

CATALYTIC INNOVATIONS



SAFETY DATA SHEET

1. PRODUCT IDENTIFICATION

Product Name: *Ammonium Molybdate Solution (10%)*

CAS #: 12054-85-2

Trade Names/Synonyms: Di-Ammonium Molybdate, Moly Solution

EPA Reg. No.: Not applicable

Use of substance/mixture: For laboratory, manufacturing, and fertilizer use only.

Restricted Use: Not for food, drug, or household use.

Manufacturer: Catalytic Innovations, LLC
10027 County Road 2020
Rolla, MO 65401

Emergency Contact Number: **573-578-1368**

SDS CREATION DATE: February 17th, 2023

SDS REVISION DATE: April 26th, 2023

2. HAZARD IDENTIFICATION

GHS CLASSIFICATION: Acute toxicity, oral (category 4), (Skin corrosion/irritation Category 2), Serious eye damage/eye irritation (Category 2A), Specific target organ toxicity (single exposure) (Category 3), Hazardous to the aquatic environment – Acute.

Hazard Category 3

SIGNAL WORD: Warning!

HAZARD STATEMENTS:

H302: Harmful if swallowed.
H315 Causes skin irritation
H319 Causes serious eye irritation
H335 May cause respiratory irritation
H402 Harmful to aquatic life

PRECAUTIONARY STATEMENTS:

Prevention Measures:

P201: Obtain special instructions before use
P202: Do not handle until all safety precautions have been read and understood
P264: Wash skin thoroughly after handling
P270: Do not eat, drink, smoke when using this product
P273: Avoid release to the environment
P280: Wear protective gloves, eye protection
P362+P364: Take off contaminated clothing and wash it before reuse
P391: Collect spillage
P405: Store locked up
P501: Dispose of contents/container to comply with local, state and



federal regulations

Response Measures:

P301+P312+P330: IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.

P308+P313: IF exposed or concerned: Get medical advice/attention physician

P501: Dispose of contents/container to an approved waste disposal plant.

HEALTH COMMENTS: Read all precautions of products being handled and follow the most restrictive language for all products to provide the safest work environment.

COMMENTS: KEEP OUT OF REACH OF CHILDREN

3. COMPOSITION

<u>Chemical Ingredients:</u>	<u>Percentage by Weight</u>	<u>CAS No.</u>	<u>GHS-US</u>
Water	<95%	7732-18-5	
Ammonium Molybdate	>5%	12054-85-2	

4. FIRST AID MEASURES

EYES: Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first minutes then continue rinsing eyes. Call a poison control center or doctor for treatment advice if pain, blinking, or redness persists.

SKIN: Take off contaminated clothing. Rinse skin immediately with plenty of water and mild soap for 15-20 minutes followed by a rinse with warm water. Call a POISON CENTER or doctor for treatment advice.

INGESTION: Immediately call a poison control center or doctor. Rinse the mouth. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

INHALATION: Move person to fresh air. Allow the victim to rest. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

NOTES TO PHYSICIAN: All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Symptoms: No information available.

Chronic Symptoms: No information available.

5. FIRE FIGHTING MEASURES

Flash Point (°F/Test Method): Data unavailable.
Flammable Limits (LFL & UFL): Not flammable.

Extinguishing Media: Foam. Dry powder. Carbon Dioxide. Water spray. Sand. **DO NOT** use heavy water stream.

Specific Hazards Arising from Chemical: Nitrogen oxides. Molybdenum oxides. An ambient fire may liberate hazardous vapors.

Hazardous Combustion Products: No information available.

Precautionary Measures for Fire-Fighters: Exercise caution when fighting any chemical fire. Prevent fire-fighting water that may be contaminated by chemical from entering the environment. Do not enter without personal protective equipment, including respiratory protection.

6. ACCIDENTAL RELEASE MEASURES

Steps to be taken in case material is released or spilled: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

Environmental Caution: Keep spills and cleaning runoff out of municipal sewers and open bodies of water. Notify the authorities if liquid enters the sewers or public waters.

7. HANDLING/STORAGE INFORMATION

Precautions for Safe Handling: Use in a well-ventilated area. Avoid eye and skin contact and do not breathe in dust, mist, or vapors. Use PPE (Personal Protective Equipment) as required. Do not handle until all safety precautions have been read and understood.

Precautions for Storage: Keep container tightly closed when in use. Do not store the product with highly reactive substances and strong reducing agents. Keep in a dry, cool, and well-ventilated place. Storage class (TRGS 510): 13: Non Combustible Solids.

Other Comments: No information available.

Observe all federal, state and local regulations when storing this product. It is recommended that storage and transfers of this product be done on an impervious surface to prevent contamination of waterways.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Parameters:

Component: Ammonium Molybdate (VI)		
Agency	Parameters	Values
ACGIH	TLV (TWA)	5 mg/m ³
OSHA	PEL (TWA)	0.5 mg/m ³

Engineering Controls: Emergency eye wash fountains and showers should be made available in the immediate vicinity of the chemical or where exposure can occur. Ensure adequate ventilation.

