

# Safety Data Sheet

Issue Date: 29-Jun-2017

Revision Date: 29-Jun-2017

Version 1

## 1. IDENTIFICATION

### Product Identifier

**Product Name** Eminate 25-5-20

### Other means of identification

**SDS #** VLS-220  
FFN 00410

### Recommended use of the chemical and restrictions on use

**Recommended Use** Fertilizer.

### Details of the supplier of the safety data sheet

#### Supplier Address

Planet Turf  
6422 E 2nd Avenue  
Spokane Valley, WA 99212

### Emergency Telephone Number

**Company Phone Number** Business Phone: 509-921-5421

**Emergency Telephone (24 hr)** INFOTRAC 1-352-323-3500 (International)  
1-800-535-5053 (North America)

## 2. HAZARDS IDENTIFICATION

**Appearance** Green-blue crystals

**Physical state** Solid

**Odor** Fertilizer-like

### Classification

This chemical does not meet the hazardous criteria set forth by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). However, this Safety Data Sheet (SDS) contains valuable information critical to the safe handling and proper use of this product. This SDS should be retained and available for employees and other users of this product.

### Other hazards

Harmful to aquatic life with long lasting effects

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Please also refer to subsequent sections of this SDS for additional information regarding the components of this product.

Chemical Name	CAS No.	Weight-%
Potassium Nitrate	7757-79-1	Proprietary
Ammonium Sulfate	7783-20-2	Proprietary
Sodium Nitrate	7631-99-4	Proprietary
Citric Acid	77-92-9	Proprietary
Boric Acid	10043-35-3	Proprietary

\*\*If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.\*\*

## 4. FIRST AID MEASURES

### First Aid Measures

<b>General Advice</b>	Provide this SDS to medical personnel for treatment.
<b>Eye Contact</b>	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
<b>Skin Contact</b>	Wash with plenty of water. Take off contaminated clothing. Wash contaminated clothing before reuse. If skin irritation persists, call a physician.
<b>Inhalation</b>	Remove exposed individual(s) to fresh air for 20 minutes. Consult a physician/poison center if individual's condition declines or if symptoms persist.
<b>Ingestion</b>	Do NOT induce vomiting. Rinse mouth. Drink 1 or 2 glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

### Most important symptoms and effects

<b>Symptoms</b>	May be harmful if swallowed.
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### Indication of any immediate medical attention and special treatment needed

<b>Notes to Physician</b>	Treat symptomatically.
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## 5. FIRE-FIGHTING MEASURES

### Suitable Extinguishing Media

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

**Unsuitable Extinguishing Media** Not determined.

### Specific Hazards Arising from the Chemical

Product is not flammable.

### Explosion Data

### Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

<b>Personal Precautions</b>	Wear protective clothing as described in Section 8 of this safety data sheet. Ventilate area of leak or spill.
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### Environmental precautions

<b>Environmental precautions</b>	See Section 12 for additional Ecological Information.
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### Methods and material for containment and cleaning up

<b>Methods for Containment</b>	Prevent further leakage or spillage if safe to do so.
<b>Methods for Clean-Up</b>	Avoid creating dust. Sweep up and shovel into suitable containers for disposal. For waste disposal, see section 13 of the SDS.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

#### **Advice on Safe Handling**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid generation of dust. Wear eye/face protection. Wear protective gloves/protective clothing. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product.

### Conditions for safe storage, including any incompatibilities

#### **Storage Conditions**

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

#### **Incompatible Materials**

Strong oxidizing agents. Strong acids. Strong bases.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Citric Acid 77-92-9	-	15 mg / m <sup>3</sup> (Total)	-
Fe EDTA 15708-41-5	TWA: 1 mg/m <sup>3</sup> Fe	(vacated) TWA: 1 mg/m <sup>3</sup> Fe	TWA: 1 mg/m <sup>3</sup> Fe
Synthetic calcium silicate 1344-95-2	-	TWA: 15 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable fraction (vacated) TWA: 15 mg/m <sup>3</sup> total dust (vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction	TWA: 10 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable dust
Manganese EDTA 15375-84-5	-	(vacated) Ceiling: 5 mg/m <sup>3</sup> Ceiling: 5 mg/m <sup>3</sup> Mn	IDLH: 500 mg/m <sup>3</sup> Mn TWA: 1 mg/m <sup>3</sup> Mn STEL: 3 mg/m <sup>3</sup> Mn
Ethylenediaminetetraacetic acid copper salt, tetrahydrate 14025-15-1	TWA: 1 mg/m <sup>3</sup> Cu dust and mist	-	IDLH: 100 mg/m <sup>3</sup> Cu dust and mist TWA: 1 mg/m <sup>3</sup> Cu dust and mist
Boric Acid 10043-35-3	STEL: 6 mg/m <sup>3</sup> inhalable particulate matter TWA: 2 mg/m <sup>3</sup> inhalable particulate matter	-	-

### Appropriate engineering controls

#### **Engineering Controls**

Apply technical measures to comply with the occupational exposure limits. Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area. Ensure adequate ventilation, especially in confined areas.

