

MATERIAL SAFETY DATA SHEET**Product Name:** Ammonium molybdate tetrahydrate**CAS No.** 12054-85-2**Version:** 0**1. Identification**

Product Code : 90118, 90331,
Company Name : Advent Chembio Private Limited
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2. Composition/Information on Ingredients

Ingredient	CAS No	Percent
AMMONIUM MOLYBDATE TETRAHYDRATE	12054-85-2	90- 100%

3. Hazards Identification**Hazard classification****Health hazards**

Acute toxicity (Oral) : Category 4
Germ cell mutagenicity : Category 2
Toxic to reproduction : Category 2
Specific target organ toxicity - single
exposure : Category 2
Specific target organ toxicity -
repeated exposure : Category 1

Labels elements**Hazard symbol**

Signal word : Danger
Hazard statement : Harmful if swallowed.
Suspected of causing genetic defects.
Suspected of damaging fertility or the unborn child.
Causes damage to organs through prolonged or repeated exposure .

Precautionary statement

MATERIAL SAFETY DATA SHEET**Product Name:** Ammonium molybdate tetrahydrate**CAS No.** 12054-85-2**Version:** 0

- Prevention** : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe dust. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.
- Response** : IF exposed or concerned: Get medical advice/attention. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.
- Storage** : Store locked up.
- Disposal** : Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
- Other hazards which do not result in GHS classification** : None.

4. First Aid Measures

- General information** : Get medical advice/attention if you feel unwell. If medical advice is needed, have product container or label at hand. Show this safety data sheet to the doctor in attendance.
- Ingestion** : Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.
- Inhalation** : Move to fresh air. Get medical attention if symptoms persist.
- Skin contact** : Wash skin thoroughly with soap and water. Get medical attention if irritation persists after washing. Remove contaminated clothing and shoes. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes ..
- Eye contact** : Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention immediately.
- Most important symptoms/effects, acute and delayed Symptoms** : Harmful if swallowed. May cause irritation to skin, eyes, and respiratory tract .
- Indication of immediate medical attention and special treatment needed** : Treat symptomatically. Symptoms may be delayed.

MATERIAL SAFETY DATA SHEET**Product Name:** Ammonium molybdate tetrahydrate**CAS No.** 12054-85-2**Version:** 0**5. Fire fighting measures**

- General fire hazards** : No unusual fire or explosion hazards noted.
- Suitable (and unsuitable) extinguishing media**
- Suitable extinguishing media** : Use fire-extinguishing media appropriate for surrounding materials.
- Unsuitable extinguishing media** : None known.
- Specific hazards arising from the chemical** : During fire, gases hazardous to health may be formed .
- Special protective equipment and precautions for firefighters**
- Special fire fighting procedures** : Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool. Cool containers exposed to flames with water until well after the fire is out.
- Special protective equipment for fire-fighters** : Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6. Accidental Release Measures

- Personal precautions, protective equipment and emergency procedures** : Keep unauthorized personnel away. Keep upwind. Ventilate closed spaces before entering them. Avoid inhalation of dust. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Methods and material for containment and cleaning up** : Sweep up and place in a clearly labeled container for chemical waste. Clean surface thoroughly to remove residual contamination.
- Notification Procedures** : Inform authorities if large amounts are involved.
- Environmental precautions** : Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and Storage

- Precautions for safe handling** : Use personal protective equipment as required. Avoid inhalation of dust. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Use only with adequate ventilation. Wash thoroughly after handling. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood .
- Conditions for safe storage, including any incompatibilities** : Keep container tightly closed. Store in a dry place. Store in a well-ventilated place.

MATERIAL SAFETY DATA SHEET

Product Name: Ammonium molybdate tetrahydrate

CAS No. 12054-85-2

Version: 0

8. Exposure Controls Personal Protection

Control parameters

Occupational exposure limits

Chemical identity	Type	Exposure Limit values	Source
AMMONIUM MOLYBDATE TETRAHYDRATE	TWA	0.5 mg/m ³	US. ACGIH Threshold Limit Values (2011)
	TWA	10 mg/m ³	US. ACGIH Threshold Limit Values (2011)
	TWA	3 mg/m ³	US. ACGIH Threshold Limit Values (2011)
	PEL	5 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	PEL	15 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	5 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	10 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)

Appropriate engineering controls : No data available.

Individual protection measures, such as personal protective equipment

General information : Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area. Use explosion-proof ventilation equipment.

Eye/face protection : Wear safety glasses with side shields (or goggles).