Hygiene Measures: Wash hands and other exposed areas with mild soap and water before eating, drinking, smoking, or when leaving work. Wash contaminated clothing before re-use. Do not allow contaminated clothing out of the workplace.

Respiratory Protection: Avoid breathing dust or mist. Use NIOSH/OSHA approved respiratory protection equipment when air borne exposure is excessive.

Skin/Body Protection: Wear chemically protective gloves. Wear chemically protective boots, aprons, and gauntlets to prevent prolonged or repeated contact with skin.

Eye/Face Protection: Wear safety goggles when handling this product. Use a face shield for additional protection. Contact lenses are not eye protective devices.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid

Appearance: slight ammonia odor

Odor: None

pH: 7-8

Evaporation Rate: No data available.
Flammability: Non-flammable.
Melting Point: No data available.
Freezing Point: No data available.
Boiling Point: No data available.
Flash Point: Non-flammable.
Relative Density: No data available.
Water Solubility: No data available.
Specific Gravity (water = 1.0): No data available.
Percent Volatile (by volume): No data available.
Vapor Pressure: No data available
Vapor Density: No data available
Viscosity: No data available.
Partition Coefficient: N-Octanol/Water: No data available.

10. STABILITY AND REACTIVITY

Reactivity: No information available

Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Direct sunlight. Extremely low or high temperatures.

Incompatible Materials: Strong oxidizing. Strong acids.

Hazardous Decomposition Products: Gaseous ammonia.

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Inhalation, skin, or eye contact.

Acute Toxicity Effects:

Component: Ammonium Molybdate (VI)	
Test	Result
LD50 Oral Rat	331 mg/kg

Sensitization: No information available.

Eye Irritation: Causes skin irritation.

Skin Irritation: Causes serious eye irritation.

Respiratory Irritation: No information available.

Reproductive Toxicity: May cause damage to fertility or the unborn child.

Developmental Toxicity: No information available.

STOT Single Exposure: May cause respiratory irritation.

STOT Repeated Exposure: No information available.

Carcinogenicity: None listed on OSHA, NTP, or IARC.

Acute Symptoms: Nausea. Vomiting. Diarrhea.

Chronic Effects: No information available.

12. ECOLOGICAL INFORMATION

Acute Aquatic Toxicity Effects:

Component: Ammonium Molybdate (VI)	
Test	Result
LC50 Fish 1	320 mg/l (96 hrs)
EC50 Daphnia 1	140 mg/l
LC50 Fish 2	420 mg/l (96 hrs)
ErC50 (algae)	41 mg/l

Persistence and Degradability: Not established.

Bioaccumulative Potential: Not established.

Do not contaminate water supplies. Avoid release to the environment.

13. DISPOSAL CONSIDERATIONS

Evaluation is required by the user at the time of disposal. In all cases, disposal should be in accordance with all local, state, and federal laws and regulations. For recycling options please contact product manufacturer.

14. TRANSPORTATION INFORMATION

DOT: Not Regulated under 49 CFR 172.101

15. REGULATORY INFORMATION

US FEDERAL REGULATIONS

Component: Ammonium Molybdate (VI)	
Statute	Status
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard

16. OTHER INFORMATION

Prepared by: ESH Department
SDS Preparation Date: February 17th, 2023
Last Revision Date: April 26th, 2023
Revision Summary: Format update

NFPA CODES



FOR ADDITIONAL NON-EMERGENCY INFORMATION CONTACT:

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573-578-1368

Note: This SDS was prepared for and shall only be used for this product. The information and recommendations on this SDS are presented in good faith and based on data which is believed to be accurate. Catalytic Innovations, however, makes no guarantees or warranty, either expressed or implied, on the accuracy of this information. The conditions or methods of handling, storage, use, and disposal of this is beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expense arising out of or in any way connected with the handling, storage, disposal of this product. If this product is used as a

component of another product, the information contained in this SDS may no longer be applicable.

Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. This information relates to the specific product designated and may not be valid for such product used in combination with any other materials or in any other processes. Such information is to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty or guarantee is made as to its accuracy, reliability, or completeness by Catalytic Innovations, LLC. It is the user's responsibility to satisfy themselves as to the suitability and completeness of such information for their own particular use. We do not accept liability for any loss or damage that may occur from the use of this information nor do we offer warranty against patent infringement. Catalytic Innovations, LLC reserves the right to refuse shipment of this product to any consumer who fails to demonstrate the ability to consistently handle and use it safely and in compliance with all applicable laws, rules and regulations. Such demonstration may require on-site inspection of any or all storage, processing, packaging and other handling systems that come in contact with it. Customers are responsible for compliance with local, state and federal regulations that may be pertinent in the storage, application and disposal of this product.

Legend:

ACGIH (American Conference of Governmental Industrial Hygienists)

OSHA (Occupational Safety and Health Agency)

NIOSH (National Institute for Occupational Safety and Health)

IARC (International Agency for Research on Cancer)

TSCA (Toxic Substance Control Act)

SARA (Superfund Amendments and Reauthorization Act)

CFR (Code of Federal Regulations)

DOT (Department of Transportation)

CAS (Chemical Abstracts Service)

CWA (Clean Water Act)

CAA (Clean Air Act)