



Safety Data Sheet
According to the (US) Hazard Communication Standard (29 CFR 1910.1200)

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name	Ammonium Molybdate (4-Hydrate), ACS	
NCL Catalog Number	A-39	
Product Description	Laboratory chemical	
Manufacturer	EMD Millipore Corp.	290 Concord Road Billerica, MA 01821
Supplier	NCL of Wisconsin, Inc. Telephone: 1-800-648-7836 Email: nclabs@nclabs.com	PO Box 8, Birnamwood, WI 54414 Fax: 715-449-2454 Emergency Contact: 1-800-424-9300 (Chemtrec)

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

GHS Classification

Skin Irritation	Category 2
Eye Irritation	Category 2A
Specific Target Organ Toxicity	Single Exposure Category 3
Aquatic Acute	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

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 protective gloves/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a POISON CENTER or doctor if you feel unwell.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.
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.

Other Hazards Not Contributing to the Classification

No additional information

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Identity Not applicable
Common Name Not applicable

Substances

Name	CAS #	Approximate %
Ammonium Molybdate Tetrahydrate	12054-85-2	100

SECTION 4: FIRST AID MEASURES

Description of First Aid Measures

General First Aid Measures Never give anything by mouth to an unconscious person. Seek medical advice if you feel unwell.

If Inhaled Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.

In Case of Skin Contact Remove all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention.

In Case of Eye Contact Rinse carefully with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation persists.

If Swallowed Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

Most Important Symptoms/Effects Acute and Delayed

Symptoms/Injuries After Inhalation May cause respiratory irritation.

Symptoms/Injuries After Skin Contact Causes skin irritation.

Symptoms/Injuries After Eye Contact Causes serious eye irritation.

Symptoms/Injuries After Ingestion Nausea. Vomiting. Diarrhea.

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

Indication of Immediate Medical Attention and Special Treatment Needed

Seek medical attention if exposed.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media Alcohol resistant foam. Dry powder. Water spray. Carbon dioxide.

Unsuitable Extinguishing Media None known.

Special Hazards Arising from the Substance or Mixture Reacts violently with strong oxidizers, some halogen compounds, acids to release toxic/corrosive gases (hydrogen chloride), and bases to release corrosive gases (ammonia).

Special Protective Equipment and Precautions for Fire-Fighters Wear self-contained breathing apparatus and protective clothing.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Personal Precautions Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. See section 8 for personal protection.

Environmental Precautions Prevent entry to sewers and public waters.

Methods and Materials for Containment and Cleaning Up Sweep or shovel into suitable containers. Minimize generation of dust. Store away from other materials. Wash clothing/equipment after handling. Ensure compliance with federal, state and local regulations.

SECTION 7: HANDLING AND STORAGE

Handling and Storage

Precautions for Safe Handling

Avoid contact with eyes and skin. Avoid breathing vapors. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.

Conditions for Safe Storage Including any Incompatibilities

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Store away from sunlight and sources of ignition.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Ammonium Molybdate Tetrahydrate (12054-85-2)		
USA ACGIH	ACGIH TWA (mg/m ³)	0.5 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	5 mg/m ³

Appropriate Engineering Controls

Material should be handled or transferred in a fume hood or with equivalent ventilation. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Individual Protection Measures

Avoid all unnecessary exposure.

Skin Protection

Resistant gloves and additional protection including impervious boots, apron, or coveralls, as needed in areas of unusual exposure to prevent skin contact.

Eye Protection

Use chemical safety goggles and /or a full face shield where splashing is possible. Contact lenses should not be worn when working with this material. Maintain eye-wash fountain and quick-drench facilities in work area.

Respiratory Protection

Wear appropriate mask.

Other Information

Do not eat, drink, or smoke during use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid, crystals
Color	White
Molecular Mass	1235.86 g/mol
Odor	Odorless
Odor Threshold	Not determined
pH	Not determined
Melting Point/Freezing Point	Not determined
Initial Boiling Point and Boiling Range	Not determined
Flash Point	Not determined
Evaporation Rate	Not determined
Flammability (Solid, Gas)	Not determined
Upper/Lower Flammability/Explosive Limits	Not determined
Vapor Pressure	Not determined
Vapor Density	Not determined
Relative Density	2.276 g/cm ³
Solubility	Soluble in water
Partition Coefficient: n-octanol/water	Not determined
Auto-Ignition Temperature	Not determined
Decomposition Temperature	Not determined
Viscosity	Not determined

SECTION 10: STABILITY AND REACTIVITY

Reactivity	No data available
Chemical Stability	Not established
Possibility of Hazardous Reactions	Not established
Conditions to Avoid	Direct sunlight. Extremely high or low temperatures.
Incompatible Materials	No data available
Hazardous Decomposition Products	Gaseous ammonia

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Toxicity	Not classified
Skin Corrosion/Irritation	Causes skin irritation.
Serious Eye Damage/Irritation	Causes serious eye irritation.
Respiratory or Skin Sensitization	No data available
Germ Cell Mutagenicity	No data available
Carcinogenicity	Not classified
Reproductive Toxicity	No data available
Specific Target Organ Toxicity (Single Exposure)	No data available
Specific Target Organ Toxicity (Repeated Exposure)	No data available
Aspiration Hazard	No data available
Symptoms/Injuries After Inhalation	May cause respiratory irritation.
Symptoms/Injuries After Skin Contact	Causes skin irritation.
Symptoms/Injuries After Eye Contact	Causes serious eye irritation.
Symptoms/Injuries After Ingestion	Nausea. Vomiting. Diarrhea.
Chronic Symptoms	Prolonged or repeated contacts with the skin may cause dermatitis.
Potential Adverse Human Health Effects and Symptoms	No data available
Other Information	No additional information

SECTION 12: ECOLOGICAL INFORMATION

Ecology – Water Toxicity Harmful to aquatic life.

Ammonium Molybdate Tetrahydrate (12054-85-2)	
LC50 fishes 1	320 mg/l
EC50 Daphnia 1	140 mg/l
LC50 fish 2	420
ErC50 (algae)	41 mg/l

Persistence and Degradability	No data available
Bioaccumulative Potential	Not applicable
Mobility in Soil	No data available
Other Adverse Effects	Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Methods of Disposal

Disposal Recommendations Dispose of contents/containers in accordance with federal, state and local regulations.

Ecology-Waste Materials Avoid release to the surrounding environment.

SECTION 14: TRANSPORT INFORMATION

UN Number Not applicable

UN Shipping Name Not applicable

Transport Hazard Class(es) Not applicable

Packing Group Not applicable

Environmental Hazards Not applicable

Transport in Bulk Not applicable

Special Precautions Not applicable

SECTION 15: REGULATORY INFORMATION

Ammonium Molybdate Tetrahydrate (12054-85-2)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

SECTION 16: OTHER INFORMATION

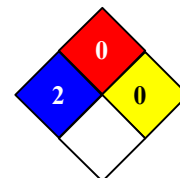
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NFPA Hazards

Health Hazard 2: Intense or prolonged exposure may cause incapacitation; residual injury may occur if not treated.

Fire Hazard 0: Materials that will not burn under typical fire conditions.

Reactivity/Instability 0: Normally stable, even under fire exposure conditions, and is not reactive with water.



HMIS III Rating

Health 2: Temporary or minor injury may occur.

Flammability 0: Materials that will not burn.

Physical Hazard 0: Materials that are normally stable, even under fire conditions.

Personal Protection E

A-39	
Health	2
Flammability	0
Physical Hazard	0
Personal Protection	E

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END OF SAFETY DATA SHEET