Material Safety Data Sheet

Section 1. Product and Company Identification

Product Name Molybdic Acid, 85%, GR Product MX1604

Code

Manufacturer EMD Chemicals Inc. Effective 3/3/2003

P.O. Box 70

480 Democrat Road Gibbstown, NJ 08027

Prior to January 1, 2003 EMD Chemicals Inc. was EM Industries, Inc. or EM Science, Division of

EM Industries, Inc.

For More Information Call In Case of Emergency Call

856–423–6300 Technical Service 800–424–9300 CHEMTREC

Monday-Friday: 8:00 AM – 5:00 PM (USA)

613-996-6666 CANUTEC

(Canada)

24 Hours/Day: 7 Days/Week

Synonym None.

Material Uses Analytical reagent.
Chemical Inorganic salt.

Family

Section 2. Composition and Information on Ingredients

Component CAS # % by

Weight

Molybdic Acid 7782–91–4 85–100

Section 3. Hazards Identification

Physical State and Solid. (Powder.)

Appearance

Emergency WARNING!

Overview CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION.

MAY BE HARMFUL IF INHALED OR SWALLOWED.

Routes of Entry Inhalation. Ingestion.

Potential Acute Health

Effects

Eyes Hazardous in case of eye contact (irritant). Inflammation of the eye is

characterized by redness, watering, and itching.

Skin Hazardous in case of skin contact (irritant). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Inhalation Hazardous in case of inhalation (lung irritant). May be hazardous in case of inhalation.

Ingestion May be hazardous in case of ingestion.

Potential Chronic Health Effects

Carcinogenic This material is not known to cause cancer in animals or humans.

Effects

Additional information See Toxicological Information (section 11)

Medical Conditions Repeated or prolonged exposure is not known to aggravate medical

Aggravated by condition.

Overexposure:

Section 4. First Aid Measures

Eye Contact Check for and remove any contact lenses. In case of contact, immediately

flush eyes with plenty of water for at least 15 minutes. Cold water may be

used. Get medical attention immediately.

Skin Contact In case of contact, immediately flush skin with plenty of water for at least

15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention

immediately.

Inhalation If inhaled, remove to fresh air. If not breathing, give artificial respiration.

If breathing is difficult, give oxygen. Get medical attention immediately.

Ingestion Do NOT induce vomiting unless directed to do so by medical personnel.

Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately.

Loosen tight clothing such as a collar, tie, belt or waistband.

Section 5. Fire Fighting Measures

Flammability of the Non-flammable.

Product

Auto-ignition Not applicable.

Temperature

Flash Points Not applicable.
Flammable Limits Not applicable.
Products of Not available.

Combustion

Fire Hazards in Not applicable.

Presence of Various

Substances

Explosion Hazards Risks of explosion of the product in presence of static discharge: No.

in Presence of

Various Substances Risks of explosion of the product in presence of mechanical impact:

No.

Fire Fighting Media Not applicable.

and Instructions

Protective Clothing Not applicable.

(Fire)

Special Remarks on Not available.

Fire Hazards

Special Remarks on Not available.

Explosion Hazards

Section 6. Accidental Release Measures

Small Spill and Use appropriate tools to put the spilled solid in a convenient waste

Leak

disposal container.

Large Spill and

Leak

Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface

and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on

the MSDS and with local authorities.

Spill Kit Information

No specific spill kit required for this product.

Section 7. Handling and Storage

Handling Avoid contact with eyes, skin and clothing. Do not ingest. Avoid

breathing dust. Keep container closed.

Storage Keep container in a cool, well–ventilated area.

Section 8. Exposure Controls/Personal Protection

Engineering Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If

user operations generate dust, fume or mist, use ventilation to keep

exposure to airborne contaminants below the exposure limit.

Personal Protection

Eyes Splash goggles.

Body Lab coat.

Respiratory Dust respirator. Be sure to use an approved/certified respirator or

equivalent. Wear appropriate respirator when ventilation is inadequate.

Hands Gloves.

Feet Not applicable.

Protective Clothing

(Pictograms)

Personal Protection Splash goggles. Full suit. Dust respirator. Boots. Gloves. A

in Case of a Large self—contained breathing apparatus should be used to avoid inhalation of Spill the product. Suggested protective clothing might not be sufficient; consult

a specialist BEFORE handling this product.

Product Name Exposure Limits

Molybdic Acid AUVA (Austria, 1995).

PEAK: 50 mg/m3 1 times per shift, Period: 30 minute(s).

MAK: 5 mg/m3

Belgium Minister of Labour (Belgium, 1998).

VL: 5 mg/m3

SUVA (Switzerland, 1997).

MAK: 5 mg/m3

DK-Arbejdstylsinet (Denmark, 1996).

GV: 10 mg/m3

Tyterveyslaitos (Finland, 1998).

TWA: 5 mg/m3

INRS (France, 1996).

VLE: 10 mg/m3 VME: 5 mg/m3

National Authority for Occupational Safety/Health

(**Ireland, 1999**). STEL: 10 mg/m3 OEL: 5 mg/m3

Arbeidsinspectie (Netherlands, 1999).

