

Ammonium molybdate tetrahydrate**09880-25KG**

Version 1.1

Revision Date 09/14/2021

Print Date 05/29/2023

SECTION 1. IDENTIFICATION

Product name : Ammonium molybdate tetrahydrate

Number : 000000020218

Product Use Description : Laboratory chemicals

Manufacturer or supplier's details : Honeywell Specialty Chemicals Seelze GmbH
Wunstorfer Straße 40
Seelze, 30926

For more information call : 1-800-368-0050
+1-231-726-3171(Monday-Friday, 9:00am-5:00pm)

In case of emergency call : **Medical: 1-800-498-5701 or +1-303-389-1414**
: **Transportation (CHEMTREC): 1-800-424-9300 or +1-703-527-3887**
:
: (24 hours/day, 7 days/week)

SECTION 2. HAZARDS IDENTIFICATION**Emergency Overview**

Form : crystalline

Color : white

Odor : odourless

Classification of the substance or mixture

Not a hazardous substance or mixture.

Precautionary statements : **Prevention:**
Use personal protective equipment as required.

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Hazards not otherwise classified : Repeated or prolonged exposure may irritate eyes, skin and respiratory system.

Carcinogenicity

ACGIH: Ammonium molybdate-4-hydrate 12054-85-2
A3: Confirmed animal carcinogen
A3: Confirmed animal carcinogen

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : Substance

Chemical name	CAS-No.	Concentration
Ammonium molybdate-4-hydrate	12054-85-2	>=90.00 - <=100.00 %

SECTION 4. FIRST AID MEASURES

General advice : First aider needs to protect himself. Move out of dangerous area. Take off all contaminated clothing immediately.

Inhalation : If inhaled, remove to fresh air. Call a physician if irritation develops or persists.

Skin contact : After contact with skin, wash immediately with plenty of water. Call a physician if irritation develops or persists.

Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Protect unharmed eye. Remove contact lenses. Call a physician immediately.

Ingestion : Clean mouth with water and drink afterwards plenty of water. Call a physician immediately.

Notes to physician

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Most important symptoms/effects, acute and delayed : No information available.

Indication of immediate medical attention and special treatment needed, if necessary : Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Water spray
Foam
Carbon dioxide (CO₂)
Dry powder

Specific hazards during firefighting : In case of fire hazardous decomposition products may be produced such as:
Ammonia
Molybdenum oxide
Nitrogen oxides (NO_x)

Special protective equipment for firefighters : Wear an approved positive pressure self-contained breathing apparatus in addition to standard fire fighting gear.

Further information : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Do not use a solid water stream as it may scatter and spread fire.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Keep people away from and upwind of spill/leak.
Provide adequate ventilation.
Avoid dust formation.
Avoid contact with skin, eyes and clothing.

Environmental precautions : Prevent further leakage or spillage if safe to do so.
Should not be released into the environment.

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Methods and materials for containment and cleaning up : Sweep up and shovel into suitable containers for disposal.

SECTION 7. HANDLING AND STORAGE**Handling**

Precautions for safe handling : Wear personal protective equipment.
Use with local exhaust ventilation.
Avoid dust formation.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Storage

Conditions for safe storage, including any incompatibilities : Store in original container.
Keep container tightly closed in a dry and well-ventilated place.
Recommended storage temperature: room temperature.
(Ambient temperature: > 0 < 35°C)

Advice on common storage : Do not store together with:
Strong oxidizing agents
Nitrites

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Protective measures : Ensure that eyewash stations and safety showers are close to the workstation location.
Legal requirements are to be considered in regard of the selection, use and care of personal protective equipment.
Avoid contact with skin, eyes and clothing.
Avoid breathing dust or spray mist.

Engineering measures : Use with local exhaust ventilation.

Eye protection : Safety glasses with side-shields

Hand protection : Latex gloves
Gloves must be inspected prior to use.
Replace when worn.

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- Skin and body protection : Protective suit
- Respiratory protection : In the case of dust or aerosol formation use respirator with an approved filter.
- Hygiene measures : Keep away from food, drink and animal feedingstuffs.
Remove and wash contaminated clothing before re-use.
Wash hands before breaks and at the end of workday.

Exposure Guidelines

Components	CAS-No.	Value	Control parameters	Update	Basis
Ammonium molybdate-4-hydrate	12054-85-2	TWA : Time weighted average	0.5 mg/m3	2009	ACGIH:US. ACGIH Threshold Limit Values, as amended
Further information	:	Form of exposure : Respirable fraction. Expressed as : as Mo			

Ammonium molybdate-4-hydrate	12054-85-2	PEL : Permissible exposure limit	5 mg/m3	02 2006	OSHA_TRANS:US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended
Further information	:	Expressed as : as Mo			

Ammonium molybdate-4-hydrate	12054-85-2	TWA : Time weighted average	5 mg/m3	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended
Further information	:	Expressed as : as Mo			

Ammonium molybdate-4-hydrate	12054-85-2	TWA : Time weighted average	0.5 mg/m3	2009	ACGIH:US. ACGIH Threshold Limit Values, as amended
Further	:	Form of exposure : Respirable fraction.			

