MATERIAL SAFETY DATA SHEET

PO#: 9900038 ORDER#: 284088

MSDS DATE: 11/06/96 CHANGE NO.: 14092 For Assistance, Contact: Regulatory Affairs Dept. PO 80x 907 Ames, IA 50010 (800) 227-4224

HACH COMPANY PO BOX 907 AMES, IA 50010 Emergency Telephone # Rocky Mountain Poison Ctr. (303) 623-5716

PRODUCT IDENTIFICATION

PRODUCT NAME: MolyVer © 1 Molybdenum Reagent
CAS NO.: NA CHEMICAL NAME:

FORMULA: Not applicable

CHEMICAL NAME: Not applicable

MSDS NUMBER: MODO63

CHEMICAL FAMILY: Not applicable

II. INGREDIENTS

Succinic Acid

PCT: <60 CAS NO.: 110-15-6 SARA: NOT LISTED
TLV: Not established PEL: Not established

HAZARD: Severe eye irritant; may cause respiratory tract irritation

Disodium Succinate, Anhydrous

PCT: <35 CAS NO.: 150-90-3 SARA: NOT LISTED
TLY: Not established PEL: Not established HAZARD: May cause irritation

1,2-Cyclohexanediaminetetraacetic Acid, Trisodium Sait (CDTA)Na3
PCT: <20 CAS NO.: 36679-96-6 SARA: NOT LISTED
TLY: Not established
HAZARO: Toxicity unknown: may cause | Irritation

TII. PHYSICAL DATA

STATE: solid APPEARANCE: White powder ODOR: Not determined SOLUBILITY IN: WATER: Soluble ACID: Soluble OTHER: Not determined BOILING POINT: NA MELTING PT.: dec 85-95°C SPEC GRAVITY: 1.52 ph: of 5% soln. = 4.28 VAPOR PRESSURE: Not applicable VAPOR DENSITY (air=1): NA EVAPORATION RATE: NA METAL CORROSIVITY - ALUMINUM: 0.005 in/yr STEEL: 0.168 in/yr STABILITY: Stable STORAGE PRECAUTIONS: Store in a cool, dry place.

IV. FIRE, EXPLOSION HAZARD AND REACTIVITY DATA

FLASH PT.: Not applicable METHOD: NA
FLAMMABILITY LIMITS - LOWER: NA UPPER: NA
SUSCEPTIBILITY TO SPONTAMEOUS HEATING: None
SHOCK SENSITIVITY: None AUTOIGNITION PT.: ND
EXTINGUISHING MEDIA: water, carbon dioxide, or dry chemical
FIRE/EXPLOSION HAZARDS: May emit acrid smoke and fumes in fire
HAZARDOUS DECOMP. PRODUCTS: Acrid smoke and fumes in fire.
OXIDIZER: No NFPA Codes: Health: 1 Flammability: 1 Reactivity: 0
CONDITIONS TO AVOID: Extreme temperatures; moisture; contact with oxidizers

V. HEALTH HAZARD DATA

THIS PRODUCT MAY BE: irritating to eyes and respiratory tract.

ACUTE TOXICITY: Not determined
ROUTES OF EXPOSURE: ingestion, inhalation
TARGET ORGANS: Not determined
CHRONIC TOXICITY: Not determined
ROUTES OF EXPOSURE: Not determined
TARGET ORGANS: Not determined
CANCER INFORMATION: Not applicable
ROUTES OF EXPOSURE: Not applicable
TARGET ORGANS: Not applicable
OVEREXPOSURE: Causes severe eye irritation; may cause respiratory tract
irritation; may cause weakness and diarrhea.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Pre-existing eye and respiratory tract conditions.

VI. PRECAUTIONARY MEASURES

Avoid contact with eyes and skin.

Do not breathe dust.

Wash thoroughly after handling.

Keep away from oxidizers.

PROTECTIVE EQUIPMENT: adequate ventilation, lab grade goggles, disposable latex gloves

VII. FIRST AID

EYE AND SKIN CONTACT: Immediately flush eyes with water for 15 minutes. Ca physician. Wash skin with soap and plenty of water.

INGESTION: Give large quantities of water. Call physician immediately.

INHALATION: Remove to fresh air. Give artificial respiration if necessary Call physician.

VIII. SPILL AND DISPOSAL PROCEDURES

IN CASE OF SPILL OR RELEASE: Cover contaminated surfaces with soda ash or sodium bicarbonate. Mix and add water if necessary. Use litmus paper t make sure pH of slurry is neutral or add neutralizer until mixture stops bubbling. Scoop up the slurry and wash the neutral waste down the drain with excess water. Wash the site with soda ash solution.

DISPOSE OF IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS.

IX. TRANSPORTATION DATA

D.O.T. PROPER SHIPPING NAME: Not Currently Regulated HAZARD CLASS: NA ID: NA GROUP: NA

I.C.A.O. PROPER SHIPPING NAME: Not Currently Regulated HAZARO CLASS: NA ID: NA GROUP: NA

I.M.O. PROPER SHIPPING NAME: Not Currently Regulated HAZARD CLASS: NA ID: NA GROUP: NA

X. REFERENCES

- TLV's Threshold Limit Values and Biological Exposure Indices for 1988-1989. American Conference of Governmental Industrial Hygienists, 1988.
- Air Contaminants, Federal Register, Vol. 54, No. 12, Thursday, January 19, 1989. pp. 2332-2983.
- 3) In-house information
- 4) Technical judgment
- NIOSH Registry of Toxic Effects of Chemical Substances, 1985-86.
 Cincinnati: U. S. Department of Health and Human Services, April, 198
- Patty, Frank A. Industrial Hygiene and Toxicology, 3rd Revised Editic Volume 2. New York; A Wiley-Interscience Publication, 1981.

SPECIAL NOTE: 1,2-Cyclohexanediaminetetraacetic Acid Trisodium Salt may be used only as achelating reagent.