



Safety Data Sheet

1. IDENTIFICATION

Product identifier

Product Name: Bioforce® Plant Growth Promoter Fertilizer
Product Code:

Recommended use of the chemical and restrictions on use

Recommended Use: Fertilizer Product
Recommended Restrictions: Workers (and your customers or users in the case of resale) should be informed of the need to observe all standard safety procedures for handling liquid products to avoid spills and potential contact with the material.

Details of the supplier of the safety data sheet

Supplier Name: Nutrient Technologies, LLC
Supplier Address: 5415 Lake Howell Rd. Ste. 177
Winter Park, FL 32792
Supplier Phone Number: 855-688-3241 Fax: 956-386-0070
Contact Phone: 407-610-7563
Supplier Email: info@nutrienttechnologies.net

Emergency telephone number

CHEMTREC (800) 424-9300
(407) 470-4180

2. HAZARDS IDENTIFICATION

Classification

Physical hazards: Not classified.
Health hazards: Not classified.
Environmental hazards: Not classified.
OSHA defined hazards: Not classified.

GHS Label elements, including precautionary statements

Pictogram:



Signal word:

None

Hazard statement(s):

This product is not hazardous and does not meet the criteria for classification.

Appearance: Brown liquid
Physical State: Liquid
Odor: Aromatic
Precautionary statements:
Prevention: Always use good standard safety practices when handling this or any product. Avoid contact with skin/eyes and do not ingest. Avoid breathing mist if generated.
Response: Wash hands after handling.
Disposal: Dispose of waste and residues in accordance with local authority requirements.
Hazards not otherwise classified (HNOC): None known.
Other information: None.

3. COMPOSITION OF PRODUCT/INFORMATION ON INGREDIENTS

Ingredients	CAS-No.	Weight %	Trade Secret
Zinc Sulfate	7446-20-0	0.2 - 1%	*
Magnesium sulfate	10034-99-8	0.2 – 1%	*
Boric acid	10043-35-3	0.01 – 0.02%	*
Iron sulfate	7782-63-0	0.5 – 1%	*
Manganese sulfate	10034-96-5	0.1 – 0.2%	*
Other components below reportable levels		95 - 99%	*

* The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

General advice: Non-hazardous material. If discomfort, irritation or reaction of any kind occurs, seek immediate medical advice from a qualified physician. Make sure that medical professionals are aware of the material(s) involved.

In case of eye contact: Wash eyes immediately with fresh water for at least 15 minutes and seek medical attention if irritation develops and persists.

In case of skin contact: Wash skin thoroughly with soap and water. Get medical attention if irritation develops and persists.

If inhaled: If respiratory irritation or any signs or symptoms occur, move person to fresh air. Remove subjects from area and seek medical help if there is any difficulty breathing or if these or any other symptoms persist. If breathing has ceased, give mouth-to-mouth resuscitation.

If swallowed: Dilute material immediately by administering large quantities of water. Induce vomiting by giving a tablespoon of salt in water and/or touching the back of throat with finger. Repeat until vomit is clear. Do not induce vomiting on a person that is unconscious. Get medical attention if other symptoms occur.

Most important symptoms and effects, both acute and delayed: No data available.

Indication of any immediate medical attention and special treatment needed: No data available.

Note to Physician: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

This product is not flammable. Use normal firefighting techniques using water and other available fire suffocating agents.

Extinguishing media

Suitable extinguishing media: Water, fire retardant powders, foam and carbon dioxide and dry chemical powders are all suitable fire-fighting media.

Unsuitable extinguishing media: Do not use water jets that will unnecessarily spread the fire.

Special hazards arising from the substance or mixture: When surrounded by fire, gases hazardous to health such as carbon monoxide may be formed from this product.

Advice for firefighters: Self-contained breathing equipment are essential to those exposed to fumes. Material can be slippery if spilled. Use water spray to cool unopened containers as pressure may build inside of them.

