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EMERGENCY TELEPHONE - CHEMTREC 1-800-424-9300

# MATERIAL SAFETY DATA SHEET

Revised 09/22/05

## SECTION I PRODUCT INFORMATION

**TRADE NAME:** MicroEssentials S15

**COMMON NAME:** Monoammonium Phosphate + Sulfur  
Monobasic Ammonium Phosphate + Sulfur  
Ammonium Dihydrogen Phosphate + Sulfur  
Sulfur MAP 13-33-0-15  
MAP + S

**HMIS RATING:** Health Hazard-1  
Fire Hazard-0  
Reactivity Hazard-0  
Specific Hazard-none

**C.A.S. NUMBER:** 7722 - 76 - 1  
7783 - 20 - 2  
7704 - 34 - 9

**CHEMICAL FAMILY:** Ammonium Phosphates

## SECTION II INGREDIENTS

**FORMULA:**  $\text{NH}_4\text{H}_2\text{PO}_4 + (\text{NH}_4)_2\text{SO}_4 + \text{S}$

**COMPOSITION:**

Phosphate as $\text{P}_2\text{O}_5$	33%
Nitrogen as N	13%
Water	0.5%
Sulfur as S	7.5%
Sulfur as $(\text{NH}_4)_2\text{SO}_4$	7.5%

## SECTION III HAZARD IDENTIFICATION

**CLASSIFICATION:** Non-Toxic

**EMERGENCY CONCERNS:** None Established

**PRECAUTIONARY MEASURE:** Avoid breathing dust  
Avoid ingestion  
Avoid excessive contact with eyes  
Use in adequate ventilation

**OVEREXPOSURE CONDITIONS:** Acute: Unknown  
Chronic: Unknown

## SECTION IV FIRST AID MEASURES

<b>IMMEDIATE TREATMENT:</b>	<p>If in eyes: Flush with plenty of water for at least 15 minutes. Get medical attention as soon as possible.</p> <p>If on skin: Wash contaminated area with soap or mild detergent and water. If chemical or solution soaks through clothing, remove clothing in area and wash contaminated skin as above. If irritation persists after washing, seek medical attention.</p> <p>If inhaled: Move to fresh air. Treat symptomatically. Get medical attention promptly.</p> <p>If ingested: Give large quantities of water to patient if conscious. Induce vomiting and seek medical attention.</p>
<b>FIRST AID TREATMENT:</b>	Same as above
<b>A NOTE TO PHYSICIAN:</b>	Not applicable

## SECTION V FIRE FIGHTING MEASURES

<b>FLASH POINT:</b>	Not Detected, > 200°F
<b>MINIMUM EXPLOSIBLE CONC.(g/m<sup>3</sup>)</b>	Not Explosible
<b>FIRE FIGHTING HAZARDS:</b>	NH <sub>3</sub> fumes may be released
<b>APPROPRIATE EXTINGUISHING MEDIA:</b>	Small fires: Water spray, foam, dry chemical or CO <sub>2</sub> Large fires: Water spray, fog or foam
<b>SPECIFIC PROTECTIVE EQUIPMENT:</b>	Wear self-contained breathing apparatus with full protective clothing

## SECTION VI ACCIDENTAL RELEASE MEASURES

<b>CONTROLLING SPILLS:</b>	<p>Small spills: Carefully shovel material into dry container. Remove from site.</p> <p>Large spills: Use same procedure as above. Contact proper local, state, or federal regulatory agency (ies) to ascertain proper disposal techniques and procedures.</p>
<b>PPE:</b>	Wear respiratory equipment to avoid breathing dust.

## SECTION VII HANDLING AND STORAGE

<b>STORAGE CONDITIONS:</b>	None Listed
<b>HANDLING PROCEDURES:</b>	Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Maintain proper hygiene practices when handling this product.

## SECTION VIII EXPOSURE CONTROLS / PPE

<b>EXPOSURE LIMITS:</b>	OSHA Permissible Exposure Limits (PEL): Unknown ACGIH Threshold Limit Value (TLV): Unknown
<b>PPE:</b>	Respiratory Protection: Single use dust respirator Skin Protection: Protect open wounds Eye Protection: Eye protection should be worn at all times.
<b>ENGINEERING CONTROLS:</b>	None established

## SECTION IX PHYSICAL AND CHEMICAL PROPERTIES

**APPEARANCE / ODOR / COLOR:** Brown, granulated solid material with slight odor.

**BOILING POINT (°F):** Not applicable

**MELTING POINT (°F):** Not applicable

**VAPOR PRESSURE (mmHg):** Not applicable

**SPECIFIC GRAVITY (H<sub>2</sub>O = 1):** 1.82

**% VOLATILE BY VOLUME:** Not applicable

**VAPOR DENSITY:**

**SOLUBILITY IN WATER:** 20°C 85.4%

**EVAPORATION RATE (BUTYL ACETATE = 1):** Not applicable

**MOLECULAR WEIGHT:** 115.0  
132.0  
32.0

**PHYSICAL STATE:** Solid

**DENSITY - BULK:** (Packed) 56.80lbs./ft<sup>3</sup>

**pH:** 4.2

## SECTION X STABILITY AND REACTIVITY

**STABILITY:** Stable

**HAZARDOUS POLYMERIZATION:** Will not occur

**CONDITIONS AND MATERIALS TO AVOID:** Extreme temperatures

**HAZARDOUS DECOMPOSITION PRODUCTS:** Extreme temperatures such as a fire cause formation of toxic fumes of PO<sub>x</sub>, NH<sub>3</sub> and/or SO<sub>2</sub>

## SECTION XI TOXICOLOGY INFORMATION

**PRODUCT TOXICOLOGICAL DATA:** Mammalian:  
Oral LD<sub>50</sub> OECD Guideline 425 (rat): >2,000 mg/kg  
Dermal LD<sub>50</sub> OECD Guidelines 402 (rat): >5,000 mg/kg  
Not found to be toxic by oral exposure as defined by OSHA. Based on toxicity data for other ammonium compounds (i.e., ammonium nitrates), not expected to be toxic by dermal exposure as defined by OSHA.

## SECTION XII ECOLOGICAL INFORMATION

**ECOTOXICOLOGY:** Aquatic:  
Fish 96 hour LC<sub>50</sub>, OECD Guidelines 203 (rainbow trout): >86mg/L  
Non-toxic to aquatic organisms as defined by USEPA.

## SECTION XIII DISPOSAL CONSIDERATIONS

**WASTE DISPOSAL CONSIDERATIONS:** Pick up with shovel and broom and broadcast as fertilizer using proper agriculture and soil management.

## SECTION XIV TRANSPORT INFORMATION

**SHIPPING NAME:** Not regulated by D.O.T.

**HAZARD CLASS:** Not applicable

**D.O.T. NUMBER:** Not applicable

## **SECTION XV REGULATORY INFORMATION**

**REPORTABLE QUANTITIES:** Not on the 302 list of SARA reportable quantities

**HAZ WASTE NO:** None established

**EPA REGISTER NO:** None established

## **SECTION XVI OTHER INFORMATION**

**NONE LISTED**

**REFERENCES:** Sax and Lewis, *Dangerous Properties of Industrial Materials*, seventh edition, VanNostrand Reinhold Co., N.Y., 1989.

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