



## AMMONIUM MOLYBDATE

### 1. Product Identification

Synonyms: Molybdic acid hexammonium salt tetrahydrate; ammonium molybdate tetrahydrate; ammonium heptamolybdate, tetrahydrate

CAS No.: 12027-67-7 (Anhydrous); 12054-85-2 (Tetrahydrate)

Molecular Weight: 1235.86

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

Product Code : 30187 , 30189

### 2. Composition/Information on Ingredients

Ingredient	CAS No	Percent
Hexaammonium Molybdate	12027-67-7	98 - 100%

### 3. Hazards Identification

Potential Health Effects

Inhalation: Irritant for the upper respiratory system. Pungent taste in mouth and throat, coughing, labored breathing. Can be a route of absorption by the body with symptoms like ingestion.

Ingestion: Irritant to the digestive system. Symptoms of sore throat, abdominal pain, nausea may occur. May cause anemia, gout, headaches, weight loss, joint pain, and liver or kidney damage.

Skin Contact: Causes irritation to skin. Symptoms include redness, itching, and pain.

Eye Contact: Causes irritation, redness, and pain.

Chronic Exposure: Prolonged or repeated exposure to this product may cause symptoms similar to ingestion.

Aggravation of Pre-existing Conditions: Persons with pre-existing skin disorders, blood disorders or eye problems, or impaired liver, kidney or respiratory function may be more susceptible to the effects of the substance.

### 4. First Aid Measures

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion: Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

Skin Contact: Immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

### 5. Fire Fighting Measures

Fire: Not considered to be a fire hazard.

Explosion: Not considered to be an explosion hazard.

Fire Extinguishing Media: Use any means suitable for extinguishing surrounding fire.

Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Water spray may be used to keep fire exposed containers cool.



Registered Off. : 101-A, Deep Enclave, Pocket 'D', Ashok Vihar, Phase-III, Delhi-110 052 (India)  
Corporate Off. : 152, Vardhman City Centre, Near Shakti Nagar Underbridge, Delhi-110052 (India)  
Works : Plot No.1022, Modern Industrial Estate, Bahadurgarh-124507, Haryana (India)  
Telephone : 0091 - 11 - 23646422 E-mail : tecpharm@gmail.com  
Website : www.technopharmchem.com

#### 6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8.  
Spills: Pick up and place in a suitable container for reclamation or disposal, using a method that does not generate dust.

#### 7. Handling and Storage

Keep in a tightly closed container. Protect from physical damage. Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatibilities.

#### 8. Exposure Controls/Personal Protection

Airborne Exposure Limits:

-OSHA Permissible Exposure Limit (PEL): 5 mg/m<sup>3</sup> for soluble molybdenum compounds as Mo  
15 mg/m<sup>3</sup> for insoluble molybdenum compounds as Mo

-ACGIH Threshold Limit Value (TLV): Molybdenum, metal and insoluble compounds, inhalable fraction, as Mo: 10 mg/m<sup>3</sup>

Molybdenum, metal and insoluble compounds, respirable fraction, as Mo: 3 mg/m<sup>3</sup>

Molybdenum, soluble compounds, respirable fraction, as Mo: 0.5 mg/m<sup>3</sup>, A3 - Confirmed animal carcinogen with unknown relevance to humans

Ventilation System: A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.

Personal Respirators : If the exposure limit is exceeded and engineering controls are not feasible, a half facepiece particulate respirator (NIOSH type N95 or better filters) may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest.. A full-face piece particulate respirator (NIOSH type N100 filters) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest.

Skin Protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection: Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

#### 9. Physical and Chemical Properties

Appearance: White to yellow-green crystals

Odor: Odorless.

Solubility: 43 g / 100 cc cold water.

Density: 2.498

pH: 5.0 - 5.5

% Volatiles by volume @ 21C (70F): 0

Boiling Point: 190C (374F) Decomposes.

Melting Point: 90C (194F) Loses 1 water @ this temperature.

Vapor Density (Air=1): No information found.

Vapor Pressure (mm Hg): No information found.

Evaporation Rate (BuAc=1): No information found.



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#### 10. Stability and Reactivity

Stability: Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products: Burning may produce ammonia, nitrogen oxides and metal fumes.

Hazardous Polymerization: Will not occur.

Incompatibilities: Alkali metals

Conditions to Avoid: Incompatibles.

#### 11. Toxicological Information

Anhydrous: Oral rat LD50: 333 mg/kg. Investigated as a mutagen.

#### 12. Ecological Information

Environmental Fate: No information found.

Environmental Toxicity: No information found.

#### 13. Disposal Considerations

Dispose of container and unused contents in accordance with federal, state and local requirements.

#### 14. Transport Information

Not Regulated.

#### 15. Regulatory Information

SARA 311/312: Acute: Yes Chronic: Yes Fire: No Pressure: No

Reactivity: No (Pure / Solid)

#### 16. Other Information

Product Use:

Laboratory Reagent.