

1. Product and Company Identification

Product Code:	Z-ROOTF	
Product Name:	ROOT FEED	
Company Name:	Stoller	Phone Number:
	9090 Katy Freeway	1 (713)461-1493
	Suite 400	
	Houston, TX 77024	
Web site address:	www.stollerusa.com	
Email address:	compliance@stollerusa.com	
Emergency Contact:	CHEMTREC, In the US and Canada call	1 (800)424-9300
	CHEMTREC, From other countries call	+1 (703)527-3887
Information:		1 (800)539-5283
Synonyms:	Solution of urea, boric acid, calcium and magnesium salts.	

2. Hazards Identification

Serious Eye Damage/Eye Irritation, Category 2B

Acute Toxicity: Skin, Category 5

Acute Toxicity: Inhalation, Category 5

Acute Toxicity: Oral, Category 4



GHS Signal Word: **Warning**

GHS Hazard Phrases: H302 - Harmful if swallowed.
H313 - May be harmful in contact with skin.
H320 - Causes eye irritation.
H333 - May be harmful if inhaled.

GHS Precautionary Phrases: P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.

GHS Response Phrases: P301+312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 - Call a POISON CENTER or doctor/physician if you feel unwell.
P330 - Rinse mouth.
P337+313 - If eye irritation persists, get medical advice/attention.

GHS Storage and Disposal Phrases: P501 - Dispose of contents/container to permitted waste facility.

Potential Health Effects (Acute and Chronic): Acute: Depending on the duration of contact, overexposure can irritate the eyes, skin, mucous membranes and any other exposed tissue.

Chronic: Not known. Expected toxicity hazard: slight.

Inhalation: May cause respiratory tract irritation. Prolonged exposure to low concentrations of mists may cause sore throat, headache, nausea, dizziness and even unconsciousness.

Skin Contact: May cause discomfort, skin irritation or rash unless treated promptly.

Eye Contact: Contact with product may cause redness, slight to severe eye irritation.

Ingestion: May cause malaise, nausea, burning sensation in stomach, gastrointestinal damage.

SAFETY DATA SHEET

ROOT FEED

3. Composition/Information on Ingredients

CAS #	Components (Chemical Name)	Concentration	RTECS #
57-13-6	Urea	<20.0 %	YR6250000
22691-02-7	Calcium Chloride	<20.0 %	EV9800000
7791-18-6	Magnesium chloride (hydrated)	<15.0 %	OM2975000
10043-35-3	Boric acid	< 0.5 %	ED4550000

4. First Aid Measures

Emergency and First Aid Procedures:	Victims of severe exposure to chemicals must be taken to health providing centers for medical attention. Always bring with victim a copy of label and SDS of product to health professional.
In Case of Inhalation:	Move patient to fresh air. Supplemental oxygen may be needed. Assure mucous does not obstruct airways. Seek medical attention if victim's breathing becomes difficult.
In Case of Skin Contact:	Wipe off product and immediately wash affected area with abundant soap and water. Remove contaminated clothing taking care not to impregnate eyes. Seek medical attention if irritation occurs.
In Case of Eye Contact:	Holding eyelids apart, immediately flush eyes with running water for at least 15 minutes. Seek medical attention if severe irritation occurs.
In Case of Ingestion:	Immediately contact a physician or poison control center for treatment advice. Victim should drink milk, egg whites or large quantities of water and be induced to vomiting. Never give anything by mouth to someone who is unconscious, having convulsions or unable to swallow.
Note to Physician:	Treat symptomatically and supportively.

5. Fire Fighting Measures

Flash Pt:	N.A.
Explosive Limits:	LEL: N.A. UEL: N.A.
Autoignition Pt:	N.A.
Suitable Extinguishing Media:	Use all means adequate to fight surrounding fire: water, foam, CO2, dry chemicals, etc.
Fire Fighting Instructions:	None specific for this product, however, it is suggested that firefighters wear self-contained breathing apparatus (SCBA) and full protective equipment, such as chemical resistant clothing.
Flammable Properties and Hazards:	Toxic fumes under fire conditions such as NH3, NO, NO2, etc.
Hazardous Combustion Products:	None.

