

CATALYTIC INNOVATIONS



SAFETY DATA SHEET

1. PRODUCT IDENTIFICATION

Product Name: *Dry Ammonium Molybdate (56% Mo)*

CAS #: 12054-85-2

Trade Names/Synonyms: Ammonium Molybdate

EPA Reg. No.: Not applicable

Use of substance/mixture: For laboratory and manufacturing 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: April 13th, 2023

SDS REVISION DATE: N/A

2. HAZARD IDENTIFICATION

GHS CLASSIFICATION: 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:

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

PRECAUTIONARY STATEMENTS:

Prevention Measures:

P261: Avoid breathing dust.
P264: Wash exposed skin thoroughly after handling.
P271: Use only outdoors or in a well-ventilated area.
P273: Avoid release to the environment.
P280: Wear eye protection, protective gloves.
P362: Take off contaminated clothing and wash before reuse.
P403+P233: Store in a well-ventilated place. Keep container tightly closed.
P405: Store locked up.
P501: Dispose of contents/container to comply with local, state and federal regulations.

Response Measures:

P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.



Continue rinsing.
P312: Call a POISON CENTER or doctor/physician if you feel unwell. P332+P313 - If skin irritation occurs: Get medical advice/attention.
P337+P313: If eye irritation persists: Get medical advice/attention.

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>
Ammonium Molybdate	<=100%	12054-85-2	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335 Aquatic Acute 3, H402

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 control 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: If ingested, then nausea, vomiting, and diarrhea. If inhaled, may cause respiratory irritation. Can also cause serious eye irritation and skin irritation.

Chronic Symptoms: Prolonged or repeated exposure with the skin may cause dermatitis.

5. FIRE FIGHTING MEASURES

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

Extinguishing Media: Water spray. Carbon dioxide. Dry chemical. Chemical foam. **DO NOT** use a heavy water stream.

Specific Hazards Arising from Chemical: Fine dust dispersed in air may ignite. Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

Hazardous Combustion Products: Nitrogen oxides (NOx) Highly toxic fumes Ammonia.

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: Sweep up, shovel, or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation. Avoid release to the environment.

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. Wear appropriate PPE (Personal Protective Equipment) when required.

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.

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		
Agency	Parameters	Values
ACGIH	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. Do not bring contaminated clothing outside of work areas.

Respiratory Protection: Avoid breathing dust or mist. Use NIOSH 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: Solid

Appearance: Powder/White

Odor: Odorless

pH: No data available.

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: 63.5 g/100ml
Specific Gravity (water = 1.0): 2.276g/cm³
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: Avoid dust formation. Avoid incompatible products. Avoid direct sunlight and extremely high or low temperatures.

Incompatible Materials: No information available.

Hazardous Decomposition Products: Nitrogen oxides (NO_x), Highly toxic fumes, Ammonia.

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Inhalation and skin/eye contact.

Acute Toxicity Effects: No information available.

Sensitization: No information available.

Eye Irritation : Causes serious eye irritation.

Skin Irritation: Causes skin irritation.

Respiratory Irritation: May cause respiratory irritation.

Reproductive Toxicity: No information available.

Developmental Toxicity: No information available.

STOT Single Exposure: No information available.

STOT Repeated Exposure: No information available.

Carcinogenicity: No information available.

Acute Symptoms: Skin irritation, serious eye irritation, and respiratory irritation. If ingested, then nausea, vomiting, and diarrhea may occur.

Chronic Effects: Prolonged or repeated contact with skin may cause dermatitis.

12. ECOLOGICAL INFORMATION

AQUATIC TOXICITY EFFECTS: Harmful to aquatic life.

Component: Ammonium Molybdate	
Test	Results
LC50 Fish 1	320 mg/l
Ec50 Daphnia	140 mg/l
LC50 Fish 2	420 mg/l
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. Avoid release to the environment.

14. TRANSPORTATION INFORMATION

Not Regulated under DOT - 49 CFR 172.101

15. REGULATORY INFORMATION

US FEDERAL REGULATIONS

Product: Ammonium Molybdate	
Statute	Status
SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard Immediate (acute) health hazard
SARA Section 313 (Tri Reporting)	N/A
TSCA Listing	YES

16. OTHER INFORMATION

Prepared by: ESH Department
 SDS Preparation Date: April 11th, 2023
 Last Revision Date: N/A
 Revision Summary: N/A



FOR ADDITIONAL NON-EMERGENCY INFORMATION CONTACT:

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 10027 County Road 2020

Rolla, MO 65401
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 for SDS's:

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*)