

## SAFETY DATA SHEET

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifiers

Product name Ammonium molybdate tetrahydrate  
CAS number 12054-85-2  
Synonyms Ammonium heptamolybdate tetrahydrate

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses Laboratory chemicals.

#### 1.3 Details of the supplier of the safety data sheet

Company Lab Alley, LLC  
12501 Pauls Valley Road  
Austin, Texas 78737  
U.S.A.  
Telephone 512-668-9918  
Fax 512-886-4008

#### 1.4 Emergency telephone

Emergency Phone # US & Canada: 1-800-535-5053 INFOTRAC  
International 1-352-323-3500 INFOTRAC

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute Oral Toxicity Category 4

#### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word

Warning

Hazard statements

Harmful if swallowed.

Precautionary statements

Prevention: Wash face, hands, and any exposed skin thoroughly after handling. Do not eat, drink, or smoke when using this product.

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.

Disposal: Dispose of contents/container to an approved waste disposal plant.

## 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

None identified.

## SECTION 3: Composition/information on ingredients

### 3.1 Components

| Chemical name                        | Common name and synonyms        | CAS number | Concentration |
|--------------------------------------|---------------------------------|------------|---------------|
| Ammonium heptamolybdate tetrahydrate | Ammonium molybdate tetrahydrate | 12054-85-2 | <=100%        |

## SECTION 4: First aid measures

### 4.1 Description of first-aid measures

#### General advice

#### If inhaled

Remove to fresh air. Get medical attention if symptoms occur. If not breathing, give artificial respiration.

#### In case of skin contact

Wash off immediately with plenty of water for at least 15 minutes. . If skin irritation persists, call a physician.

#### In case of eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

#### If swallowed

Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.

#### 4.2 Most important symptoms and effects, both acute and delayed

None reasonably foreseeable.

#### 4.3 Indication of any immediate medical attention and special treatment needed

If symptoms persist, call a physician. Treat symptomatically.

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

**Suitable extinguishing media** No information available.

**Unsuitable extinguishing media** No information available.

#### 5.2 Specific hazards arising from the substance or mixture

Keep product and empty container away from heat and sources of ignition.  
Hazardous Combustion Products: Nitrogen oxides (NO<sub>x</sub>).

#### 5.3 Special protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

#### 5.4 Further information

**Flash Point** No information available.

**Autoignition Temperature** No information available.

##### Explosion limits

**Upper** No data available.

**Lower** No data available.

**Sensitivity to Mechanical Impact** No information available.

**Sensitivity to Static Discharge** No information available.

##### NFPA

| Health | Flammability | Instability | Physical hazards |
|--------|--------------|-------------|------------------|
| 2      | 1            | 0           | N/A              |

### SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures**  
Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation.
- 6.2 Environmental precautions**  
Should not be released into the environment.
- 6.3 Methods and materials for containment and cleaning up**  
Sweep up and shovel into suitable containers for disposal.
- 6.4 Reference to other sections**  
See Section 2 for full list of hazard and precaution statements.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

#### Precautions on safe handling

Wear personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation.

#### Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

### 7.2 Conditions for safe storage, including any incompatibilities

#### Storage conditions

Keep containers tightly closed in a dry, cool, and well-ventilated place.

#### Incompatibilities

Strong oxidizing agents. Strong acids.

## SECTION 8: Exposure controls/personal protection

### 8.1 Occupational exposure limits

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

| Component                            | Type          | Value               |
|--------------------------------------|---------------|---------------------|
| Ammonium heptamolybdate tetrahydrate | (Vacated) TWA | 5 mg/m <sup>3</sup> |

**US. ACGIH Threshold Limit Values**

| Component                            | Type | Value                 |
|--------------------------------------|------|-----------------------|
| Ammonium heptamolybdate tetrahydrate | TWA  | 0.5 mg/m <sup>3</sup> |

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### US. NIOSH: Pocket Guide to Chemical Hazards

| Component                            | Type | Value      |
|--------------------------------------|------|------------|
| Ammonium heptamolybdate tetrahydrate | TWA  | 1000 mg/m3 |

#### Biological occupational exposure limits

No information available.

## 8.2 Exposure controls

### Appropriate engineering controls

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

### Personal protective equipment

#### Eye/face protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

#### Skin protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

#### Body Protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

#### Respiratory protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Recommended Filter type: Particulates filter conforming to EN 143.

