

## SAFETY DATA SHEET

Rootstim

Date Prepared: 7/2/2024

Replaces: All Previous

### SECTION 1. IDENTIFICATION

Product Name: Rootstim  
Synonyms: None  
Use: Agricultural, Soil Amendment  
Manufactured For: Chemical Dynamics, Inc.  
4206 Business Lane  
Plant City, FL 33566  
Phone: 813-752-2812  
Chemtrec (Emergency) Phone: 800-424-9300

### SECTION 2. HAZARDS IDENTIFICATION

Product is not classified as hazardous under 29 CFR 1910.1200 under normal conditions.

### SECTION 3. COMPOSITION

Material	CAS #	EINECS #	%WT
Potassium Humate	68514-28-3	271-030-1	Proprietary blend of materials not classified as hazardous or are below de minimus classification limits.
Ascophyllum Nodosum	84775-78-0	283-907-6	
Urea	57-13-6	200-315-5	
Water	7732-18-5	231-791-2	

See product label for guaranteed analysis.

### SECTION 4. FIRST AID MEASURES

<b>General:</b>	In case of persisting adverse effects consult a physician. Treat symptomatically.
<b>Ingestion:</b>	Rinse mouth. Do NOT induce vomiting. Drink large amounts of water. Never give anything by mouth to an unconscious person. Seek medical attention.
<b>Skin Contact:</b>	If on skin (or hair): Take off all contaminated clothing. Rinse skin with water for at least 15 minutes.
<b>Inhalation:</b>	If inhaled: Remove person to fresh air and keep comfortable for breathing. Provide artificial respiration if necessary. Seek medical attention if necessary.
<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 attention.
<b>Acute Exposure Symptoms:</b>	Moderate irritant of eyes, skin and contaminated tissue
<b>Chronic Exposure Symptoms:</b>	Not available

### SECTION 5. FIRE FIGHTING MEASURES

<b>Extinguishing Media:</b>	Not Flammable. Use extinguishing media appropriate to surrounding fire. Cool containers with water spray to avoid rupture due to thermal expansion.
<b>Specific Hazards:</b>	This product is an aqueous mixture which will not burn. In a fire this material may decompose and produce acrid vapors, especially if evaporated to dryness.
<b>Protective Equipment and Precautions for Fire-Fighters:</b>	Wear self-contained breathing apparatus (SCBA) and full protective gear. Avoid inhaling combustion products. Fire run-off should be contained to prevent possible environmental damage.
<b>NFPA Rating:</b>	Health: 0, Fire: 0, Reactivity: 0

### SECTION 6. ACCIDENTAL RELEASE MEASURES

<b>Precautions:</b>	Isolate area. Keep unnecessary personnel away. Avoid splashing or spraying.
<b>Protective Equipment:</b>	Impervious gloves (rubber, neoprene or nitrile), Long sleeved clothing. Side-shielded safety glasses or chemical splash-proof goggles, face shield Chemical resistant apron and/or rubber boots may be needed.
<b>Containment:</b>	Stop flow of material if safe to do so. Dike area with diatomaceous earth or sand and maximize recovery. Avoid infiltration of large quantities into drains, surface water, groundwater and soil.
<b>Clean Up:</b>	Pump into a suitable tank or absorb with diatomaceous earth or sand. Sweep up and place into suitable containers for agronomical land application at recommended rates or dispose of in accordance with local/regional/national regulations (See Section 13 of SDS).

### SECTION 7. HANDLING AND STORAGE

<b>Precautions for safe handling:</b>	Material has low toxicity; therefore risk of damage is limited in normal handling. Normal handling or minor release is not expected to be hazardous. Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Do not eat, drink or use tobacco products when handling this material. Apply product in open areas. Keep away from children and pets. Do not contaminate feed, seed or any water sources. Launder work clothes frequently and separate from other laundry.
<b>Conditions for safe storage:</b>	Store in a well-ventilated, cool, dry place, away from direct sunlight, sources of intense heat, or where freezing is possible. Do not let product go below 32°F. Inspect all incoming containers before storage, to ensure containers are properly labeled and not damaged. Store or ship undiluted product in polypropylene or fiberglass containers.
<b>Incompatibilities:</b>	Strong oxidizing agents

### SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>Component Exposure Limits:</b>	Potassium Humate, Ascophyllum Nodosum	Not Established	PEL, OSHA
		Not Established	TWA, ACGIH
		Not Established	IDLH, NIOSH
		Not Established	REL, NIOSH
		Not Established	STEL, NIOSH
	Urea	Not Established	PEL, OSHA
		10 mg/m <sup>3</sup>	TWA, ACGIH
		Not Established	IDLH, NIOSH
		Not Established	REL, NIOSH
		Not Established	STEL, NIOSH
<b>Engineering Controls:</b>	Provide local exhaust ventilation and wash facilities.		
<b>Personal Protective Equipment:</b>	<p><u>Eyes</u>: Side-shielded safety glasses or chemical splash-proof goggles (where splashing is possible)</p> <p><u>Skin</u>: Impervious gloves (rubber, neoprene or nitrile), long sleeved clothing. Chemically resistant apron is recommended.</p> <p><u>Respiratory</u>: None required for ambient air concentrations (i.e. in the open under normal agronomic conditions). Use NIOSH approved respirator when dusts, mists, or vapors are present.</p>		
<b>General:</b>	Eye wash stations and safety shower required.		

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Dark Brown to Black liquid		
<b>Odor:</b>	Earthy	<b>UEL / LEL:</b>	Not Applicable
<b>Odor Threshold:</b>	Not Applicable	<b>Vapor Pressure:</b>	Not Available
<b>pH:</b>	8 to 9	<b>Density:</b>	1.1 g/cm <sup>3</sup>
<b>Melting/Freezing Point:</b>	<0°C (32°F)	<b>Solubility:</b>	Water
<b>Boiling Point:</b>	>100°C (212°F)	<b>Log<sub>ow</sub>:</b>	Not Available
<b>Flash Point:</b>	Not Applicable	<b>Auto Ignition Temp:</b>	Not Applicable
<b>Evaporation Rate:</b>	Similar to water	<b>Decomposition Temp:</b>	Not Available
<b>Flammability (Solid/Gas):</b>	Not Applicable	<b>Viscosity</b>	Not Available

### SECTION 10. STABILITY AND REACTIVITY

<b>Reactivity:</b>	If evaporated to dryness, product may be combustible
<b>Chemical Stability:</b>	Stable under normal conditions
<b>Possibility of Hazardous Reactions:</b>	Hazardous polymerization will not occur.
<b>Conditions to avoid:</b>	Avoid exposure to extreme temperatures and contact with incompatible materials. Elevated temperatures may cause containers to rupture.
<b>Incompatible Materials:</b>	Strong oxidizing agents.
<b>Hazardous Decomposition Products:</b>	Typical combustion products.

**SECTION 11. TOXICOLOGICAL INFORMATION**

<b>Acute Toxicity:</b>	Potassium Humate: LD50 oral (rat): > 5,000 mg/kg (100% Basis) Urea: LD50 oral (rat): > 8471 mg/kg (100% basis)
<b>Likely Routes of Exposure:</b>	Contact with eyes or skin
<b>Symptoms and Signs of Exposure:</b>	<u>Eyes</u> : Minimally irritating to eyes. <u>Skin</u> : Slightly irritating to skin.
<b>Chronic Effects:</b>	Not Available
<b>Carcinogenic:</b>	None of this product's components are listed by IARC, ACGIH, OSHA, NIOSH or NTP as carcinogenic.
<b>Mutagenicity:</b>	Not Available
<b>Reproductive Toxicity:</b>	Not Available

**SECTION 12. ECOLOGICAL INFORMATION**

<b>Ecotoxicity:</b>	Not Available
<b>Other Adverse Effects:</b>	Not harmful to ozone layer
<b>Ecotoxicity:</b>	Not Available

**SECTION 13. DISPOSAL CONSIDERATIONS**

<b>General Information:</b>	none
<b>Disposal Instructions:</b>	Agronomical land application at recommended rates or dispose of in accordance with local/regional/national regulations. Containers may be triple rinsed and offered for recycling.

**SECTION 14. TRANSPORT INFORMATION**

<b>This material is not hazardous as defined by 49 CFR 172.101 by the US Department of Transportation</b>	
<b>Proper Shipping Name:</b>	Not Applicable
<b>Hazard Class:</b>	Not Applicable
<b>UN Identification #:</b>	Not Applicable
<b>Packing Group:</b>	Not Applicable
<b>Required Label(s):</b>	Not Applicable
<b>Emergency Response Guide Number:</b>	Not Applicable
<b>Marine Pollutant:</b>	No

**SECTION 15. REGULATORY INFORMATION**

<b>TSCA Inventory Status</b>	All intentional ingredients listed on the TSCA inventory.
<b>DSCL (EEC) Status</b>	All intentional ingredients listed on the DSCL inventory.
<b>United States – SARA Hazard Category:</b>	This product has been reviewed according to the EPA Hazard Categories promulgated under Sections 311 and 312 of Title III of the Superfund Amendments and Reauthorization Act (SARA) and is considered, under applicable definitions, to meet the following categories:  Fire – No, Pressure – No, Acute – No, Chronic – No, Reactive – No
<b>SARA Title III Information:</b>	This product contains the following substances subject to the reporting requirements of Title III (EPCRA) of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:
Potassium Humate CAS No. 68514-28-3	CERCLA RQ (pounds): No SARA Reporting, 302: No SARA Reporting, 304: No SARA Reporting, 313: No
<b>Federal Insecticide, Fungicide, and Rodenticide Act</b>	This product is not a pesticide.
<b>State Regulations:</b>	Other state regulations may apply. Check individual state requirements.

**SECTION 16. OTHER INFORMATION**

Date of Revision:	7/2/2024, revision prepared in accordance with 29 CFR 1910.1200 Appendix D to meet Global Harmonization Standards.
Disclaimer:	The information contained in this SDS refers only to the specific material designated and does not relate to any process or use with any other materials. This information is based on data believed to be accurate and reliable as of the date hereof. It is intended for use by persons possessing technical knowledge at their own discretion and risk. Because safety standards and regulations are subject to change and because Chemical Dynamics, Inc. has no continuing control over the material, those handling, storing or using the material should satisfy themselves that they have current information regarding the particular way the material is handled, stored or used and that the same is done in accordance with federal, state and local law. No warranty, expressed or implied, and no liability is assumed by Chemical Dynamics, Inc. in conjunction with the use of this information. Nothing herein is to be construed as a recommendation to infringe any patents.