

## 1. CHEMICAL IDENTIFICATION AND COMPANY INFORMATION

PRODUCT NAME: Ammonium Molybdate (VI), Tetrahydrate

PRODUCT NUMBER: A112

COMPANY INFO: PhytoTech Labs Inc.  
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EMERGENCY PHONE NUMBER 1-800-535-5053 - US Only  
 (INFOTRAC): 1-352-323-3500 - International

RECOMMENDED USE: For Laboratory use or Further Manufacturing only

RESTRICTIONS ON USE: Products sold by PhytoTech Labs Inc. 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, in vitro diagnostics, or as household chemicals.

## 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

GHS Classification:

H402 – Acute aquatic toxicity (Category 3)  
 H412 – Chronic aquatic toxicity (Category 3)

GHS Label elements, including hazard and precautionary statements:

Pictogram: None

Signal Word: None

Hazard Statements:

H412 – Harmful to aquatic life with long lasting effects.

Precautionary Statements:

P273 – Avoid release to the environment.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: Molybdic Acid, Ammonium salt, tetrahydrate; Ammonium heptamolybdate tetrahydrate

CAS No.: 12054-85-2

Formula:  $(\text{NH}_4)_6\text{Mo}_7\text{O}_{24} \cdot 4\text{H}_2\text{O}$

Molecular Weight: 1235.9 g/mol

EC No.: 234-320-9

Ingredient	CAS Number	Percent	Hazardous
Ammonium Molybdate, Tetrahydrate	12054-85-2	≥99%	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. <b>Get medical attention.</b>
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. <b>Get medical attention.</b>

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. <b>Get medical attention if irritation persists.</b>
Skin Contact	Irritating. May cause reddening, itching or inflammation.	Wash area thoroughly with soap and water. Remove and wash contaminated clothing. <b>Get medical attention if irritation persists.</b>

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:	Nitrogen oxides (NOx), molybdenum oxides

## 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures:

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

Environmental Precautions:	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
Method of Containment and Cleanup:	Wear suitable protective clothing. Avoid dust formation. 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 products 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.
Incompatibilities:	Alkali metals, reducing agents
Recommended Storage Temperature:	Room Temperature

## 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:	Appropriate respirator

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	White crystalline powder	
pH:	Under Development	
Solubility:	Soluble in water	
Melting Point:	~400°C (Decomposition)	
Vapor Density:	No data available	
Vapor Pressure:	No data available	
Odor:	Odorless	
Odor Threshold:	No data available	
Viscosity:	No data available	
Relative Density:	2.50 g/cm <sup>3</sup>	
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:	Heat, incompatibles	
Incompatibles Materials:	Alkali metals, reducing agents	
Hazardous Decomposition Products:	Nitrogen oxides (NOx), molybdenum oxides	

## 11. TOXICOLOGICAL INFORMATION

Toxicity:	LD <sub>50</sub> (Oral-Rat)(mg/Kg):	No data available
	LD <sub>50</sub> (Oral-Mouse)(mg/Kg):	No data available
	LD <sub>50</sub> (Dermal-Rabbit)(mg/Kg):	No data available
Carcinogenicity:	NTP:	No
	IARC:	No
	OSHA Reg:	No
Reproductive Toxicity:	No data available	
Symptoms Associated with Overexposure:	Irritation, itching, severe gastrointestinal upset, vomiting, anemia	
Specific Target Organ Toxicity:	Single Exposure:	No data available
	Repeated Exposure:	No data available
Target Organs:	None identified	

Medical Conditions           None identified  
Aggravated by Exposure:  
Routes of Entry:            Ingestion  
NIOSH/RTECS NO:         QA5076000

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

**12. ECOLOGICAL INFORMATION**

Ecotoxicity:                 Aquatic Toxicity – LC50 – Oncorhynchus mykiss (rainbow trout) – 320 mg/L – 96 hr  
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:         No SARA Hazards

Massachusetts Right to Know Components:   This product is not on the Massachusetts Substance List (MSL).

Pennsylvania Right to Know Components:   This product is not listed on the Pennsylvania Code’s Hazardous Substance List (Chapter 323).

New Jersey Right to Know Components:

This product is not listed amongst the New Jersey Right to Know Hazardous Substance List

California Prop. 65 Components:

This product is not known to the State of California to cause cancer or reproductive toxicity.

## 16. OTHER INFORMATION

HMIS Rating:	<b>Health Hazard</b>	<b>Flammability</b>	<b>Physical Hazard</b>	<b>Personal Protection</b>
	2	0	0	B
NFPA Rating:	<b>Health Hazard</b>	<b>Fire Hazard</b>	<b>Instability</b>	<b>Special Hazard</b>
	2	0	0	

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