Further information: Use standard firefighting procedures and consider the hazards of other involved materials. No unusual fire or explosion hazards noted.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Keep unnecessary personnel away. Do not touch or walk on spilled material; material can be slippery if spilled. Wear appropriate protective equipment and clothing during clean-up. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to fumes

Environmental precautions: Collect and dispose of spillage as indicated in section 13 of the SDS. Do not flush into surface water or sanitary sewer system.

Methods and materials for containment and cleaning up: Stop the flow of material, if this is without risk. Dike for later disposal if attending to other priorities is needed. Remove as much product as possible and place into containers for disposal by siphoning or pumping if possible; flush area with large amounts of water. If the spill is small, add an absorbent material such as sawdust, sand, or soil. Pick up mixture and place it in containers in which it can be disposed of in accordance with applicable federal, state or local procedures.

Reference to other sections: For disposal see Section 13.

7. HANDLING AND STORAGE

Precautions for safe handling. Practice good housekeeping and do not eat, drink or smoke near the area where the product is stored.

Recommendations on the conditions for safe storage: Product is subject to moisture loss so it should be stored in a closed container when not in use. Store in a dry, cool and well-ventilated place and if available provide containment. Avoid storing under extreme temperatures that are below -10° C or over 45° C. Eyewash facilities should be available. Monitor containers for any potential leaks or pressure build-up inside the containers. If there is any sign of pressure build-up contact the manufacturer.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Permissible Exposure Limits

Not applicable/Not established

Exposure Controls

Appropriate engineering controls: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions.

Personal Protective Equipment

General hygiene considerations: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

Eye/face protection: Safety glasses with side-shields or safety goggles.

Skin protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body protection: Wear suitable protective clothing.

Respiratory protection: Wear NIOSH/MSHA approved air-purifying respirator with cartridges/canisters if there is a risk of exposure to fumes or mists at levels that might cause discomfort.

Control of environmental exposure: Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical State:	Liquid
Appearance:	Brown liquid
Odor:	Aromatic
Odor Threshold:	No data available

<u>Property</u>	<u>Values</u>
pH	3.25 -3.95
Freezing point	N/A
Boiling point	95° C
Flash Point	Non-combustible
Evaporation Rate	No data available
Flammability	No data available
Flammability Limit in Air	
Upper flammability limit	No data available
Lower flammability limit	N/A
Vapor pressure	17 mm of Hg
Vapor density	1
Specific Gravity	1.12 -1.15 gr/cc
Water solubility	100% at 20° C

<u>Property</u>	<u>Values</u>
Solubility in other solvents	No data available

Partition coefficient: n-octanol/water	No data available
Autoignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	Not considered an oxidizer

10. STABILITY AND REACTIVITY

Reactivity: Stable under normal storage conditions. Sensible to extremes in temperature.

Chemical Stability: Product is stable. Under extreme high temperatures, evolution of CO or CO₂ gassing-off may occur. Exposure to extreme alkaline materials may cause a neutralization reaction to occur with associated CO₂ gassing-off.

Possibility of Hazardous Reactions: No dangerous reaction known under conditions of normal use.

Hazardous: Polymerization: No data available.

Conditions to Avoid: Extreme high temperatures with no ventilation. Contact with alkaline materials, oxidizers and acids..

Incompatible Materials: Alkaline materials, oxidizers and strong acids. Formulation adjuvants in some chemicals may be incompatible and cause insoluble solids to form. Always conduct a compatibility jar test before mixing product in large quantities.

Hazardous Decomposition Products: Will not occur. Other decomposition products – no data available. In the event of a fire see Section 5.

Other Order of addition when mixing this product with other products is important. Please read and follow the entire label before use.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation	Spray mist, vapors or fumes could be inhaled. No known hazard from inhalation.
Eye contact	Product could splash or leak and come into eye contact.
Skin contact	Product could come in contact directly with skin if product is mishandled and the appropriate protective clothing is not worn. Not toxic dermally.
Oral	Product could accidentally be ingested.

