2 (14-19)	X	X	X	-	-	-	-	X
Potassium Nitrate 7757-79-1 (7-13)	X	X	X	X	X	X	X	X
Humic Acid 68514-28-3 (7-13)	X	X	X	-	-	X	-	X
Magnesium Sulfate heptahydrate 10034-99-8 (5-10)	X	X	-	X	X	X	X	-
Ammonium Nitrate 6484-52-2 (3-7)	X	X	X	X	X	X	X	X
Potassium Phosphate 7778-77-0 (3-7)	X	X	X	X	X	X	X	X
Nitric acid, magnesium salt, hexahydrate 13446-18-9 (1-5)	-	X	-	X	X	X	X	-
Fe EDTA 15708-41-5 (0.5-1.5)	X	X	X	X	-	X	X	X
Manganese EDTA 15375-84-5 (0.1-1)	X	X	X	-	X	X	X	-
Ethylenediaminetetraacetic acid copper salt, tetrahydrate 14025-15-1 (0.1-1)	X	X	X	X	X	X	X	X
Zinc EDTA 14025-21-9 (0.1-1)	X	X	X	-	X	X	X	-
Sodium tetraborate pentahydrate 12179-04-3 (0.1-1)	X	-	-	X	X	X	-	-
Diammonium Phosphate 7783-28-0 (0.1-1)	X	X	X	X	X	X	X	X
Citric Acid 77-92-9 (0.1-1)	X	X	X	X	X	X	X	X

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

PICCS - Philippines Inventory of Chemicals and Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
AICS - Australian Inventory of Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances

15.2. Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

Section 16: OTHER INFORMATION

Full text of H-Statements referred to under section 3

H360FD - May damage fertility. May damage the unborn child

Legend

SVHC: Substances of Very High Concern for Authorisation:

Legend

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

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Classification Procedure

Calculation method

Issue Date: 05-Oct-2021

Revision Date: 31-Mar-2022

Revision Note: New emergency telephone numbers.

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2015/830

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