6. Accidental Release Measures

Protective Precautions, Protective Equipment and Emergency Procedures:	In case of a large spill, clear the affected area and protect people. Such releases should be responded to by trained personnel using pre-planned procedures. In the event of an incidental release, minimum Personal Protective Equipment must be worn: latex or rubber gloves and rubber boots, goggles or full face-shield and coveralls.
Steps To Be Taken In Case Material Is Released Or Spilled:	It is necessary to contain the spill into the smallest area possible by diking, scooping, shoveling, etc., and place liquid into an appropriate container, labeling it accordingly. If product is clean, use it as intended, following original label directions; should it get contaminated, salvage for proper disposal as waste. Absorb residual product onto dry carrier such as dirt, sand or any other absorbent material, then put in covered, labeled containers and dispose of as dry waste in accordance with Federal, State and Local waste disposal regulations.

7. Handling and Storage

Precautions To Be Taken in Handling: All personnel who handle this material should be trained to work with it safely. Avoid breathing vapors or mist; use in well-ventilated location.

Precautions To Be Taken in Storing: Store in a cool, dry place, away from food, feed, clothing materials and living quarters. Whenever possible, place chemicals on secondary containers or diked area. Inspect all incoming containers before storage to ensure all are properly labeled and not damaged. Keep containers tightly closed when not in use.

8. Exposure Controls/Personal Protection

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
57-13-6	Urea	No data.	TLV: 10 mg/m ³ /8 hr	No data.
22691-02-7	Calcium Chloride	No data.	TLV: 10 mg/m ³	No data.
7791-18-6	Magnesium chloride (hydrated)	No data.	TLV: 10 mg/m ³	No data.
10043-35-3	Boric acid	No data.	TLV: 2 mg/m ³ STEL: 6 mg/m ³	No data.

Respiratory Equipment (Specify Type): A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use. Use a NIOSH/OSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Wear a NIOSH/OSHA approved respirator if working conditions require doing so.

Eye Protection: Safety glasses should be worn in any type of operation with chemicals.

Protective Gloves: Protective gloves.

Other Protective Clothing: Long-sleeved shirt, long pants and protective shoes should be worn as a good safety practice.

Engineering Controls (Ventilation etc.): General ventilation is usually adequate. Local exhaust should be used if needed for safe, comfortable working conditions. An eye bath and washing facilities should be readily available.

Work/Hygienic/Maintenance Practices: As a general rule, do not eat, drink, smoke, and/or chew gum or tobacco when handling chemicals. Wash thoroughly after handling this product. Remove all dirty or contaminated clothing and wash it before reusing.

9. Physical and Chemical Properties

Physical States: [] Gas [X] Liquid [] Solid

Appearance and Odor: Colorless to slight yellowish color.

pH: 4.5 - 6.5

Melting Point: N.A.

Boiling Point: NP

Flash Pt: N.A.

Evaporation Rate: No data.

Flammability (solid, gas): Product is non-flammable.

Explosive Limits: LEL: N.A. UEL: N.A.

Vapor Pressure (vs. Air or mm Hg): NA

Vapor Density (vs. Air = 1): NA

SAFETY DATA SHEET

ROOT FEED

Specific Gravity (Water = 1):	1.29 - 1.33
Density:	~ 10.9 LB/GA
Solubility in Water:	NA
Saturated Vapor Concentration:	NA
Octanol/Water Partition Coefficient:	N.E.
Percent Volatile:	N.D.
Autoignition Pt:	N.A.
Decomposition Temperature:	N.E.
Viscosity:	NA
Molecular Formula & Weight:	Proprietary 0.0

