*Phyto*Technology Laboratories®

# SAFETY DATA SHEET

## 1. CHEMICAL IDENTIFICATION AND COMPANY INFORMATION

PRODUCT NAME: Hoagland Modified Basal Salt Mixture

PRODUCT NUMBER: H353

COMPANY INFO: *Phyto*Technology Laboratories®
PO Box 12205, Shawnee, KS 66282-2205
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EMERGENCY PHONE NUMBER: 1-800-535-5053 - US Only
1-352-323-3500 - International

RECOMMENDED USE: For Research Use Only

RESTRICTIONS ON USE: Products sold by *Phyto*Technology Laboratories® are intended for research and laboratory use only. Products are not to be used as human or animal therapeutics, cosmetics, agricultural or pesticidal products, food additives, or as household chemicals.

## 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

GHS Classification:

H272 - Oxidizing solids (Category 3)
H315 - Skin irritation (Category 2)
H319 - Eye irritation (Category 2A)

GHS Label elements, including hazard and precautionary statements:

Pictogram: 

Signal Word: Warning

Hazard Statements:

H315 – Causes skin irritation.
H319 – Causes serious eye irritation.
H335 – May cause respiratory irritation.

Precautionary Statements:

P280 – Wear protective clothing.
P305 + P351 + P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: N/A

CAS No: Not Listed

Formula: N/A

Molecular Weight: N/A

This product is a mixture that contains, but is not limited to, the following components that may cause harm to the user or environment or may be suspected to do so:

| Ingredient | CAS Number | Percent | Hazardous |
|---|---|---|---|
| Potassium Nitrate | 7757-79-1 | 37.22% | No exposure limits established by OSHA or ACGIH |
| Calcium Nitrate | 13477-34-4 | 40.28% | No exposure limits established by OSHA or ACGIH |
| EDTA, Disodium Salt, Dihydrate | 6381-92-6 | 0.21% | No exposure limits established by OSHA or ACGIH |
| Cupric Sulfate, Pentahydrate | 7758-99-8 | 0.005% | No exposure limits established by OSHA or ACGIH |
| Molybdenum Trioxide | 1313-27-5 | 0.001% | OSHA PEL: 5 mg (Mo)/$m^3$; ACGIH TLV: 5 mg (Mo)/$m^3$ |
| Manganese Chloride, Tetrahydrate | 13446-34-9 | 0.39 % | OSHA PEL: 5 mg (Mn)/$m^3$ |
| Potassium Iodide | 7681-11-0 | 0.11% | No exposure limits established by OSHA or ACGIH |
| Boric Acid | 10043-35-3 | 0.18% | No exposure limits established by OSHA or ACGIH |

## 4. FIRST AID MEASURES

General Advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

| Route of Entry | Symptoms | First Aid Procedures |
|---|---|---|
| Ingestion | May cause irritation if swallowed | If swallowed, wash out mouth with water. Never give anything by mouth to an unconscious person. **Get medical attention.** |
| Inhalation | May cause irritation to respiratory tract | Safely remove victim to fresh air. If not breathing, institute cardiopulmonary resuscitation (CPR). If breathing is difficult, ensure clear airway and give oxygen. **Get medical attention.** |
| Eye Contact | Direct contact may cause irritation. May cause redness, tearing, or blurred vision. | Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. **Get medical attention if irritation persists.** |
| Skin Contact | Irritating. May cause reddening, itching or inflammation. | Wash area thoroughly with soap and water. Remove and wash contaminated clothing. **Get medical attention if irritation persists.** |

Most Important Symptoms or Effects, Both Acute and Delayed:

See section 2 and/or section 11

Recommendation for Immediate Medical Care and Special Treatment Needed:

No data available

## 5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Water spray, carbon dioxide, dry chemical powder, or appropriate foam. Use extinguishing media suitable for surrounding fire.

Special Protective Equipment and Precaution for Firefighters: In the event of a fire, wear full protective clothing and NIOSH approved self-contained breathing apparatus. Evacuate the area and fight fire from a safe distance.

Hazardous Combustion Products: May emit toxic fumes under fire conditions.

Toxic Gases Produced: Carbon monoxide, carbon dioxide, nitrogen oxides

## 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures:

Use personal protection recommended in Section 8. Avoid dust formation. Avoid breathing dust, vapours, mist or gas. Ensure adequate ventilation, especially in confined areas. Evacuate personnel to safe areas.

Environmental Precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Method of Containment and Cleanup: Wear suitable protective clothing. Avoid dust formation. Avoid breathing vapours, mist or gas. Carefully sweep up and remove. Place material in a dry container and cover. Remove from the area. Flush spill area with water. Do not let product enter drains.

## 7. HANDLING AND STORAGE

Precaution for Safe Handling: Avoid contact with skin and eyes. Avoid dust formation and aerosols. Avoid incompatible substances. Wash thoroughly after use.

Conditions for Safe Storage: Keep in a tightly closed container and store in a cool, dry, and well-ventilated area. Protect from moisture.

Incompatibilities: Strong oxidizing agent

Recommended Storage Temperature: 2 to 6 $^{o}$C

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OSHA's Permissible Exposure Limits (PELs): No data available

Threshold Limit Values (TLVs): No data available

Engineering Controls: Handle in accordance to general industrial hygiene and safety practice.

