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## MATERIAL SAFETY DATA SHEET

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### Section 1: Chemical Product and Company Identification

Product name: **plantSolution+**  
 Product description: Natural liquid fertilizer  
 Manufacturer: plusMinerals, Inc.  
 PO Box 723  
 Bay Springs, MS 39422  
 888-565-7378

### Section 2: Composition/Information on Ingredients

Chemical name	CAS#	OSHA PEL	ACGIH TLV
Refined fish emulsion	NA	NA	NA
Magnesium sulfate, heptahydrate; Epsom salt	10034-99-8	NA	NA
Sodium tetraborate decahydrate; Borax	1303-96-4	NA	TLV 2 mg/m <sup>3</sup> STEL 6 mg/m <sup>3</sup>
Trace minerals*	NA	NA	NA

\*Leachate produced from bucatunna clay

### Section 3: Hazards Identification

Emergency overview:	A viscous dark liquid. Non-combustible. Slightly irritating to eyes and skin upon prolonged contact. If pH exceeds 5.0 there is the possibility of formation of explosive mixture of gases. pH should be monitored and adjusted as needed. Tanks should be seasoned and well ventilated.
Eye contact:	Irritating to the eyes which may results in watering and redness.
Skin contact:	Prolonged contact may cause irritation or allergic dermatitis.
Inhalation:	If liquid mists are generated, may result in respiratory irritation with coughing, dryness or sore throat.
Ingestion:	May cause nausea, vomiting, abdominal cramps and diarrhea.
Chronic hazards:	No known chronic hazards. Not listed by NTP, IARC or OSHA as a carcinogen.
Physical hazards:	Spills produce slippery surfaces.

#### Section 4: First Aid Measures

Eye:	In case of eye contact, flush eyes with clean water for at least 15 minutes. Seek medical attention if irritation persists.
Skin:	Wash skin with soap and clean water. Remove contaminated clothing and wash before re-use. Seek medical attention if irritation persists.
Inhalation:	Remove to fresh air. Seek medical attention if irritation persists.
Ingestion:	Treat symptomatically and supportively. Maintain airway and respiration. If vomiting occurs, keep head below hips to prevent aspiration. Contact physician or local poison control center.

#### Section 5: Fire Fighting Measures

Flammable limits:	This material is non-combustible under conditions of use.
Extinguishing media:	CO <sub>2</sub> , water, foam
Unusual fire and explosion hazards:	If pH exceeds 5.0 there is the possibility of formation of explosive mixture of gases. Gases may include ammonia, hydrogen, methane and hydrogen sulfide

#### Section 6: Accidental Release Measures

Personal protection:	Wear chemical goggles and gloves. Prevent skin contact.
Spills:	Keep area well ventilated. Cover with damp absorbent (inert material, sand or soil). Collect and seal in properly labeled drums for disposal. Wash area with water. Avoid contaminating waterways. Spills produce slippery surfaces.
Waste disposal:	This material is not a RCRA hazardous waste and can be disposed of in accordance with federal, state and local regulations. There is no CERCLA Reportable Quantity for this material.

#### Section 7: Handling and Storage

Handling:	Non-seasoned metal should be avoided. pH should be monitored and adjusted as required to maintain pH at 5.0. Tank contents should be circulated periodically. Tanks must be vented and purged with air before entry. Tanks must be well ventilated.
Storage:	Store in cool, dry place and away from combustible materials, herbicides and fungicides. Keep containers closed at all times. Avoid extreme temperatures.

## Section 8: Exposure Controls, Personal Protection

Engineering controls:	Use in well ventilated spaces. Provisions for flushing eyes and skin should be available at the location of handling, use and storage.
Respiratory protection:	Not anticipated under normal use conditions. If necessary, use NIOSH approved respiratory protection.
Skin protection:	Rubber, neoprene or nitrile gloves.
Eye protection:	Chemical splash goggles and face shield.

## Section 9: Physical and Chemical Properties

Appearance:	Viscous liquid
Color:	Brown
Odor:	Fishy, slightly sweet
pH:	3.6 to 4.2
Specific gravity:	1.0 to 1.4
Water solubility:	Complete
Flash point:	NA
Flammability limits:	NA
Boiling point:	>220 F
Vapor pressure:	Unknown

## Section 10: Stability and Reactivity

Stability:	Stable
Conditions to avoid:	pH above 5.0, extreme temperatures
Incompatibility:	Alkali, mild steel
Hazardous decomposition products:	Ammonia, hydrogen gas, methane, hydrogen sulfide

## Section 11: Toxicological Information

Chronic toxicity:	Ingredients not listed as NTP, IARC or OSHA carcinogens
Acute toxicity:	Ingredients listed as acute irritants

## Section 12: Ecological Information

Ecotoxicity:	Data not available
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### Section 13: Disposal Considerations

Disposal method:	This material is not a RCRA hazardous waste and can be disposed of in accordance with federal, state and local regulations. There is no CERCLA Reportable Quantity for this material.
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### Section 14: Transport Information

Transport information:	This material is not regulated hazardous material for transportation.
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### Section 15: Regulatory Information

OSHA Hazard Communication, 29 CFR 1910.1200	The Occupational Safety and Health Administration requires that the information on this material safety data sheet is made available in the workplace.
CERCLA	No CERCLA Reportable Quantities
SARA Title III	Not a toxic chemical
TSCA	Magnesium sulfate, heptahydrate and Sodium tetraborate decahydrate are listed as on U.S. Toxic Substances Control Act

### Section 16: Other Information

Preparation date: May 6, 2009

*The information on this MSDS is provided in good faith and believed to be accurate and it is the best information available to plusMinerals, Inc. as of the date hereof. This document is intended as a guide to be used by persons trained in the safe handling, use, storage and disposal of this product. It is expected that trained persons will exercise their independent judgment in determining the appropriate use of information contained within this document. plusMinerals, Inc. makes no representations, or warranties of merchantability, either expressed or implied, with respect to information set forth herein, and we assume no liability resulting from the use or handling of the product to which this MSDS relates.*