

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Molybdenum 2 Reagent for Low Range Molybdate
Catalog Number: 2352523

Hach Company
P.O.Box 389
Loveland, CO USA 80539
(970) 669-3050

Emergency Telephone Numbers:
(Medical and Transportation)
(303) 623-5716 24 Hour Service
(515)232-2533 8am - 4pm CST

MSDS Number: M00342
Chemical Name: Not applicable
CAS Number: Not applicable
Additional CAS No. (for hydrated forms): Not applicable
Chemical Formula: Not applicable
Chemical Family: Not applicable
Intended Use: Determination of molybdenum

2. HAZARDS IDENTIFICATION

GHS Classification:

Hazard categories: Serious Eye Damage/Eye Irritation:Eye Irrit. 2 Hazardous to the Aquatic Environment: Aquatic Chronic 3

GHS Label Elements:

WARNING



Hazard statements: Causes serious eye irritation. Harmful to aquatic life with long lasting effects.
Precautionary statements: Handle environmental release according to local, state, federal, provincial requirements. Wear eye protection. 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. Dispose of contents/container according to state, local, federal or national regulations.

HMIS:

Health: 1
Flammability: 0
Reactivity: 0
Protective Equipment: X - See protective equipment, Section 8.

NFPA:

Health: 1
Flammability: 0
Reactivity: 0
Symbol: Not applicable

WHMIS Hazard Classification: Not applicable

WHMIS Symbols: Not applicable

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Components according to GHS:

Octylphenoxy polyethoxyethanol

CAS Number: 9036-19-5
Chemical Formula: $(C_2H_4O)_n C_{14}H_{22}O$
GHS Classification: Acute tox. 5 -Orl, H303; Eye Dam. 1, H318
Percent Range (Trade Secret): 1.0 - 5.0
Percent Range Units: weight / weight
PEL: Not established
TLV: Not established

WHMIS Symbols: Other Toxic Effects
Cetyltrimethylammonium Bromide

CAS Number: 57-09-0
Chemical Formula: $C_{19}H_{42}NBr$
GHS Classification: Acute Tox. 4 -Orl, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT Single 3, H335; Aquatic Chronic 1, H410
Percent Range (Trade Secret): < 0.2
Percent Range Units: weight / weight
PEL: Not established
TLV: Not established

WHMIS Symbols: Corrosive/Acute Poison
Hazardous Components according to GHS: No
Demineralized Water

CAS Number: 7732-18-5
Chemical Formula: H_2O
GHS Classification: Not a dangerous substance according to GHS.
Percent Range (Trade Secret): >95.0
Percent Range Units: weight / weight
PEL: Not established
TLV: Not established

WHMIS Symbols: Not applicable

4. FIRST AID MEASURES

General Information: In the event of exposure, show this Material Safety Data Sheet and label (where possible) to a doctor.
Advice to doctor: Treat symptomatically.
Eye Contact: Immediately flush eyes with water for 15 minutes. Call physician if irritation develops.
Skin Contact (First Aid): Remove contaminated clothing. Wash skin with soap and plenty of water. Call physician if irritation develops.
Inhalation: Remove to fresh air.
Ingestion (First Aid): Give large quantities of water. Never give anything by mouth to an unconscious person. Call physician immediately.

5. FIRE FIGHTING MEASURES

Flammable Properties: Material is not classified as flammable according to GHS criteria.
Fire Fighting Instruction: As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear.
Extinguishing Media: Use media appropriate to surrounding fire conditions
Extinguishing Media NOT To Be Used: Not applicable
Fire / Explosion Hazards: None reported
Hazardous Combustion Products: This material will not burn.

6. ACCIDENTAL RELEASE MEASURES

Spill Response Notice:

Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance.

Containment Technique: Absorb spilled liquid with non-reactive sorbent material. Dike large spills to keep spilled material from entering sewage and drainage systems or bodies of water.

Clean-up Technique: Absorb spilled liquid with non-reactive sorbent material. Dilute with a large excess of water. Decontaminate the area of the spill with a soap solution. Dispose of in accordance with local, state and federal regulations or laws.

Evacuation Procedure: Evacuate as needed to perform spill clean-up. If conditions warrant, increase the size of the evacuation.

DOT Emergency Response Guide Number: Not applicable

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes. Wash thoroughly after handling. Maintain general industrial hygiene practices when using this product.

Storage: Keep container tightly closed when not in use.

Flammability Class: Not applicable

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Maintain general industrial hygiene practices when using this product.

Personal Protective Equipment:

Eye Protection: safety glasses with top and side shields

Skin Protection: disposable latex gloves, lab coat. In the EU, the selected gloves must satisfy the specifications of EU Directive 89/686/EEC and standard EN 374 derived from it.

Inhalation Protection: adequate ventilation

Precautionary Measures: Avoid contact with: eyes. Wash thoroughly after handling.

