

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

MSDS No: M00125

## SAFETY DATA SHEET

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### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Molybdenum 1 Reagent  
**Catalog Number:** 2359299

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:** M00125  
**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:** Laboratory Reagent Determination of molybdenum

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### 2. HAZARDS IDENTIFICATION

**GHS Classification:**

**Hazard categories:** Serious Eye Damage/Eye Irritation: Eye Irrit. 2A . .

**GHS Label Elements:**

WARNING



**Hazard statements:** . . Causes serious eye irritation.

**Precautionary statements:** Wear protective gloves / protective clothing / eye protection / face 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. .

**HMIS:**

**Health:** 1

**Flammability:** 1

**Reactivity:** 0

**Protective Equipment:** X - See protective equipment, Section 8.

**NFPA:**

**Health:** 1

**Flammability:** 1

**Reactivity:** 0

**Symbol:** Not applicable

**WHMIS Hazard Classification:** Not applicable

**WHMIS Symbols:** Not applicable

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### 3. COMPOSITION / INFORMATION ON INGREDIENTS

**Hazardous Components according to GHS:**

**Potassium Acid Phthalate**

**CAS Number:** 877-24-7

**Chemical Formula:**  $C_8H_5KO_4$

**GHS Classification:** Acute Tox 5, H303; Acute Tox. Derm. 4, H312; Eye Irrit. 2A, H319

**Percent Range:** 60.0 - 70.0

**Percent Range Units:** weight / weight

**PEL:** 15 mg/m<sup>3</sup> as total dust; 5 mg/m<sup>3</sup> as respirable dust

**TLV:** 10 mg/m<sup>3</sup> as inhalable dust; 3 mg/m<sup>3</sup> as respirable dust

**WHMIS Symbols:** Not applicable

#### **Pyrocatechol Violet**

**CAS Number:** 115-41-3

**Chemical Formula:**  $C_{19}H_{14}O_7S$

**GHS Classification:** Acute Tox. 4-Orl, H302; Skin Irrit. 2, H315; Eye Dam. 1, H318; STOT Single 3, H335; Aquatic Acute 2, H401

**Percent Range:** < 1.0

**Percent Range Units:** weight / weight

**PEL:** 15 mg/m<sup>3</sup> as total dust; 5 mg/m<sup>3</sup> as respirable fraction

**TLV:** Not Established

**WHMIS Symbols:** Not applicable

#### **Sodium Hypochlorite**

**CAS Number:** 7681-52-9

**Chemical Formula:** NaOCl

**GHS Classification:** Skin Corr. 1B, H314; Aquatic Acute 1, H400

**Percent Range:** < 0.1

**Percent Range Units:** weight / weight

**PEL:** Not established

**TLV:** Not established (0.5 ppm as chlorine)

**WHMIS Symbols:** Corrosive Other Toxic Effects

**Hazardous Components according to GHS:** No

#### **Ascorbic Acid**

**CAS Number:** 50-81-7

**Chemical Formula:**  $C_6H_8O_6$

**GHS Classification:** Not applicable

**Percent Range:** 30.0 - 40.0

**Percent Range Units:** weight / weight

**PEL:** 15 mg/m<sup>3</sup> as total dust; 5 mg/m<sup>3</sup> as respirable dust

**TLV:** 10 mg/m<sup>3</sup> as inhalable dust; 3 mg/m<sup>3</sup> as respirable dust

**WHMIS Symbols:** Not applicable

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## **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.

**Skin Contact (First Aid):** Wash skin with plenty of water.

**Inhalation:** Remove to fresh air.

**Ingestion (First Aid):** Give large quantities of water. Call physician immediately.

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## **5. FIRE FIGHTING MEASURES**

**Flammable Properties:** Can burn in fire, releasing toxic vapors.

**Fire Fighting Instruction:** As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear.

**Extinguishing Media:** Water. Carbon dioxide Dry chemical.

**Extinguishing Media NOT To Be Used:** Not applicable

**Fire / Explosion Hazards:** None reported

**Hazardous Combustion Products:** Toxic fumes of: potassium oxides carbon monoxide, carbon dioxide.

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## 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. Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.