Hand protection : Chemical resistant gloves.

Other : Wear suitable protective clothing.

Respiratory protection : In case of inadequate ventilation use suitable respirator. Air-purifying respirator with a high efficiency particulate filter.

Hygiene measures : Provide eyewash station and safety shower. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned. Wash contaminated clothing before reuse.

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Appearance	:	Solid Crystalline Powder, Yellow green to white.
Odor	:	Odorless
pH	:	5 - 5.5
Melting point/freezing point	:	90 °C
Initial boiling point and boiling range	:	190 °C
Flash Point	:	Not applicable
Vapor pressure	:	No data available.
Vapor density	:	No data available.
Relative density	:	2.5 (20 °C)
Solubility in water	:	Soluble
Solubility (other)	:	No data available.
Formula	:	$H_4N.2/3H_2O.1/6Mo_7O_{24}$
Molecular Weight	:	1,235.86 g/mol

10. Stability and Reactivity

Reactivity	:	No dangerous reaction known under conditions of normal use .
Chemical stability	:	Material is stable under normal conditions.
Possibility of hazardous reactions	:	Hazardous polymerization does not occur.
Conditions to avoid	:	Excessive heat.
Incompatible materials	:	Strong oxidizing agents. Alkali metals.
Hazardous decomposition products	:	Nitrogen Oxides ammonia.

11. Toxicological Information**Information on likely routes of exposure**

Ingestion	:	Harmful if swallowed.
Inhalation	:	May cause irritation to the respiratory system.
Skin contact	:	May cause irritation.
Eye contact	:	May irritate eyes.

Information on toxicological effects**Acute toxicity (list all possible routes of exposure)**

Oral Product	:	LD 50 (Rat): 333 mg/kg
Dermal Product	:	No data available.
Inhalation Product	:	No data available.

MATERIAL SAFETY DATA SHEET**Product Name:** Ammonium molybdate tetrahydrate**CAS No.** 12054-85-2**Version:** 0

Repeated dose toxicity Product	:	No data available.
Skin corrosion/irritation Product	:	May cause skin irritation.
Serious eye damage/eye irritation Product	:	May irritate eyes.
Respiratory or skin sensitization Product	:	Not a skin sensitizer.
Carcinogenicity Product	:	This substance has no evidence of carcinogenic properties .
IARC Monographs on the Evaluation of Carcinogenic Risks to Humans DIOXANE	:	No carcinogenic components identified.
US. National Toxicology Program (NTP) Report on Carcinogens DIOXANE	:	No carcinogenic components identified.
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050	:	No carcinogenic components identified.
Germ cell mutagenicity In vitro Product	:	Suspected of causing genetic defects.
In vivo Product	:	Suspected of causing genetic defects.
Reproductive toxicity Product	:	Suspected of damaging fertility or the unborn child.
Specific target organ toxicity - single exposure Product	:	None known.
Specific target organ toxicity - repeated exposure Product	:	Oral Inhalation - dust and mist: Blood. Kidneys. Liver. Bones.
Aspiration hazard Product	:	Not classified
Other effects	:	None known.

12. Ecological Information**Ecotoxicity****Acute hazards to the aquatic environment :**

Fish Product	:	No data available.
Aquatic invertebrates Product	:	No data available.

Chronic hazards to the aquatic environment :

Fish Product	:	No data available.
Aquatic invertebrates Product	:	No data available.
Toxicity to Aquatic Plants Product:	:	No data available.
Persistence and degradability		
Biodegradation Product	:	The product is not expected to be biodegradable.
BOD/COD ratio Product	:	No data available.
Bioaccumulative potential		
Bioconcentration factor (BCF) Product	:	No data available on bioaccumulation.
Partition coefficient n-octanol /	:	No data available.

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- : The product is water soluble and may spread in water systems.
- : The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

13. Disposal consideration**Disposal instructions**

- : Discharge, treatment, or disposal may be subject to national, state, or local laws.

Contaminated packaging

- : Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. Transport Information

	UN No.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
DOT			Not Regulated		
IMDG			Not Regulated		
IATA			Not Regulated		

15. Regulatory Information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Safety, health and environmental regulations/legislation specific for the substance or mixture
No Data Available.

MATERIAL SAFETY DATA SHEET

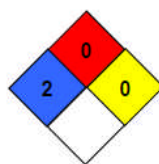
Product Name: Ammonium molybdate tetrahydrate

CAS No. 12054-85-2

Version: 0

16. Other Information

NFPA Hazard ID



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

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