### Individual protection measures, such as personal protective equipment

#### **Eye/Face Protection**

Chemical safety goggles/faceshield. Refer to 29 CFR 1910.133 for eye and face protection regulations.

#### **Skin and Body Protection**

Wear protective gloves and protective clothing. Refer to 29 CFR 1910.138 for appropriate skin and body protection.

#### **Respiratory Protection**

If necessary, wear a MSHA/NIOSH-approved respirator. Refer to 29 CFR 1910.134 for respiratory protection requirements.

**General Hygiene Considerations** Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Physical state</b>	Solid	<b>Odor</b>	Fertilizer-like
<b>Appearance</b>	Green-blue crystals	<b>Odor Threshold</b>	Not determined
<b>Color</b>	Green-blue		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>	Not determined	
<b>Melting Point/Freezing Point</b>	Not determined	
<b>Boiling Point/Boiling Range</b>	Not determined	
<b>Flash Point</b>	Not determined	
<b>Evaporation Rate</b>	Not determined	
<b>Flammability (Solid, Gas)</b>	Not determined	
<b>Flammability Limits in Air</b>		
<b>Upper Flammability Limits</b>	Not determined	
<b>Lower Flammability Limit</b>	Not determined	
<b>Vapor Pressure</b>	Not determined	
<b>Vapor Density</b>	Not determined	
<b>Relative Density</b>	Not determined	
<b>Water Solubility</b>	100%	
<b>Solubility in other solvents</b>	Not determined	
<b>Partition Coefficient</b>	Not determined	
<b>Auto-ignition Temperature</b>	Not determined	
<b>Decomposition Temperature</b>	Not determined	
<b>Kinematic Viscosity</b>	Not determined	
<b>Dynamic Viscosity</b>	Not determined	
<b>Explosive Properties</b>	Not determined	
<b>Oxidizing Properties</b>	Not determined	

### Other Information

**Density** 12.8 lbs/gal

## 10. STABILITY AND REACTIVITY

### Reactivity

Not reactive under normal conditions.

### Chemical Stability

Stable under recommended storage conditions.

### Possibility of Hazardous Reactions

None under normal processing.

### Conditions to Avoid

Avoid generation of dust.

### Incompatible Materials

Strong oxidizing agents. Strong acids. Strong bases.

### Hazardous Decomposition Products

None known based on information supplied.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### Product Information

<b>Eye Contact</b>	May cause mechanical eye irritation.
<b>Skin Contact</b>	May cause temporary irritation on skin contact.
<b>Inhalation</b>	Dusts of this product may cause irritation of the nose, throat, and respiratory tract.
<b>Ingestion</b>	May be harmful if swallowed.

### Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Potassium Nitrate 7757-79-1	= 3015 mg/kg ( Rat )	-	-
Urea 57-13-6	= 8471 mg/kg ( Rat )	-	-
Ammonium Sulfate 7783-20-2	= 2840 mg/kg ( Rat )	-	-
Mono-ammonium Phosphate 7722-76-1	= 5750 mg/kg ( Rat )	> 7940 mg/kg ( Rabbit )	-
Sodium Nitrate 7631-99-4	= 1267 mg/kg ( Rat )	-	-
Citric Acid 77-92-9	= 3 g/kg ( Rat ) = 3000 mg/kg ( Rat )	-	-
Fe EDTA 15708-41-5	> 5000 mg/kg ( Rat ) = 5 g/kg ( Rat )	> 5000 mg/kg ( Rat )	> 2.05 g/m <sup>3</sup> ( Rat ) 4 h
Synthetic calcium silicate 1344-95-2	> 5000 mg/kg ( Rat )	-	-
Zinc EDT 14025-21-9	= 1750 mg/kg ( Rat )	-	-
Boric Acid 10043-35-3	= 2660 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	> 0.16 mg/L ( Rat ) 4 h

### Information on physical, chemical and toxicological effects

**Symptoms** Please see section 4 of this SDS for symptoms.

### 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 IARC group 2A carcinogens.

Chemical Name	ACGIH	IARC	NTP	OSHA
Potassium Nitrate 7757-79-1		Group 2A		X
Sodium Nitrate 7631-99-4		Group 2A		X
Boric Acid 10043-35-3		Group 2A		X

#### Legend

**IARC (International Agency for Research on Cancer)**

Group 2A - Probably Carcinogenic to Humans

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

X - Present

**Numerical measures of toxicity**

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

ATEmix (oral) 4,043.00 mg/kg

ATEmix (dermal) 10,481.35 mg/kg

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

Harmful to aquatic life with long lasting effects.

