

Material Safety Data Sheet

AMMONIUM MOLYBDATE TETRAHYDRATE

Section 1 - Chemical Product and Company Identification

MSDS Name: Ammonium molybdate tetrahydrate

Synonyms: Ammonium heptamolybdatetetrahydrate

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	EC no	EINECS/ELINCS
12054-85-2	Ammonium molybdate tetrahydrate	234-320-9	NA

Section 3 - Hazards Identification

3.1 Classification of the substance or mixture

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

3.2 Label elements

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

3.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Section 4 - First Aid Measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

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If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

Section 5 - Fire Fighting Measures

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Nitrogen oxides (NO_x), Molybdenum oxides

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

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7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

Section 8 - Exposure Controls, Personal Protection

8.1 Control parameters

Components with workplace control parameters

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

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Section 9 - Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

a) Appearance	Form: crystalline colour : white
b) Odor:	No data available.
c) Odor Threshold:	No data available.
d) pH:	No data available.
e) Melting point/ freezing point:	No data available.
f) Initial boiling point and boiling range:	No data available.
g) Flash point:	Not applicable.
h) Evaporation rate:	No data available.
i) Flammability (solid, gas):	No data available
j) Upper/lower flammability or explosive limits:	No data available.
k) Vapour pressure:	No data available.
l) Vapour density:	no data available.
m) Relative density:	2.498 g/mL at 25 °C.
n) Water solubility:	4,3 g/l at 20 °C
o) Partition coefficient: n-octanol/water	No data available.
p) Auto ignition temperature:	No data available.
q) Decomposition temperature:	No data available.
r) Viscosity:	No data available.
s) Explosive properties:	No data available
t) Oxidizing properties:	No data available.

9.2 Other safety information:

Bulk density	1,400 kg/m ³ .
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Section 10 - Stability and Reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

Strong oxidizing agents, Strong acids

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Nitrogen oxides (NO_x), Molybdenum oxides

Other decomposition products - No data available

In the event of fire: see section 5.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - 333 mg/kg

LC50 Inhalation - Rat - 4 h - 5 mg/l

(Read-across (Analogy))

LD50 Dermal - Rabbit - > 2.000 mg/kg

(Read-across (Analogy))

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation

(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Mild eye irritation

(OECD Test Guideline 405)

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

Result: Not mutagenic in Ames Test

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Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

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

Additional Information

RTECS: QA5076000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. (Ferrous sulfate heptahydrate).

Section 12 - Ecological Information

12.1 Toxicity

Toxicity to fish	LC0 - Oncorhynchus mykiss (rainbow trout)	- 320 mg/l	- 96 h
	LC50 - Oncorhynchus mykiss (rainbow trout)	- 420 mg/l	- 96 h
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea)	- 140 mg/l	- 48 h
	Toxicity to algae	EC50 - Desmodesmus subspicatus (green algae)	- 41 mg/l - 72 h

12.2 Persistence and degradability

The methods for determining biodegradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

Harmful to aquatic life.
 No data available.

Section 13 - Disposal Considerations

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

Section 14 - Transport Information

14.1 UN number

ADR/RID: - -

IMDG: - -

IATA: - -

14.2 UN proper shipping name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

14.3 Transport hazard class(es)

ADR/RID: - -

IMDG: - -

IATA: - -

14.4 Packaging group

ADR/RID: - -

IMDG: - -

IATA: - -

14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

14.6 Special precautions for user

Further information

No data available.

Section 15 - Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

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

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

Section 16 - Other Information

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

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