TLV: Not established

PEL: Not established

For Occupational Exposure Limits (OEL) for ingredients, see section 3 - Composition/Information on Ingredients.:

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear, colorless liquid

Physical State: Liquid

Molecular Weight: Not applicable

Odor: None

Odor Threshold: Odorless

pH: 6.5

Metal Corrosivity:

Corrosivity Classification: Not classified as corrosive to metals according to GHS criteria.

Steel: 0.009 in/yr

Aluminum: 0.001 in/yr

Specific Gravity/ Relative Density (water = 1; air = 1): 1.00

Viscosity: Not determined

Solubility:

Water: Soluble

Acid: Soluble

Other: Not determined

Partition Coefficient (n-octanol / water): Not applicable

Coefficient of Water / Oil: Not applicable

Melting Point: 1 °C (34 °F)

Decomposition Temperature: Not determined

Boiling Point: 98 °C (208 °F)

Vapor Pressure: Not determined
Vapor Density (air = 1): Not determined
Evaporation Rate (water = 1): 0.71
Volatile Organic Compounds Content: Not applicable
Flammable Properties: Material is not classified as flammable according to GHS criteria.
Flash Point: Not applicable
Method: Not applicable
Flammability Limits:
Lower Explosion Limits: Not applicable
Upper Explosion Limits: Not applicable
Autoignition Temperature: Not applicable
Explosive Properties:
Not classified according to GHS criteria.
Oxidizing Properties:
Not classified according to GHS criteria.
Reactivity Properties:
Not classified as self-reactive, pyrophoric, self-heating or emitting flammable gases in contact with water according to GHS criteria.
Gas under Pressure:
Not classified according to GHS criteria.

10. STABILITY AND REACTIVITY

Chemical Stability: Stable when stored under proper conditions.
Mechanical Impact: None reported
Static Discharge: None reported.
Reactivity / Incompatibility: None reported
Hazardous Decomposition: No hazardous decomposition products known.
Conditions to Avoid: Evaporation Extreme temperatures

11. TOXICOLOGICAL INFORMATION

Toxicokinetics, Metabolism and Distribution: No information available for mixture.
Toxicologically Synergistic Products: None reported
Acute Toxicity: Practically Non-toxic Based on classification principles, the classification criteria are not met.
Specific Target Organ Toxicity - Single Exposure (STOT-SE): Based on classification principles, the classification criteria are not met.
Specific Target Organ Toxicity - Repeat Exposure (STOT-RE): Based on classification principles, the classification criteria are not met.
Skin Corrosion/Irritation: Based on classification principles, the classification criteria are not met.
Eye Damage: Irritating to eyes.
Sensitization: Based on classification principles, the classification criteria are not met.
CMR Effects/Properties (carcinogenic, mutagenic or toxic to reproduction): No germ cell mutagenicity, carcinogenicity or reproductive toxicity data found.
This product does NOT contain any IARC listed chemicals.
This product does NOT contain any NTP listed chemicals.
This product does NOT contain any OSHA listed carcinogens.
Symptoms/Effects:
Ingestion: Very large doses may cause: gastrointestinal tract irritation nausea vomiting diarrhea
Inhalation: No data reported.
Skin Absorption: None Reported
Chronic Effects: No effects anticipated
Medical Conditions Aggravated: Pre-existing: Eye conditions

12. ECOLOGICAL INFORMATION

Product Ecological Information: --

No ecological data available for this product. Do not place in landfill. Recycle appropriately. Do not release into the environment.

Method Used for Estimation of Aquatic Toxicity of Mixture Summation Method M-factor (Multiplier) for highly toxic ingredients: 10

Ingredient Ecological Information: Cetyltrimethylammonium Bromide: 96 hr Danio rerio LC50 = 0.3 mg/L; 48 hr Daphnia magna EC50 = 0.03 mg/L; 96 hr Microcystis aeruginosa ErC50 = 0.06 mg/L; 96 hr Echinogammarus tibaldii Amphipod LC50 = 0.16 mg/L

Octylphenoxypolyethoxyethanol: 96 hr Lepomis macrochirus > 10 mg/L; 48 hr Daphnia magna EC50 = 18-26 mg/L; 96 hr Selenastrum Green Algae ErC50 = 0.21 mg/L.

CEPA statement: Octylphenoxypolyethoxyethanol: Inherently toxic to aquatic organisms. Not Persistent or bioaccumulative; Cetyltrimethylammonium Bromide: Inherently toxic to aquatic organisms and Persistent . Not bioaccumulative.

13. DISPOSAL CONSIDERATIONS

EPA Waste ID Number: Not applicable

Special Instructions (Disposal): If permitted by regulation, Dilute to 3 to 5 times the volume with cold water. Open cold water tap completely, slowly pour the material to the drain. Allow cold water to run for 5 minutes to completely flush the system. Otherwise, Dispose of material in an E.P.A. approved hazardous waste facility.