Personal Protective Equipment (PPE):

| | |
|---|---|
| Eye/Face Protection: | Chemical safety glasses or goggles. Have eye-washing facilities readily available where eye contact can occur. |
| Skin Protection: | Protective gloves |
| Body Protection: | Lab coat |
| Respiratory Protection: | Respiratory protection is not required.<br>Use N95 (US) or type P1 (EN 143) dust mask where dust level is nuisance.<br>A NIOSH/MSHA approved air purifying respirator is recommended where airborne concentrations are expected to exceed exposure limits. Protection provided by purifying respirators is limited. |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| Appearance: | White to off-White Powder |
| pH (4.33 g/L): | Approximately 4.25 – 5.25 |
| Solubility: | Soluble in Water |
| Melting Range: | No data available |
| Vapor Density: | No data available |
| Vapor Pressure: | No data available |
| Specific Gravity: | No data available |
| Odor: | Odorless |
| Odor Threshold: | No data available |
| Viscosity: | No data available |
| Relative Density: | No data available |
| Evaporation Rate: | No data available |
| Initial Boiling Point and Boiling Range: | No data available |
| Flammability (solid, gas): | No data available |
| Partition coefficient: n-octanol/water): | No data available |
| Auto-ignition Temperature: | No data available |
| Decomposition Temperature: | No data available |
| Flash Point (Closed Cup): | No data available |
| Flammable Limits: | Upper (%) – No data available Lower (%) – No data available |

## 10. STABILITY AND REACTIVITY

| | |
|---|---|
| Reactivity: | No data available |
| Chemical Stability: | Stable under normal conditions of use |
| Possibility of Hazard Reactions: | Will not occur |
| Conditions to Avoid: | Moisture, excessive heat |
| Incompatibles Materials: | Strong oxidizing agents |
| Hazardous Decomposition Products: | Carbon monoxide, carbon dioxide, and nitrogen oxides |

## 11. TOXICOLOGICAL INFORMATION

| | | |
|---|---|---|
| Toxicity: | $LD_{50}$ (Oral-Rat)(mg/Kg): | No data available |
| | $LD_{50}$ (Oral-Mouse)(mg/Kg): | No data available |
| | $LD_{50}$ (Dermal-Rabbit)(mg/Kg): | No data available |

| | | |
|---|---|---|
| Carcinogenicity: | NTP: | No |
| | IARC: | No |
| | Z List: | No |
| | OSHA Reg: | No |

| | |
|---|---|
| Reproductive Toxicity: | No data available |
| Symptoms Associated with Overexposure: | Irritation, sneezing, gastrointestinal upset |

| | | |
|---|---|---|
| Specific Target Organ Toxicity: | Single Exposure: | No data available |
| | Repeated Exposure: | No data available |

| | |
|---|---|
| Target Organs: | None identified |
| Medical Conditions Aggravated By Exposure: | None identified |
| Routes of Entry: | Inhalation, Ingestion, skin and eye contact |
| NIOSH/RTECS NO: | Not Listed |

***The toxicological properties of this product have not been thoroughly investigated***

## 12. ECOLOGICAL INFORMATION

| | |
|---|---|
| Ecotoxicity: | No data available |
| Persistence and Degradability: | No data available |
| Bioaccumulative Potential: | No data available |
| Mobility in Soil: | No data available |
| Other Adverse Effects: | No data available |

## 13. DISPOSAL CONSIDERATION

| | |
|---|---|
| Disposal Procedure: | Dispose in accordance with all applicable federal, state, and local environmental regulations. |
| EPA Hazardous Waste Number: | No data available |

## 14. TRANSPORT INFORMATION

| | | |
|---|---|---|
| Domestic (D.O.T.): | Proper Shipping Name: | CHEMICALS, N.O.S. (NON-REGULATED) |
| | Hazard Class: | N/A |
| | UN/NA: | N/A |
| | Labels: | N/A |

International:

| | | |
|---|---|---|
| IMDG: | Proper Shipping Name: | CHEMICALS, N.O.S. (NON-REGULATED) |
| | Hazard Class: | N/A |
| | UN/NA: | N/A |
| | Labels: | N/A |

| | | |
|---|---|---|
| IATA: | Proper Shipping Name: | CHEMICALS, N.O.S. (NON-REGULATED) |
| | Hazard Class: | N/A |
| | UN/NA: | N/A |
| | Labels: | N/A |

**15. REGULATORY INFORMATION**

TSCA: No

SARA TITLE III:

| | |
|---|---|
| Section 302 (EHS) Ingredients: | No |
| Section 313 Ingredients: | No |
| Section 304 (EHS/CERCLA) Ingredients: | No |
| Section 311/312 Hazard: | Reactivity Hazard, Acute Health Hazard, Chronic Health Hazard |

**16. OTHER INFORMATION**

| **HMIS Rating:** | **Health Hazard** | **Chronic Health Hazard** | **Flammability** | **Physical Hazard** |
|---|---|---|---|---|
| | 2 | * | 0 | 1 |
| **NFPA Rating:** | **Health Hazard** | **Fire Hazard** | **Reactivity Hazard** | **Special Hazard** |
| | 2 | 0 | 1 | OX |

*Chronic Hazard: Chronic (long-term) health effects may result from repeated overexposure.

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