**Containment Technique:** Stop spilled material from being released to the environment.

**Clean-up Technique:** If permitted by regulation, Scoop up spilled material into a large beaker and dissolve with water. Adjust to a pH between 6 and 9 with an alkali, such as soda ash or sodium bicarbonate. Flush reacted material to the drain with a large excess of water. Otherwise, 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

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## 7. HANDLING AND STORAGE

**Handling:** Avoid contact with eyes skin Do not breathe dust. 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

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

**Inhalation Protection:** adequate ventilation

**Precautionary Measures:** Avoid contact with: eyes skin Do not breathe: dust Wash thoroughly after handling. Keep away from: alkalis oxidizers

**TLV:** Not established

**PEL:** Not established

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

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** Brown to beige powder

**Physical State:** Solid

**Molecular Weight:** Not applicable

**Odor:** None

**Odor Threshold:** Odorless

**pH:** 1.6% soln = 3.6

**Metal Corrosivity:**

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

**Steel:** 0.082 in/yr

**Aluminum:** 0.002 in/yr

**Specific Gravity/ Relative Density (water = 1; air =1):** 1.64

**Viscosity:** Not determined

**Solubility:**

**Water:** Soluble

**Acid:** Slightly soluble

**Other:** Not determined

**Partition Coefficient (n-octanol / water):** Not applicable  
**Coefficient of Water / Oil:** Not applicable  
**Melting Point:** 146°C (295°F)  
**Decomposition Temperature:** Not determined  
**Boiling Point:** Not applicable  
**Vapor Pressure:** Not applicable  
**Vapor Density (air = 1):** Not applicable  
**Evaporation Rate (water = 1):** Not applicable  
**Volatile Organic Compounds Content:** Not applicable  
**Flammable Properties:** Can burn in fire, releasing toxic vapors.  
**Flash Point:** Not applicable  
**Method:** Not applicable  
**Flammability Limits:**  
**Lower Explosion Limits:** Not determined  
**Upper Explosion Limits:** Not determined  
**Autoignition Temperature:** Not determined  
**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.  
Not determined

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## 10. STABILITY AND REACTIVITY

**Chemical Stability:** Stable when stored under proper conditions.  
**Mechanical Impact:** None reported  
**Static Discharge:** None reported.  
**Reactivity / Incompatibility:** Incompatible with: alkalies oxidizers  
**Hazardous Decomposition:** Toxic fumes of: potassium oxide carbon monoxide carbon dioxide  
**Conditions to Avoid:** Heat Excess moisture

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## 11. TOXICOLOGICAL INFORMATION

**Toxicokinetics, Metabolism and Distribution:** No information available for mixture.  
**Toxicologically Synergistic Products:** None reported  
**Acute Toxicity:** Acute Toxicity Estimate (ATE) - Calculated from Ingredient Toxicity Data Route Data Given Below  
Based on classification principles, the classification criteria are not met.  
Oral Rat LD50 = 4293 mg/kg  
Dermal Guinea Pig LD50 > 2000 mg/kg  
**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):** Data insufficient for classification  
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:** May cause: gastrointestinal tract irritation nausea vomiting paresthesias (tingling or burning sensation) of the hands and feet  
**Inhalation:** No effects anticipated May cause: irritation of nose and throat  
**Skin Absorption:** No effects anticipated  
**Chronic Effects:** Chronic overexposure may cause eye irritation

*Medical Conditions Aggravated:* Eye conditions

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## 12. ECOLOGICAL INFORMATION

***Product Ecological Information:*** --

No ecological data available for this product. Mobility in soil: No data available Based on classification principles, not classified as hazardous to the environment.

CEPA Categorization: Not Persistent or Bioaccumulative. Not inherently toxic to aquatic organisms.

***Ingredient Ecological Information:*** --

Ecological data for ingredients is not indicative of likely ecological harm.

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## 13. DISPOSAL CONSIDERATIONS

***EPA Waste ID Number:*** Not applicable

***Special Instructions (Disposal):*** Dilute material with excess water making a weaker than 5% solution. Adjust to a pH between 6 and 9 with an alkali, such as soda ash or sodium bicarbonate. Open cold water tap completely, slowly pour the material to the drain. Flush system with plenty of water.

***Empty Containers:*** Rinse three times with an appropriate solvent. Collect rinsate and dispose of according to local, state or federal regulations. Dispose of empty container as normal trash. 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.

***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.

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## 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

***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.

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## 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/NDSL 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.

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## 16. OTHER INFORMATION

**References:** 29 CFR 1900 - 1910 (Code of Federal Regulations - Labor). Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992. Technical Judgment. In-house information. Fire Protection Guide on Hazardous Materials, 10th Ed. Quincy, MA: National Fire Protection Fire Protection Guide on Hazardous Materials, 10th Ed. Quincy, MA: National Fire Protection Association, 1991.

**Complete Text of H phrases referred to in Section 3:** H302 Harmful if swallowed. Not applicable H312 Harmful in contact with skin. H314 Causes severe skin burns and eye damage. H315 Causes skin irritation. H318 Causes serious eye damage. H319 Causes serious eye irritation. H335 May cause respiratory irritation. H400 Very toxic to aquatic life.

**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:** 05

**Month:** June

**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).

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### Legend:

NA - Not Applicable

ND - Not Determined

NV - Not Available

w/w - weight/weight

w/v - weight/volume

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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