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Further information	:	Expressed as : as Mo
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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	:	crystalline
Color	:	white
Odor	:	odourless
Odor threshold	:	Note: No data available
pH	:	5.35 Note: Saturated solution
Melting point/range	:	Note: No data available
Boiling point/boiling range	:	Note: No data available
Flash point	:	Note: Not applicable

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Evaporation rate	: Note: No data available
Flammability	: The product is not flammable.
Lower explosion limit	: Note: Not applicable
Upper explosion limit	: Note: Not applicable
Vapor pressure	: Note: No data available
Vapor density	: Note: No data available
Water solubility	: Note: soluble
Partition coefficient: n-octanol/water	: Note: No data available
Ignition temperature	: Note: No data available
Decomposition temperature	: 190 °C Note: Decomposition temperature, Loss of water of crystallization on heating.
Viscosity, dynamic	: Note: No data available
Viscosity, kinematic	: Note: No data available
Bulk density	: ca. 1,400 kg/m ³

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: Not classified as a reactivity hazard.
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Chemical stability	: Stable under recommended storage conditions.
Possibility of hazardous reactions	: Hazardous polymerisation does not occur.
Conditions to avoid	: Temperatures greater than recommended storage temperature.
Incompatible materials	: Nitrites Chlorates
Hazardous decomposition products	: No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	: LD50: 4,233 mg/kg Species: Rat Method: OECD Test Guideline 401 Test substance: REACH dossier "read-across"
Acute inhalation toxicity	: LC50: > 5.84 mg/l , dust/mist Exposure time: 4 h Species: Rat Method: OECD Test Guideline 403 Test substance: REACH dossier "read-across"
Acute dermal toxicity	: LD50: > 2,000 mg/kg Species: Rat Method: OECD Test Guideline 402 Test substance: REACH dossier "read-across"
Skin irritation	: Species: Rabbit Classification: non-irritant Method: OECD Test Guideline 404 Test substance: REACH dossier "read-across"

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Eye irritation	: Species: rabbit eye Classification: non-irritant Method: OECD Test Guideline 405 Test substance: REACH dossier "read-across"
Sensitisation	: Maximisation Test Species: Guinea pig Classification: non-sensitizing Test substance: REACH dossier "read-across" Method: OECD Test Guideline 406
Genotoxicity in vitro	: Test Method: In vitro gene mutation study in mammalian cells Cell type: Mouse lymphoma cells Metabolic activation: with and without metabolic activation Result: negative Method: OECD Test Guideline 476 Test substance: REACH dossier "read-across" : Test Method: Ames test Metabolic activation: with and without metabolic activation Result: negative Method: OECD Test Guideline 471 Test substance: REACH dossier "read-across" : Test Method: Micronucleus test Cell type: Human lymphocytes Metabolic activation: with and without metabolic activation Result: negative Test substance: REACH dossier "read-across"
Teratogenicity	: Species: Rat Application Route: Oral NOAEL: >40 mg/kg bw/d Method: OECD Test Guideline 414 Note: REACH dossier "read-across"

SECTION 12. ECOLOGICAL INFORMATION

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Ecotoxicity effects

Toxicity to fish : semi-static test
LC50: 420 mg/l
Exposure time: 96 h
Species: Oncorhynchus mykiss (rainbow trout)
Test substance: REACH dossier "read-across"
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : static test
EC50: 79 mg/l
Exposure time: 48 h
Species: Daphnia magna (Water flea)
Test substance: REACH dossier "read-across"
Method: OECD Test Guideline 202

Toxicity to algae : Note: No data available

Toxicity to bacteria : Respiration inhibition
EC50: 820 mg/l
Exposure time: 3 h
Species: activated sludge
Test substance: REACH dossier "read-across"
Method: OECD 209

Elimination information (persistence and degradability)

Bioaccumulation : Note: Bioaccumulation is unlikely.

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

Further information on ecology**SECTION 13. DISPOSAL CONSIDERATIONS**

Disposal methods : Observe all Federal, State, and Local Environmental regulations.

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SECTION 14. TRANSPORT INFORMATION**DOT** Not dangerous goods**TDG** Not dangerous goods**IATA** Not dangerous goods**IMDG** Not dangerous goods**SECTION 15. REGULATORY INFORMATION****Inventories**US. Toxic Substances : On TSCA Inventory
Control ActAustralia. Industrial : On the inventory, or in compliance with the inventory
Chemical (Notification and
Assessment) ActCanada. Canadian : All components of this product are on the Canadian DSL
Environmental Protection
Act (CEPA). Domestic
Substances List (DSL)

Japan. Kashin-Hou Law List : On the inventory, or in compliance with the inventory

Korea. Existing Chemicals : On the inventory, or in compliance with the inventory
Inventory (KECI)Philippines. Inventory of : On the inventory, or in compliance with the inventory
Chemicals and Chemical
Substances (PICCS)China. Inventory of Existing : On the inventory, or in compliance with the inventory
Chemical Substances
(IECSC)New Zealand. Inventory of : On the inventory, or in compliance with the inventory
Chemicals (NZIoC), as

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National regulatory information

- SARA 302 Components** : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
- SARA 313 Components** : The following components are subject to reporting levels established by SARA Title III, Section 313:
: Ammonium molybdate-4-hydrate 12054-85-2
- SARA 311/312 Hazards** : No SARA Hazards
- California Prop. 65** : This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16. OTHER INFORMATION

	HMIS III	NFPA
Health hazard	: 1	1
Flammability	: 0	0
Physical Hazard	: 0	
Instability	:	0

Hazard rating and rating systems (e.g. HMIS® III, NFPA): This information is intended solely for the use of individuals trained in the particular system.

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information

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and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user. This information should not constitute a guarantee for any specific product properties.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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Prepared by Honeywell Performance Materials and Technologies Product Stewardship Group