Information on toxicological effects

Acute Toxicity	Rat LD 50: more than 10,000 mg/Kg.
Skin corrosion/irritation	Prolonged skin contact may cause staining and temporary irritation.
Serious eye damage/eye irritation	Direct contact with eyes may cause mild irritation.
Respiratory or skin sensitization	
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product can cause mild skin sensitization.

Delayed and immediate effects as well as chronic effects from short & long-term exposure

Mutagenic effects:	No data available.
Carcinogenicity:	No data available. This product is not listed as a carcinogen by OSHA, ACGIH, IARC or NTP
STOT-single exposure:	Not classified.
STOT-repeated exposure:	Not classified.
Chronic toxicity:	No data available.
Target organ exposure:	No data available.
Aspiration hazard:	Mild irritant.

Numerical measure of toxicity product information

Acute Toxicity	Rat LD 50: more than 10,000 mg/Kg
Dermal:	Rabbit LD 50 More than 5,000 mg/Kg

No additional data available.

12. ECOLOGICAL INFORMATION

Ecotoxicity:	This product is not classified as environmentally hazardous.
Persistence and Degradability:	No data available.
Bioaccumulation:	Product is biodegradable and presents minimum bioaccumulation potential. No data available..
Other adverse effects:	No other adverse environmental effects are expected from this product. Do not allow large quantities to reach groundwater, open bodies of water or sewer system.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal methods	Not classified as hazardous waste. Disposal should follow all Federal, State and Local regulations. If product has not been altered or mixed, it can be disposed of at a permitted facility. Authorization is required before disposing of product at any such facility. Do not dispose of product through the sewer system.
Packaging	Triple rinse plastic containers and offer for recycling. Surplus and non-recyclable solutions should be offered to a licensed disposal company. Do not re-use containers.

14. TRANSPORT INFORMATION

DOT (Land)	Not regulated as dangerous goods. Shipping Class 60 Trade name: Bioforce
DOT (Vessel)	Not regulated as dangerous goods. Trade name: Bioforce
IMO/IMDG (Vessel)	Not regulated as dangerous goods. Trade name: Bioforce
IATA (Air)	Not regulated as dangerous goods.

IBC Code:	Trade name: Bioforce "OS". Not regulated.
Reportable quantity (RQ):	Not applicable
Placard:	Not applicable
Emergency response guide	Not applicable

15. REGULATORY INFORMATION

US Federal Regulations This product is not known to be a "hazardous chemical" defined by OSHA Hazard Communication Standard 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D) Not Regulated.

SARA of 1986:

Immediate Hazard	No
Delayed Hazard	No
Fire Hazard	No
Pressure Hazard	No
Reactivity Hazard	No

SARA 304:	Not regulated.
SARA 311/312 Hazard Categories	Not regulated.
SARA 313	Not regulated.
OSHA (29 CFR 1910.1001-1050)	Not listed.
CERCLA (40 CFR 302.4)	Components are not listed.

US State Regulations
US Clean Water Act. The components of this product are not listed as toxic pollutants nor as priority pollutants.

16. OTHER INFORMATION

Further information

This SDS summarizes to the best of our knowledge at the date of issue, the chemical health and safety hazards of the product and general guidance on how to safely handle the product in the workplace. Since NUTRIENT TECHNOLOGIES, LLC cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. NUTRIENT TECHNOLOGIES, LLC and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. Neither NUTRIENT TECHNOLOGIES, L.L.C nor the seller shall be held responsible in any manner for any personal injury or property damage or loss resulting to the buyer or the other persons from handling, storage or use of this material, not in accordance with the directions. The buyer assumes all risk and liability resulting from improper handling, storage or use and accepts and uses this material on these conditions. See www.nutrienttechnologies.net and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

Issuing Date 5-31-2015
Revision Date 31 May- 2015
Revision Number 1