

# Safety Data Sheet

## Ammonium Molybdate, Tetrahydrate

**CAROLINA**<sup>®</sup>  
www.carolina.com

### Section 1 Product Description

**Product Name:** Ammonium Molybdate, Tetrahydrate  
**Recommended Use:** Science education applications  
**Synonyms:** Ammonium Molybdate, Tetrahydrate  
**Distributor:** Carolina Biological Supply Company  
2700 York Road, Burlington, NC 27215  
1-800-227-1150  
**Chemical Information:** 800-227-1150 (8am-5pm (ET) M-F)  
**Chemtrec:** 800-424-9300 (Transportation Spill Response 24 hours)

### Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

Harmful to aquatic life.

**GHS Classification:**  
Hazardous to the aquatic environment - Acute Category 3

### Section 3 Composition / Information on Ingredients

| <u>Chemical Name</u>             | <u>CAS #</u> | <u>%</u> |
|----------------------------------|--------------|----------|
| Ammonium Molybdate, Tetrahydrate | 12054-85-2   | 100      |

### Section 4 First Aid Measures

#### Emergency and First Aid Procedures

**Inhalation:** In case of accident by inhalation: remove casualty to fresh air and keep at rest.  
**Eyes:** In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
**Ingestion:** If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

### Section 5 Firefighting Procedures

**Extinguishing Media:** Use media suitable to extinguish surrounding fire.  
**Fire Fighting Methods and Protection:** Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.  
**Fire and/or Explosion Hazards:** Fire or excessive heat may produce hazardous decomposition products.  
**Hazardous Combustion Products:** Carbon dioxide, Carbon monoxide

### Section 6 Spill or Leak Procedures

Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation.

### Section 7 Handling and Storage

**Handling:** Avoid release to the environment. After contact with skin, wash immediately with plenty of water.  
**Storage:** Keep container tightly closed in a cool, well-ventilated place.  
**Storage Code:** Green - general chemical storage

### Section 8 Protection Information

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| <b>Chemical Name</b>             | <b>ACGIH</b>                                     |               | <b>OSHA PEL</b>        |               |
|----------------------------------|--------------------------------------------------|---------------|------------------------|---------------|
|                                  | <b>(TWA)</b>                                     | <b>(STEL)</b> | <b>(TWA)</b>           | <b>(STEL)</b> |
| Ammonium Molybdate, Tetrahydrate | 0.5 mg/m3 TWA<br>(respirable fraction,<br>as Mo) | N/A           | 5 mg/m3 TWA (as<br>Mo) | N/A           |

## Control Parameters

### Engineering Measures:

No exposure limits exist for the constituents of this product. General room ventilation might be required to maintain operator comfort under normal conditions of use.

### Personal Protective Equipment (PPE):

Lab coat, apron, eye wash, safety shower.

### Respiratory Protection:

No respiratory protection required under normal conditions of use.

### Eye Protection:

Wear chemical splash goggles when handling this product. Have an eye wash station available.

### Skin Protection:

Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

### Gloves:

Nitrile

## Section 9

## Physical Data

**Formula:** (NH<sub>4</sub>)<sub>6</sub>Mo<sub>7</sub>O<sub>24</sub> \* 4H<sub>2</sub>O

**Molecular Weight:** 1235.9 g/mol

**Appearance:** White Crystalline Solid

**Odor:** No data available

**Odor Threshold:** No data available

**pH:** No data available

**Melting Point:** No data available 190 C

**Boiling Point:** No data available

**Flash Point:** No data available

**Flammable Limits in Air:** N/A

**Vapor Pressure:** 0 mmHg at 20 °C

**Evaporation Rate (BuAc=1):** N/A

**Vapor Density (Air=1):** N/A

**Specific Gravity:** 2.87 at 20 °C

**Solubility in Water:** Soluble

**Log Pow (calculated):** No data available

**Autoignition Temperature:** No data available

**Decomposition Temperature:** No data available

**Viscosity:** No data available

**Percent Volatile by Volume:** N/A

## Section 10

## Reactivity Data

**Reactivity:**

No data available

**Chemical Stability:**

Stable under normal conditions.

**Conditions to Avoid:**

None known.

**Hazardous Polymerization:**

Will not occur

## Section 11

## Toxicity Data

**Routes of Entry:** Inhalation.  
**Symptoms (Acute):** N/A  
**Delayed Effects:** No data available

### Acute Toxicity:

**Chemical Name**

No data available

**CAS Number**

12054-85-2

**Oral LD50**

Not determined

**Dermal LD50**

Not determined

**Inhalation LC50**

Not determined

### Carcinogenicity:

**Chemical Name**

No data available

**CAS Number**

12054-85-2

**IARC**

Not listed

**NTP**

Not listed

**OSHA**

Not listed

### Chronic Effects:

**Mutagenicity:**

No evidence of a mutagenic effect.

**Teratogenicity:**

No evidence of a teratogenic effect (birth defect).

**Sensitization:**

No evidence of a sensitization effect.

**Reproductive:**

No evidence of negative reproductive effects.

**Target Organ Effects:**

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**Acute:** See Section 2  
**Chronic:** Not listed as a carcinogen by IARC, NTP or OSHA.

## Section 12

## Ecological Data

**Overview:** Moderate ecological hazard. This product may be dangerous to plants and/or wildlife. Keep out of waterways.  
**Mobility:** No data  
**Persistence:** No data  
**Bioaccumulation:** No data  
**Degradability:** No data  
**Other Adverse Effects:** No data

|                      |                   |                     |
|----------------------|-------------------|---------------------|
| <b>Chemical Name</b> | <b>CAS Number</b> | <b>Eco Toxicity</b> |
| N/A                  | 12054-85-2        |                     |

## Section 13

## Disposal Information

**Disposal Methods:** Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.  
**Waste Disposal Code(s):** Not Determined

## Section 14

## Transport Information

|                                           |                                          |
|-------------------------------------------|------------------------------------------|
| <b>Ground - DOT Proper Shipping Name:</b> | <b>Air - IATA Proper Shipping Name:</b>  |
| N/A                                       | Not regulated for air transport by IATA. |

## Section 15

## Regulatory Information

**TSCA Status:** A component (or components) of this product is not listed on the TSCA Inventory of Existing Chemical Substances. Product is for research and development use only.

| Chemical Name     | CAS Number | § 313 Name | § 304 RQ | CERCLA RQ | § 302 TPQ | CAA 112(2) TQ |
|-------------------|------------|------------|----------|-----------|-----------|---------------|
| No data available | 12054-85-2 | No         | No       | No        | No        | No            |

## Section 16

## Additional Information

**Revised:** 04/26/2016

**Replaces:** 09/09/2015

**Printed:** 07-06-2016

The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

### Glossary

|        |                                                                       |      |                                               |
|--------|-----------------------------------------------------------------------|------|-----------------------------------------------|
| ACGIH  | American Conference of Governmental Industrial Hygienists             | NTP  | National Toxicology Program                   |
| CAS    | Chemical Abstract Service Number                                      | OSHA | Occupational Safety and Health Administration |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act | PEL  | Permissible Exposure Limit                    |
| DOT    | U.S. Department of Transportation                                     | ppm  | Parts per million                             |
| IARC   | International Agency for Research on Cancer                           | RCRA | Resource Conservation and Recovery Act        |
| N/A    | Not Available                                                         | SARA | Superfund Amendments and Reauthorization Act  |
|        |                                                                       | TLV  | Threshold Limit Value                         |
|        |                                                                       | TSCA | Toxic Substances Control Act                  |
|        |                                                                       | IDLH | Immediately dangerous to life and health      |