#### Control of environmental exposure

No information available.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

|                |                                 |
|----------------|---------------------------------|
| Physical State | Solid                           |
| Appearance     | White/Yellowish/Greenish-Yellow |
| Odor           | Ammoniacal                      |
| Odor Threshold | No information available        |

|   |  |
|---|--|
| pH  | 5.0-5.5, 5% aq. solution   |
| Melting Point/Range                       | 190 °C / 374 °F  |
| Boiling Point/Range                       | No information available   |
| Evaporation Rate                          | Not applicable   |
| Flammability (solid)                      | No information available   |
| Flammability or explosive limit           | No data available  |
| Upper                                     |  |
| Lower                                     |  |
| Vapor Pressure                            | No information available   |
| Vapor Density                             | Not applicable   |
| Density                                   | No information available   |
| Solubility                                | Soluble in water   |
| Partition coefficient;<br>n-octanol/water | No data available  |
| Autoignition Temp                         | No information available   |
| Decomposition Temp                        | > 150°C  |
| Viscosity                                 | Not applicable   |
| Molecular Formula                         | (NH <sub>4</sub> ) <sub>6</sub> Mo <sub>7</sub> O <sub>24</sub> ·4H <sub>2</sub> O |
| Molecular Weight                          | 1235.86 g/mol  |
| VOC Content(%)                            | No information available   |
| Oxidizing properties                      | No information available   |

## 9.2 Other safety information

No information available.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No information available.

### 10.2 Chemical stability

Stable under normal conditions.

### 10.3 Possibility of hazardous reactions

None under normal processing.

### 10.4 Conditions to avoid

Incompatible products. Excess heat. Avoid dust formation.

### 10.5 Incompatible materials

Strong oxidizing agents, Strong acids.

### 10.6 Hazardous decomposition products

Nitrogen oxides (NO<sub>x</sub>).

## SECTION 11: Toxicological information

## 11.1 Information on toxicological effects

### Product Information, Component Information

#### Acute toxicity

| Component                            | LD50 Oral       | LD50 Dermal | LC50 Inhalation |
|--------------------------------------|-----------------|-------------|-----------------|
| Ammonium heptamolybdate tetrahydrate | 333 mg/kg (Rat) | -           | -               |

#### Skin corrosion/irritation

Irritating to skin.

#### Serious eye damage/eye irritation

Irritating to eyes.

#### Respiratory or skin sensitization

Irritating to respiratory system.

#### Germ cell mutagenicity

No information available.

#### Carcinogenicity

| Component                            | CAS        | IARC       | NTP        | ACGIH | OSHA       | Mexico     |
|--------------------------------------|------------|------------|------------|-------|------------|------------|
| Ammonium heptamolybdate tetrahydrate | 12054-85-2 | Not listed | Not listed | A3    | Not listed | Not listed |

#### Specific target organ toxicity - single exposure

None known.

#### Specific target organ toxicity - repeated exposure

None known.

#### Reproductive toxicity

No information available.

#### Chronic effects

No information available.

## 11.2 Additional Information

The toxicological properties have not been fully investigated.

## SECTION 12: Ecological information

### 12.1 Toxicity

Do not empty into drains.

**12.2 Persistence and degradability**

Soluble in water. Persistence is unlikely based on information available.

**12.3 Bio accumulative potential**

No information available.

**12.4 Mobility in soil**

Will likely be mobile in the environment due to its water solubility.

**12.5 Results of PBT and vPvB assessment**

No information available.

**12.6 Endocrine disrupting properties**

No information available.

**12.7 Other adverse effects**

No information available.

**SECTION 13: Disposal considerations**

**13.1 Waste Disposal Methods**

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

**SECTION 14: Transport information**

**DOT (US)** Not regulated.

**IMDG** Not regulated.

**IATA** Not regulated.

**SECTION 15: Regulatory information**

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**  
Not applicable.

**CERCLA Hazardous Substance List (40 CFR 302.4)**  
Not listed.



**SARA 304 Emergency release notification**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Not regulated.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous**

See Section 2 for more information.

**SARA 313 (TRI reporting)**

Listed, Ammonium heptamolybdate tetrahydrate (CAS #12054-85-2).

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act**

Not regulated.

**FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace**

Not listed.

**US state regulations**

**US. Massachusetts RTK - Substance List**

Not listed.

**US. New Jersey Worker and Community Right-to-Know Act**

Not listed.

**US. Pennsylvania Worker and Community Right-to-Know Law**

Not listed.

**California Proposition 65**

Not listed.

**SECTION 16: Other information**

Issue date: 04/14/2022

## **SECTION 17: Disclaimer**

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.