**Component Information**

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Urea 57-13-6		16200 - 18300: 96 h Poecilia reticulata mg/L LC50	3910: 48 h Daphnia magna mg/L EC50 Static 10000: 24 h Daphnia magna Straus mg/L EC50
Ammonium Sulfate 7783-20-2		18: 96 h Cyprinus carpio mg/L LC50 32.2 - 41.9: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 123 - 128: 96 h Poecilia reticulata mg/L LC50 semi-static 420: 96 h Brachydanio rerio mg/L LC50 semi-static 480: 96 h Brachydanio rerio mg/L LC50 flow-through 250: 96 h Brachydanio rerio mg/L LC50 460 - 1000: 96 h Leuciscus idus mg/L LC50 static 100: 96 h Pimephales promelas mg/L LC50 126: 96 h Poecilia reticulata mg/L LC50 5.2 - 8.2: 96 h Oncorhynchus mykiss mg/L LC50 static	14: 48 h Daphnia magna mg/L LC50 423: 24 h Daphnia magna mg/L EC50
Sodium Nitrate 7631-99-4		2000: 96 h Lepomis macrochirus mg/L LC50 static 994.4 - 1107: 96 h Oncorhynchus mykiss mg/L LC50 static	
Citric Acid 77-92-9		1516: 96 h Lepomis macrochirus mg/L LC50 static	120: 72 h Daphnia magna mg/L EC50
Boric Acid 10043-35-3		1020: 72 h Carassius auratus mg/L LC50 flow-through	115 - 153: 48 h Daphnia magna mg/L EC50

**Persistence/Degradability**

Not determined.

**Bioaccumulation**

Not determined.

**Mobility**

Chemical Name	Partition Coefficient
Urea 57-13-6	-1.59
Ammonium Sulfate 7783-20-2	-5.1
Sodium Nitrate 7631-99-4	-3.8
Citric Acid 77-92-9	-1.72
Boric Acid 10043-35-3	-0.757

**Other Adverse Effects**

Not determined

### 13. DISPOSAL CONSIDERATIONS

#### Waste Treatment Methods

<b>Disposal of Wastes</b>	Disposal should be in accordance with applicable regional, national and local laws and regulations.
<b>Contaminated Packaging</b>	Disposal should be in accordance with applicable regional, national and local laws and regulations.

#### California Hazardous Waste Status

Chemical Name	California Hazardous Waste Status
Potassium Nitrate 7757-79-1	Ignitable Reactive
Sodium Nitrate 7631-99-4	Toxic Ignitable Reactive
Ethylenediaminetetraacetic acid copper salt, tetrahydrate 14025-15-1	Toxic
Zinc EDT 14025-21-9	Toxic
Boric Acid 10043-35-3	Toxic

### 14. TRANSPORT INFORMATION

<b>Note</b>	Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.
<b>DOT</b>	Not regulated
<b>IATA</b>	Not regulated
<b>IMDG</b>	Not regulated

### 15. REGULATORY INFORMATION

#### International Inventories

Chemical Name	TSCA	DSL/NDSL	EINECS/E LINCS	ENCS	IECSC	KECL	PICCS	AICS
Potassium Nitrate	X	X	X	Present	X	Present	X	X
Urea	X	X	X	Present	X	Present	X	X
Ammonium Sulfate	X	X	X	Present	X	Present	X	X
Mono-ammonium Phosphate	X	X	X	Present	X	Present	X	X
Sodium Nitrate	X	X	X	Present	X	Present	X	X
Citric Acid	X	X	X	Present	X	Present	X	X
Fe EDTA	X	X	X		X	Present	X	X
Manganese EDTA	X	X	X	Present	X			X
Magnesium Sulfate heptahydrate	X	X		Present	X		X	X
Synthetic calcium silicate	X	X	X	Present	X	Present	X	X
Ethylenediaminetetraacetic acid copper salt, tetrahydrate	X	X	X	Present	X	Present	X	X
Zinc EDT	X	X	X	Present	X			X
Boric Acid	X	X	X	Present	X	Present	X	X

Biuret	X	X	X		X	Present		X
Urea, reaction products with formaldehyde	X	X	X	Present		Present		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

**US Federal Regulations****CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	CAS No.	Weight-%	SARA 313 - Threshold Values %
Potassium Nitrate - 7757-79-1	7757-79-1	Proprietary	1.0
Ammonium Sulfate - 7783-20-2	7783-20-2	Proprietary	1.0
Mono-ammonium Phosphate - 7722-76-1	7722-76-1	Proprietary	1.0
Sodium Nitrate - 7631-99-4	7631-99-4	Proprietary	1.0

**CWA (Clean Water Act)**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Ethylenediaminetetraacetic acid copper salt, tetrahydrate		X		
Zinc EDT		X		

**US State Regulations****U.S. State Right-to-Know Regulations**

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Potassium Nitrate 7757-79-1	X	X	X
Sodium Nitrate 7631-99-4	X	X	X
Ethylenediaminetetraacetic acid copper salt, tetrahydrate 14025-15-1	X		X
Zinc EDT 14025-21-9	X		X
Boric Acid 10043-35-3	X		



**16. OTHER INFORMATION****NFPA****Health Hazards**

Not determined

**Flammability**

Not determined

**Instability**

Not determined

**Special Hazards**

Not determined

**HMIS****Health Hazards**

Not determined

**Flammability**

Not determined

**Physical hazards**

Not determined

**Personal Protection**

Not determined

**Issue Date:** 29-Jun-2017**Revision Date:** 29-Jun-2017**Revision Note:** New product**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**