



Fisher Scientific

Part of Thermo Fisher Scientific

SAFETY DATA SHEET

Creation Date 14-Jul-2009

Revision Date 14-Apr-2014

Revision Number 1

1. Identification

Product Name Ammonium molybdate tetrahydrate
Cat No. : A674-3; A674-10; A674-500
Synonyms Ammonium heptamolybdate tetrahydrate (Crystalline/Certified ACS)
Recommended Use Laboratory chemicals
Uses advised against No Information available

Details of the supplier of the safety data sheet

Company

Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Emergency Telephone Number

CHEMTREC®, Inside the USA: 800-424-9300
CHEMTREC®, Outside the USA: 001-703-527-3887

2. Hazard(s) Identification

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

| | |
|--|------------|
| Acute oral toxicity | Category 4 |
| Skin Corrosion/Irritation | Category 2 |
| Serious Eye Damage/Eye Irritation | Category 2 |
| Specific target organ toxicity (single exposure) | Category 3 |
| Target Organs - Respiratory system. | |

Label Elements

Signal Word

Warning

Hazard Statements

Harmful if swallowed
Causes skin irritation
Causes serious eye irritation
May cause respiratory irritation



Precautionary Statements

Prevention

Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Wear protective gloves/protective clothing/eye protection/face protection
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor/physician if you feel unwell

Skin

IF ON SKIN: Wash with plenty of soap and water
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash before reuse

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention.

Ingestion

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth

Storage

Store in a well-ventilated place. Keep container tightly closed
Store locked up

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

None identified

3. Composition / information on ingredients

Haz/Non-haz

| Component | CAS-No | Weight % |
|-------------------------|------------|----------|
| Ammonium heptamolybdate | 12054-85-2 | >95 |

4. First-aid measures

Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.

Skin Contact

Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention.

Inhalation

Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Obtain medical attention.

Ingestion

Do not induce vomiting. Call a physician or Poison Control Center immediately.

Most important symptoms/effects No information available

Notes to Physician Treat symptomatically.

5. Fire-fighting measures

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

Unsuitable Extinguishing Media No information available.

Flash Point No information available.
Method - No information available

Autoignition Temperature No information available.

Explosion Limits
Upper No data available
Lower No data available

Sensitivity to Mechanical Impact No information available

Sensitivity to Static Discharge No information available

Specific Hazards Arising from the Chemical

Keep product and empty container away from heat and sources of ignition

Hazardous Combustion Products Nitrogen oxides (NO_x).

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

NFPA

| | | | |
|---------------|---------------------|--------------------|-------------------------|
| Health | Flammability | Instability | Physical hazards |
| 2 | 1 | 0 | N/A |

6. Accidental release measures

Personal Precautions Ensure adequate ventilation. Use personal protective equipment. Avoid dust formation. Avoid contact with the skin and the eyes.

Environmental Precautions Should not be released into the environment.

Methods for Containment and Clean Up Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

7. Handling and storage

Handling Wear personal protective equipment. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Avoid dust formation.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure controls / personal protection

Exposure Guidelines This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

| Component | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|-------------------------|----------------------------|------------------------------------|------------------------------|
| Ammonium heptamolybdate | TWA: 0.5 mg/m ³ | (Vacated) TWA: 5 mg/m ³ | IDLH: 1000 mg/m ³ |

| Component | Quebec | Mexico OEL (TWA) | Ontario TWAEV |
|-------------------------|--------------------------|--|----------------------------|
| Ammonium heptamolybdate | TWA: 5 mg/m ³ | TWA: 5 mg/m ³ STEL: 10 mg/m ³ | TWA: 0.5 mg/m ³ |

Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH IDLH: The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health

Engineering Measures Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

Eye/face Protection Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice

9. Physical and chemical properties

| | |
|---|---|
| Physical State | Solid |
| Appearance | White |
| Odor | No information available |
| Odor Threshold | No information available. |
| pH | 5.0-5.5 5% aq. solution |
| Melting Point/Range | 190°C / 374°F |
| Boiling Point/Range | No information available. |
| Flash Point | No information available. |
| Evaporation Rate | No information available. |
| Flammability (solid,gas) | No information available |
| Flammability or explosive limits | |
| Upper | No data available |
| Lower | No data available |
| Vapor Pressure | No information available. |
| Vapor Density | No information available. |
| Relative Density | 2.490 |
| Solubility | Soluble in water |
| Partition coefficient; n-octanol/water | No data available |
| Autoignition Temperature | No information available. |
| Decomposition temperature | > 150°C |
| Viscosity | No information available. |
| Molecular Formula | H ₂₄ Mo ₇ N ₆ O ₂₄ . 4 H ₂ O |
| Molecular Weight | 1235.86 |

10. Stability and reactivity

Reactive Hazard None known, based on information available.

Stability Stable under normal conditions.

| | |
|---|---|
| Conditions to Avoid | Incompatible products. Excess heat. Avoid dust formation. |
| Incompatible Materials | Strong oxidizing agents, Strong acids |
| Hazardous Decomposition Products | Nitrogen oxides (NOx) |
| Hazardous Polymerization | Hazardous polymerization does not occur. |
| Hazardous Reactions | None under normal processing. |

11. Toxicological information

Acute Toxicity

Product Information No acute toxicity information is available for this product

**Component Information
Toxicologically Synergistic
Products** No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation Irritating to eyes, respiratory system and skin

Sensitization No information available.

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen

| Component | CAS-No | IARC | NTP | ACGIH | OSHA | Mexico |
|-------------------------|------------|------------|------------|-------|------------|------------|
| Ammonium heptamolybdate | 12054-85-2 | Not listed | Not listed | A3 | Not listed | Not listed |

Mutagenic Effects No information available.

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure Respiratory system.

STOT - repeated exposure None known.

Aspiration hazard No information available.

**Symptoms / effects,
both acute and delayed** No information available.

Endocrine Disruptor Information No information available

Other Adverse Effects The toxicological properties have not been fully investigated..

12. Ecological information

Ecotoxicity

Do not empty into drains.

Persistence and Degradability No information available.

Bioaccumulation/ Accumulation No information available

Mobility No information available

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT Not regulated

TDG Not regulated

IATA Not regulated

IMDG/IMO Not regulated

15. Regulatory information

International Inventories

| Component | TSCA | DSL | NDSL | EINECS | ELINCS | NLP | PICCS | ENCS | AICS | IECSC | KECL |
|-------------------------|------|-----|------|--------|--------|-----|-------|------|------|-------|------|
| Ammonium heptamolybdate | - | - | - | - | - | | X | X | X | X | - |

Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313

| Component | CAS-No | Weight % | SARA 313 - Threshold Values % |
|-------------------------|------------|----------|-------------------------------|
| Ammonium heptamolybdate | 12054-85-2 | >95 | 1.0 |

SARA 311/312 Hazardous Categorization

Acute Health Hazard Yes
 Chronic Health Hazard No
 Fire Hazard No

Sudden Release of Pressure Hazard No
Reactive Hazard No

Clean Water Act Not applicable

Clean Air Act Not applicable

OSHA Occupational Safety and Health Administration
Not applicable

CERCLA
Not applicable

California Proposition 65 This product does not contain any Proposition 65 chemicals.

State Right-to-Know Not applicable

U.S. Department of Transportation
Reportable Quantity (RQ): N
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security
This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

Canada
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class D1B Toxic materials
D2B Toxic materials



16. Other information

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Creation Date 14-Jul-2009
Revision Date 14-Apr-2014
Print Date 14-Apr-2014

Revision Summary

This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of SDS