

## 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
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#### 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  
Skin Corrosion/irritation Category 2  
Serious Eye Damage/Eye Irritation Category 2  
Specific target organ toxicity (single exposure) Category 3  
Target Organs - Respiratory system.

## 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word

Warning

Hazard statements

Harmful if swallowed  
Causes skin irritation  
Causes serious eye irritation  
May cause respiratory irritation

Precautionary statements

**Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product  
Wear protective gloves/protective clothing/eye protection/face protection  
Avoid breathing dust/fume/gas/mist/vapors/spray  
Use only outdoors or in a well-ventilated area

**Inhalation**

Remove victim to fresh air and keep at rest in a position comfortable for breathing

Call a POISON CENTER or doctor/physician if you feel unwell

**Skin**

Wash with plenty of soap and water

If skin irritation occurs: Get medical advice/attention

Take off contaminated clothing and wash before reuse

**Eyes**

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

If eye irritation persists: Get medical advice/attention.

**Ingestion**

Call a POISON CENTER or doctor/physician if you feel unwell

Rinse mouth

**Storage**

Store in a well-ventilated place. Keep container tightly closed

Store locked up

**Disposal**

Dispose of contents/container to an approved waste disposal plant

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

## SECTION 3: Composition/information on ingredients

### 3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Ammonium heptamolybdate	Ammonium molybdate tetrahydrate	12054-85-2	>95%

## SECTION 4: First aid measures

### 4.1 Description of first-aid measures

#### General advice

<b>If inhaled</b>	Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Obtain medical attention.
<b>In case of skin contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention.
<b>In case of eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.
<b>If swallowed</b>	Do not induce vomiting. Call a physician or Poison Control Center immediately.

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

No information available

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

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

<b>Suitable extinguishing media</b>	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
<b>Unsuitable extinguishing media</b>	No information available.

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

No information available.

### 5.3 Special protective equipment and precautions for firefighters

No information available.

### 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. Avoid dust formation. Avoid contact with the skin and the eyes.

### 6.2 Environmental precautions

Should not be released into the environment.

### 6.3 Methods and materials for containment and cleaning up

Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

### 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

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

#### 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	(Vacated) TWA	5 mg/m <sup>3</sup>

#### US. ACGIH Threshold Limit Values

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

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

Component	Type	Value
Ammonium heptamolybdate	IDLH	1000 mg/m <sup>3</sup>

#### Biological occupational exposure limits

No information available.

### 8.2 Exposure controls

#### Appropriate engineering controls

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

#### 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.

**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
Odor	No information available
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	No information available
Flammability (solid)	No information available
Flammability or explosive limit	
Upper	No data available
Lower	No data available
Vapor Pressure	No information available
Vapor Density	No information available
Density	2.490
Solubility	Soluble in water
Partition coefficient;	No data available
Autoignition Temp	No information available
Decomposition Temp	> 150°C
Viscosity	No information available
Molecular Formula	H <sub>24</sub> Mo <sub>7</sub> N <sub>6</sub> O <sub>24</sub> . 4 H <sub>2</sub> O
Molecular Weight	1235.86
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

None known, based on information available.

### 10.2 Chemical stability

Stable under normal conditions.

### 10.3 Possibility of hazardous reactions

Incompatible products. Excess heat. Avoid dust formation.

### 10.4 Conditions to avoid

Strong oxidizing agents, Strong acids

### 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)	Not listed	Not listed

##### 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**

Respiratory system.

**Specific target organ toxicity - repeated exposure**

None known

**Reproductive toxicity**

No information available.

**Chronic effects**

No information available.

**11.2 Additional Information**

No information available.

**SECTION 12: Ecological information****12.1 Toxicity**

Do not empty into drains.

**12.2 Persistence and degradability**

No 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**

The toxicological properties have not been fully investigated.



## 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 regulated.

### 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 regulated.

#### 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**

Not regulated.

#### **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**

This product does not contain any Proposition 65 chemicals.

#### **SECTION 16: Other information**

Date of Issue: 10/9/2025

#### **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.