Empty Containers: Rinse three times with an appropriate solvent. Collect rinsate and dispose of according to local, state or federal regulations. In the US, rinsate from empty containers is classified as hazardous waste and should be disposed of at an E.P. A. approved facility. Rinsate from empty containers may contain sufficient product to require disposal as hazardous waste. Dispose of empty container as normal trash.

NOTICE (Disposal): These disposal guidelines are based on federal regulations and may be superseded by more stringent state or local requirements. Please consult your local environmental regulators for more information. In Europe: Chemical and analysis solutions must be disposed of in compliance with the respective national regulations. Product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system.

14. TRANSPORT INFORMATION

D.O.T.:

D.O.T. Proper Shipping Name: Not Currently Regulated

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Hazard Class: NA

Subsidiary Risk: NA

ID Number: NA

Packing Group: NA

T.D.G.:

Proper Shipping Name: Not Currently Regulated

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Hazard Class: NA

Subsidiary Risk: NA

UN Number/PIN: NA

Packing Group: NA

I.C.A.O.:

I.C.A.O. Proper Shipping Name: Not Currently Regulated

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Hazard Class: NA

Subsidiary Risk: NA

ID Number: NA

Packing Group: NA

I.M.O.:

Proper Shipping Name: Not Currently Regulated

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Hazard Class: NA

Subsidiary Risk: NA

ID Number: NA

Packing Group: NA

Marine Pollutant:

Additional Information: There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods. If the item is NOT in a set or kit, the classification given above applies. If the item IS part of a set or kit, the classification would change to the following: UN3316 Chemical Kit, Class 9, PG II or III. If the item is not regulated, the Chemical Kit classification does not apply.

15. REGULATORY INFORMATION

U.S. Federal Regulations:

O.S.H.A.: This product meets the criteria for a hazardous substance as defined in the Hazard Communication Standard. (29 CFR 1910.1200)

E.P.A.:

S.A.R.A. Title III Section 311/312 Categorization (40 CFR 370): Immediate (Acute) Health Hazard

S.A.R.A. Title III Section 313 (40 CFR 372): This product does NOT contain any chemical subject to the reporting requirements of Section 313 of Title III of SARA.

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302 (EHS) TPQ (40 CFR 355): Not applicable

304 CERCLA RQ (40 CFR 302.4): Not applicable

304 EHS RQ (40 CFR 355): Not applicable

Clean Water Act (40 CFR 116.4): Not applicable

RCRA: Contains no RCRA regulated substances.

State Regulations:

California Prop. 65: No Prop. 65 listed chemicals are present in this product.

Identification of Prop. 65 Ingredient(s): None

California Perchlorate Rule CCR Title 22 Chap 33: Not applicable

Trade Secret Registry: Not applicable

National Inventories:

U.S. Inventory Status: All ingredients in this product are listed on the TSCA 8(b) Inventory (40 CFR 710).

CAS Number: Not applicable

Canadian Inventory Status: All ingredients of this product are DSL Listed.

EEC Inventory Status: All ingredients used to make this product are listed on EINECS / ELINCS.

Australian Inventory (AICS) Status: All ingredients are listed.

New Zealand Inventory (NZIoC) Status: All components either listed or exempt.

Korean Inventory (KECI) Status: All components of this product are either listed, listed as the anhydrous compound or exempt.

Japan (ENCS) Inventory Status: All components either listed or exempt.

China (PRC) Inventory (MEP) Status: All components either listed or exempt.

16. OTHER INFORMATION

References: TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992. Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. Technical Judgment. Sax, N. Irving. Dangerous Properties of Industrial Materials, 7th Ed. New York: Van Nostrand Reinhold Co., 1989. Gosselin, R. E. et al. Clinical Toxicology of Commercial Products, 5th Ed. Baltimore: The Williams and Wilkins Co., 1984. Vendor Information.

Complete Text of H phrases referred to in Section 3: H302 Harmful if swallowed. Not applicable H315 Causes skin irritation. H318 Causes serious eye damage. H319 Causes serious eye irritation. H335 May cause respiratory irritation. H410 Very toxic to aquatic life with long lasting effects.

Revision Summary: . Substantial revision to comply with EU Reg 1272/2008, Reg 1907/2006 and UN GHS (ST/SG/AC.10/36/Add.3).

Date of MSDS Preparation:

Day: 14

Month: July

Year: 2014

MSDS Prepared: MSDS prepared by Product Compliance Department extension 3350

CCOHS Evaluation Note: It is offered under exemption from WHMIS labeling as specified in the Controlled Products Regulation (CPR) Section 17. It is offered under the interim policy that was established by Health Canada permitting use

of GHS-formatted safety data sheets in Canada prior to revision of CPR to GHS. This product has been classified and labeled in accordance with the requirements of GHS (ST/SG/AC.10/36/Add.3). This SDS has been prepared in accordance with the requirements of GHS (ST/SG/AC.10/36/Add.3).

Legend:

NA - Not Applicable	w/w - weight/weight
ND - Not Determined	w/v - weight/volume
NV - Not Available	v/v - volume/volume

USER RESPONSIBILITY: Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

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