10. Stability and Reactivity

Stability:	Unstable [<input type="checkbox"/>] Stable [<input checked="" type="checkbox"/>]
Conditions To Avoid - Instability:	Stable under normal condition, but avoid contact with incompatible materials.
Incompatibility - Materials To Avoid:	Bleach (sodium hypochlorite), strong acids (phosphoric, sulfuric), strong oxidizing agents.
Hazardous Decomposition or Byproducts:	Toxic fumes if mixed with incompatible materials. Toxic fumes under fire conditions such as NH ₃ , NO, NO ₂ , etc.
Possibility of Hazardous Reactions:	Will occur [<input type="checkbox"/>] Will not occur [<input checked="" type="checkbox"/>]
Conditions To Avoid - Hazardous Reactions:	No data available.

11. Toxicological Information

Toxicological Information:	Mutagenicity: The components of this product are not reported to produce mutagenic effects in humans. Embryotoxicity: The components of this product are not reported to produce embryotoxic effects in humans. Teratogenicity: The components of this product are not reported to produce teratogenic effects in humans. Reproductive Toxicity: The components of this product are not reported to produce toxic reproductive effects in humans. However, urea is being investigated as a reproductive effector. CAS# 7791-18-6: Acute toxicity, LD50, Oral, Rat, 8100. MG/KG. Result: Effects on Fertility: Abortion. ; American Industrial Hygiene Association Journal., AIHA, 475 Wolf Ledges Pkwy., Akron, OH 44311, Vol/p/yr: 30,470, 1969 CAS# 10043-35-3: Acute toxicity, LD50, Oral, Rat, 2660. MG/KG. Result: Gastrointestinal:Hypermotility, diarrhea. Gastrointestinal:Nausea or vomiting. ; Journal of the American Medical Association, American Medical Association, 535 N. Dearborn St., Chicago, IL 60610, Vol/p/yr: 128,266, 1945
Carcinogenicity/Other Information:	No component is listed as a carcinogenic by IARC, NTP, OSHA, and ACGIH.
Carcinogenicity:	NTP? No IARC Monographs? No OSHA Regulated? No

12. Ecological Information

General Ecological Information: The available data on the raw materials does not indicate any undue hazard to the environment under anticipated conditions of storage and use.

13. Disposal Considerations

Waste Disposal Method: Waste disposal must be done following all Federal, State and Local regulations. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local waste regulatory authority.

14. Transport Information

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Not Regulated. Trade Name: ROOT FEED

DOT Hazard Class:

UN/NA Number:

MARINE TRANSPORT (IMDG/IMO):

IMDG/IMO Shipping Name: Not Regulated. Trade Name: ROOT FEED

UN Number:

Packing Group:

Hazard Class:

AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Not Regulated. Trade Name: ROOT FEED

UN Number:

Packing Group:

Hazard Class:

Additional Transport Information: Placards / Markings: N.A.

Emergency Response Guide Number: N.A.

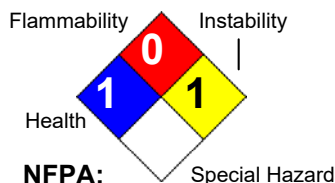
15. Regulatory Information

Regulatory Information: TSCA Inventory: In compliance with inventory requirements for commercial purposes.

16. Other Information

Revision Date: 07/31/2020

Hazard Rating System:



Additional Information About This Product: No data available.

Company Policy or Disclaimer:

Stoller believes the information contained in this Safety Data Sheet is accurate based on the information provided by reputable suppliers of our raw materials. However, Stoller does not guarantee their accuracy or completeness. The information contained herein is furnished without warranty of any kind, whether expressed or implied, as to the safety of the goods, the merchantability of the goods, or the fitness of the goods for any particular purpose. Users should consider these data only as a supplement to other information

SAFETY DATA SHEET

ROOT FEED

Revision: 07/31/2020

Supersedes Revision: 12/03/2019

gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers. Stoller assumes no responsibility for results obtained or for incidental or consequential damages arising from the use of goods and data.