

SAFETY DATA SHEET

BIO-FORGE ST

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Revision: 04/24/2020

Supersedes Revision: 04/12/2019

1. Product and Company Identification

Product Code: Z-BIOFORGEST
Product Name: BIO-FORGE ST
Trade Name: BIO-FORGE; BIO-FORGE 2-0-3; 2-0-3
Company Name: Stoller
9090 Katy Freeway
Suite 400
Houston, TX 77024
Phone Number:
1 (713)461-1493
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
Intended Use: Fertilizer Solution
Synonyms: Nitrogen and Potassium fertilizer solution.

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): Chronic: Not known. Expected toxicity hazard: slight to moderate.

Inhalation: Prolonged exposure to vapors may cause sore throat and irritation of respiratory tract.

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

Eye Contact: Contact with product may cause mild to severe irritation, blurred vision.

Ingestion: May cause irritation.

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3. Composition/Information on Ingredients

CAS #	Components (Chemical Name)	Concentration	RTECS #
1310-58-3	Potassium hydroxide	<10.0 %	TT2100000
57-13-6	Urea	<10.0 %	YR6250000

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. If necessary, also rescuers must be attended. 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:	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:	Symptomatic treatment.

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 may be generated under fire conditions, or by contact with incompatible materials.
Hazardous Combustion Products:	No data available.

6. Accidental Release Measures

Protective Precautions, Protective Equipment and Emergency Procedures:	In case of a large spill, protect people by clearing and isolating the affected area. 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 boots, goggles or full face-shield and coveralls or long-sleeved shirt and pants.
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 recover liquid into an appropriate container for salvage or later use, 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.

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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. Wear appropriate protective equipment. Empty containers may contain residual liquid or vapors and therefore should be handled the same as full containers. Product must be kept in its original container, if repackaging for any reason, use vented caps.
Precautions To Be Taken in Storing:	Inspect all incoming containers before storage to ensure all are properly labeled and not damaged. Store in a cool, dry place, away from direct sunlight, sources of intense heat or where freezing is possible. Store away from food, feed, clothing materials and living quarters. Keep away from reach of children and pets. Whenever possible, place chemicals on secondary containers or diked area. Keep containers tightly closed when not in use.

8. Exposure Controls/Personal Protection

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
1310-58-3	Potassium hydroxide	No data.	TLV: 2 mg/m ³ CEIL: 2 mg/m ³	No data.
57-13-6	Urea	No data.	TLV: 10 mg/m ³	No data.

Recommended Exposure Limits:	No occupational exposure limits have been established for this mixture.
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 irritation or other symptoms are experienced.
Eye Protection:	Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Protective Gloves:	Impervious 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.

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9. Physical and Chemical Properties

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

Appearance and Odor: Light. Amber.
Slight, vinegar-like odor.

pH: ~ 3.5 - 5.5

Melting Point: N.A.

Boiling Point: N.E.

Flash Pt: N.A.

Evaporation Rate: Similar to water

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

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

Vapor Pressure (vs. Air or mm Hg): N.E.

Vapor Density (vs. Air = 1): N.E.

Specific Gravity (Water = 1): 1.16 - 1.20

Density: ~ 9.9 LB/GA

Solubility in Water: Soluble

Saturated Vapor Concentration: N.E.

Octanol/Water Partition Coefficient: N.E.

Percent Volatile: N.D.

Autoignition Pt: N.A.

Decomposition Temperature: N.E.

Viscosity: N.E.

Molecular Formula & Weight: Proprietary 0.0

10. Stability and Reactivity

Reactivity: N.A.

Stability: Unstable [] Stable [X]

Conditions To Avoid - Instability: High heat. Mixture with incompatible materials.

Incompatibility - Materials To Avoid: Not known.

Hazardous Decomposition or Byproducts: Ammonia gas.

Possibility of Hazardous Reactions: Will occur [] Will not occur [X]

Conditions To Avoid - Hazardous Reactions: None known.

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11. Toxicological Information

Toxicological Information:	Mutagenicity: The components of this product are not reported to produce mutagenic effects in humans. However, they are being investigated as mutagenic agents.
	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# 1310-58-3: Acute toxicity, LD50, Oral, Rat, 273.0 MG/KG. Result: Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Lungs, Thorax, or Respiration: Tumors. Liver: Tumors. ; Fundamental and Applied Toxicology., Academic Press, Inc., 1 E. First St., Duluth, MN 55802, Vol/p/yr: 8,97, 1987
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 this material does not indicate any undue hazard to the environment under anticipated use and storage. All work practices must be aimed at eliminating environmental contamination. Any waste due to spillage or leakage should be contained and disposed of accordingly, see above under Section 6 "Accidental Release Measures."
Persistence and Degradability:	No data available.
Bioaccumulative Potential:	No data available.
Mobility in Soil:	No data available.

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.
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14. Transport Information

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Not Regulated. Trade Name: BIO-FORGE ST
DOT Hazard Class:
UN/NA Number:

MARINE TRANSPORT (IMDG/IMO):

IMDG/IMO Shipping Name: Not Regulated. Trade Name: BIO-FORGE ST
UN Number: **Packing Group:**
Hazard Class:

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AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Not Regulated. Trade Name: BIO-FORGE ST

UN Number:

Packing Group:

Hazard Class:

Additional Transport
Information:

Reportable Quantity: N.A.

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

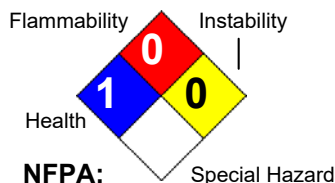
Revision Date:

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Hazard Rating System:

HEALTH		1
FLAMMABILITY		0
PHYSICAL		0
PPE		

HMIS:



Additional Information About This Product: No data available.

This Product:

Company Policy or

Disclaimer:

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