TGG 8 uur: 5 mg/m3

N-Arbeidstylsinet (Norway, 1996).

AN: 10 mg/m3

AFS (Sweden, 1996).

NGV: 10 mg/m3

EH40-OES (United Kingdom (UK), 1997).

STEL: 10 mg/m3 MEL: 5 mg/m3

ACGIH (United States, 1994). TWA: 5 mg/m3 Form: Soluble

OSHA Final Rule (United States, 1989).

TWA: 5 mg/m3 Form: Soluble

Section 9. Physical and Chemical Properties

Odor Not available.
Color White.

Physical State and Solid. (Powder.)

Appearance

Molecular Weight Not applicable.

Molecular Formula Not applicable.

pH Not available.

Boiling/Condensation Not available.

Point

Melting/Freezing Not available.

Point

Specific GravityNot available.Vapor PressureNot available.Vapor DensityNot available.Odor ThresholdNot available.Evaporation RateNot available.LogKowNot available.SolubilitySoluble in water.

Section 10. Stability and Reactivity

Stability and The product is stable.

Reactivity

Conditions of Not available.

Instability

Incompatibility with Not available.

Various Substances

Rem/Incompatibility Not available. **Hazardous** Not available.

Decomposition Products

Hazardous Will not occur.

Polymerization

Section 11. Toxicological Information

RTECS Number:

Molybdic Acid Not available.

Toxicity LD50: Not available.

LC50: Not available.

Chronic Effects on Not available.

Humans

Acute Effects on

Humans

Hazardous in case of eye contact (irritant). Inflammation of the eye is characterized by redness, watering, and itching. Hazardous in case of skin contact (irritant). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering. Hazardous in case of inhalation (lung irritant). May be hazardous in case of inhalation. May be hazardous in case of ingestion.

Synergetic Products Not available.

(Toxicologically)

Irritancy Draize Test: Not available.

Sensitization Not available.

Carcinogenic This material is not known to cause cancer in animals or humans.

Effects

Toxicity to Not available.

Reproductive

System

Teratogenic Effects Not available. **Mutagenic Effects** Not available.

Section 12. Ecological Information

Ecotoxicity Not available. **BOD5 and COD** Not available.

Section 13. Disposal Considerations

EPA Waste Not available.

Number

Treatment Material does not have an EPA Waste Number and is not a listed waste,

however consultation with a permitted waste disposal site (TSD) should be accomplished. Always contact a permitted waste disposal (TSD) to assure compliance with all current local, state, and Federal Regulations.

Section 14. Transport Information

DOT Classification Proper Shipping Name: CHEMICALS,

N.O.S.

RQ: Not applicable.

TDG Classification Not available.

IMO/IMDG Proper Shipping Name: CHEMICALS,

Classification N.O.S.

RQ: Not applicable.

ICAO/IATA Proper Shipping Name: CHEMICALS,

Classification N.O.S.

RQ: Not applicable.

Section 15. Regulatory Information

U.S. Federal Regulations TSCA 8(b) inventory: Molybdic Acid

SARA 302/304/311/312 extremely hazardous substances: No products

were found.

SARA 302/304 emergency planning and notification: No products were

found

SARA 302/304/311/312 hazardous chemicals: No products were found.

SARA 311/312 MSDS distribution – chemical inventory – hazard identification: No products were found.

SARA 313 toxic chemical notification and release reporting: No products were found.

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: No products were found.

Clean air act (CAA) 112 accidental release prevention: No products were found.

Clean air act (CAA) 112 regulated flammable substances: No products were found.

Clean air act (CAA) 112 regulated toxic substances: No products were found.

WHMIS (Canada) Class D–2B: Material causing other toxic effects (TOXIC).

CEPA DSL: Molybdic Acid

This product has been classified in accordance with the hazard criteria of the Controlled Product Regulations and the MSDS contains all required information.

International Regulations

EINECS Molybdic Acid 231–970–5

DSCL (EEC) R37/38– Irritating to respiratory system and skin.

R41- Risk of serious damage to eyes.

International Lists

Australia (NICNAS): Molybdic Acid

Japan (MITI): Molybdic Acid

Korea (TCCL): Molybdic Acid

Philippines (RA6969): Molybdic Acid

China: No products were found.

State Regulations No products were found.

California prop. 65: No products were found.

Section 16. Other Information

National Fire 0 Fire
Protection 20 Hazard
Association Health (U.S.A.) Reactivity

Specific Hazard

Other Special Contains a minimum of 85% as MoO3.

Considerations

Changed Since Last

Revision

Notice to Reader

The statements contained herein are based upon technical data that EMD Chemicals Inc. believes to be reliable, are offered for information purposes only and as a guide to the appropriate precautionary and emergency handling of the material by a properly trained person having the necessary technical skills. Users should consider these data only as a supplement to other information gathered by them and must make independent

determinations of suitability and completeness of information from all sources to assure proper use, storage and disposal of these materials and the safety and health of employees and customers and the protection of the environment. EMD CHEMICALS INC. MAKES NO REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE, WITH RESPECT TO THE INFORMATION HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS.