Chromic acid (cas 13530-68-2) MSDS

World Headquarters Hach Company Date Printed 1/7/05
P.O.Box 389 MSDS No: M00486
Loveland, CO USA 80539
(970) 669-3050

SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING
Product Name: Digestion Solution for COD 0-150 ppm Range
Catalog Number: 2125825

HACH LANGE GmbH Emergency Telephone Numbers:
Willstätterstrasse 11 (Poison Information Center Main)
40549 Düsseldorf, Germany (+49 (0) 6131 19240) 24 H +49-(0)211-52880

SDS Number: M00486
Chemical Name: Not applicable
Chemical Formula: Not applicable
Chemical Family: Not applicable
Use of the substance/preparation: Determination of Chemical Oxygen Demand
CAS No.: Not applicable
Date of MSDS Preparation:
Day: 7
Month: 01
Year: 2005

Additional Emergency Response Numbers: Austria: +49 (0)6131 19240, Belgium: +32-(0)70-245245, France: +33-(0)1-40370404, Italy: +39-02-66101029, Netherlands: +31-(0)30-2748888, Switzerland: +41-(0)1-2515151

2. COMPOSITION / INFORMATION ON INGREDIENTS
Mercuric Sulfate
EEC Number: 2319925
CAS No.: 7783-35-9 Contains Mercury. Dispose Per Local, State or Federal Laws.
Percent Range: 0.1 - 1.0
Percent Range Units: weight / weight
Ingredient EEC Symbol: N - Dangerous for the Environment T+ - VERY TOXIC
Ingredient R phrase(s) (R phrase details given in Heading 16): R 26/27/28 R 33 R 50/53
TLV: 0.05 mg/m³ (Hg)
PEL: 0.1 mg/m³ (Hg)
EU Occupational Exposure Limits: 0.1 mg/m³

Demineralized Water
EEC Number: 2319925
CAS No.: 7732-18-5
Percent Range: 15.0 - 25.0
Percent Range Units: weight / weight
Ingredient EEC Symbol: Not applicable
Ingredient R phrase(s) (R phrase details given in Heading 16): Not applicable
TLV: Not established
PEL: Not established
EU Occupational Exposure Limits: Not established

Chromic Acid
EEC Number: 2368815
CAS No.: 13530-68-2
Percent Range: 0.01 - 0.1
3. HAZARDS IDENTIFICATION

Emergency Overview:
Appearance: Turbid, light orange liquid
Odor: Not determined
EU Symbols: C - CORROSIVE T - TOXIC
R PHRASES: R 20/21/22: Harmful by inhalation, in contact with skin and if swallowed. R 33: Danger of cumulative effects. R 35: Causes severe burns. R 52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Protective Equipment: 
Potential Health Effects:
Eye Contact (EC): Causes severe burns
Skin Contact (EC): Causes severe burns
Skin Absorption (EC): Toxic Will be absorbed through the skin. Effects similar to those of ingestion
Target Organs (SA E): Central nervous system Kidneys
Ingestion (EC): Causes: severe burns May cause: abdominal pain circulatory disturbances diarrhea loosening of the teeth nausea vomiting rapid pulse and respirations toxic nephritis (inflammation of the kidneys) shock collapse kidney damage death
Target Organs (Ing E): Central nervous system Kidneys
Inhalation: Toxic Causes: severe burns May cause: difficult breathing mouth soreness teeth erosion Effects similar to those of ingestion.
Target Organs (Inh E): Central nervous system Kidneys Lungs Teeth
Medical Conditions Aggravated: Pre-existing: Eye conditions Skin conditions Respiratory conditions Allergies or sensitivity to chromates or chromic acid. Allergies or sensitivity to mercury.
Chronic Effects: Chronic overexposure may cause destruction of any tissue contacted erosion of the teeth mouth soreness chronic irritation or inflammation of the lungs accumulation of silver in body tissues which causes a slate-gray to bluish discoloration. Chromate and dichromate salts may cause ulceration and perforation of the nasal septum, severe liver damage, central nervous system effects, and lung cancer. Mercury is a general protoplasmic poison; it circulates in the blood and is stored in the liver, kidneys, spleen and bones. Main symptoms are sore mouth, tremors and psychic disturbances.

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Cancer / Reproductive Toxicity Information:
An ingredient of this mixture is: IARC Group 1: Recognized Carcinogen
Hexavalent Chromium Compounds Sulfuric Acid - The IARC evaluation was based on exposure to the mist or vapor
of concentrated sulfuric acid generated during chemical processes.
Additional Cancer / Reproductive Toxicity Information: Contains: an experimental teratogen.
Toxically Synergistic Products: None reported

4. FIRST AID MEASURES
Eye Contact: Immediately flush eyes with water for 15 minutes. Call physician.
Skin Contact (First Aid): Wash skin with plenty of water for 15 minutes. Remove contaminated clothing. Call physician immediately.
Ingestion (First Aid): Do not induce vomiting. Give large quantities of water. Never give anything by mouth to an unconscious person. Call physician immediately.
Inhalation: Remove to fresh air. Give artificial respiration if necessary. Call physician.

5. FIRE FIGHTING MEASURES
Flammable Properties: Not Flammable, but reacts with most metals to form flammable hydrogen gas. During a fire, corrosive and toxic gases may be generated by thermal decomposition.
Hazardous Combustion Products: This material will not burn.
Fire / Explosion Hazards: Contact with metals gives off hydrogen gas which is flammable May react violently with:
strong bases water
Static Discharge: None reported.
Mechanical Impact: None reported
Extinguishing Media: Use media appropriate to surrounding fire conditions
Extinguishing Media NOT To Be Used: Not applicable
Fire Fighting Instruction: As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear. Evacuate area and fight fire from a safe distance. Water runoff can cause environmental damage. Dike and collect water used to fight fire.

6. ACCIDENTAL RELEASE MEASURES
Spill Response Notice:
Only persons properly qualified to respond to an emergency involving hazardous substances should respond to a spill involving chemicals. See Section 13, Special Instructions for disposal assistance.
Containment Technique: Releases of this material may contaminate the environment. Absorb spilled liquid with non-reactive sorbent material. Stop spilled material from being released to the environment. Dike the spill to contain material for later disposal.
Clean-up Technique: Mercury and its compounds are extremely toxic! Be extremely careful not to contact the spill or breathe any vapors. Absorb spilled liquid with non-reactive sorbent material. Dispose of all mercury contaminated material at an E.P.A. hazardous waste facility. Dispose of material in an E.P.A. approved hazardous waste facility. Decontaminate area with commercially available mercury absorbing compounds.
Evacuation Procedure: Evacuate general area (50 foot radius or as directed by your facility’s emergency response plan) when: any quantity is spilled. Deny access to unnecessary and unprotected personnel. Remain up-wind from spilled material. If conditions warrant, increase the size of the evacuation.

7. HANDLING AND STORAGE
Handling: Avoid contact with eyes skin clothing Do not breathe mist or vapors. Use with adequate ventilation.
Maintain general industrial hygiene practices when using this product.
Storage: Protect from: light contamination by organic materials (will affect product stability) heat
Special Packaging Instructions: Not applicable
Use of the substance/preparation: Determination of Chemical Oxygen Demand

8. EXPOSURE CONTROLS / PROTECTIVE EQUIPMENT
Engineering Controls: Have an eyewash station nearby. Have a safety shower nearby. Use a fume hood to avoid exposure to dust, mist or vapor. Maintain general industrial hygiene practices when using this product.
Personal Protective Equipment:
Eye Protection: chemical splash goggles
Skin / Hand Protection: disposable latex gloves lab coat
Inhalation Protection: laboratory fume hood
Precautionary Measures: Avoid contact with: eyes skin clothing Do not breathe: mist/vapor Wash thoroughly after handling. Use with adequate ventilation. Protect from: light organic materials heat Keep away from: alkalies metals other combustible materials oxidizers reducers
TLV: Not established
PEL: Not established
EU Occupational Exposure Limits: Not established

9. PHYSICAL / CHEMICAL PROPERTIES
Appearance: Turbid, light orange liquid
Physical State: Liquid
Odor: Not determined
pH: < 0.5
Vapor Pressure: Not determined
Vapor Density (air = 1): Not determined
Boiling Point: ~ 105??C (~ 221??F)
Melting Point: Not applicable
Flash Point: Not applicable
Method: Not applicable
Autoignition Temperature: Not applicable
Flammability Limits: Not applicable
Lower Explosion Limits: Not applicable
Upper Explosion Limits: Not applicable
Specific Gravity (water = 1): ~ 1.78
Evaporation Rate (water = 1): Not determined
Volatile Organic Compounds Content: Not applicable
Partition Coefficient (n-octanol / water): Not applicable
Solubility:
Water: Miscible
Acid: Not determined
Other: Not determined
Metal Corrosivity:
Steel: Corrosive
Aluminum: Corrosive

10. STABILITY / REACTIVITY
Chemical Stability: Stable when stored under proper conditions.
Conditions to Avoid: Exposure to light or contamination by organic materials will affect this product's stability.
Reactivity / Incompatibility: May react violently in contact with: caustics
Hazardous Decomposition: Heating to decomposition releases toxic and/or corrosive fumes of: mercury compounds sulfur oxides
Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION
Product Toxicological Data:
LD50: Oral rat (male) LD50 = 428 mg/kg; Oral rat (female) LD50 = 360 mg/kg.
LC50: None reported
Dermal Toxicity Data: None reported
Skin and Eye Irritation Data: None reported
Mutation Data: None reported
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Reproductive Effects Data: None reported

Ingredient Toxicological Data: Sulfuric Acid: Oral rat LD50 = 2140 mg/kg; Mercuric Sulfate: Oral rat LD50 = 57 mg/kg.
Oral mouse LD50 = 25 mg/kg.

An ingredient of this mixture is: IARC Group 1: Recognized Carcinogen
Hexavalent Chromium Compounds Sulfuric Acid - The IARC evaluation was based on exposure to the mist or vapor of concentrated sulfuric acid generated during chemical processes.

12. ECOLOGICAL INFORMATION
Product Ecological Information: --
No ecological data available for this product.
Ingredient Ecological Information: --
No ecological data available for the ingredients of this product.

13. DISPOSAL CONSIDERATIONS

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

I.C.A.O.:
I.C.A.O. Proper Shipping Name: Sulphuric Acid Solution

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ICAO Hazard Class: 8
ICAO Subsidiary Risk: NA
ICAO UN/ID Number: UN1830
ICAO Packing Group: II

I.M.O.:
I.M.O. Proper Shipping Name: Sulphuric Acid Solution

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I.M.O. Hazard Class: 8
I.M.O. Subsidiary Risk: NA
I.M.O. UN Number: UN1830
I.M.O. Packing Group: II

A.D.R.:
A.D.R. Proper Shipping Name: Sulphuric Acid Solution

–
A.D.R. Hazard Class: 8
A.D.R. Subsidiary Risk: NA
A.D.R. UN-Number: 1830
A.D.R. Packing Group: II

Additional Information: This product may be shipped as part of a chemical kit composed of various compatible dangerous goods for analytical or testing purposes. This kit would have the following classification: Proper Shipping Name: Chemical Kit Hazard Class: 9 UN Number 3316

15. REGULATORY INFORMATION

National Inventories:
EEC Inventory Status: All ingredients used to make this product are listed on EINECS / ELINCS.
EEC Number: Not applicable
EEC LABEL COPY:
EU Symbols: C - CORROSIVE T - TOXIC

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S PHRASES: S 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S 36/37/39: Wear suitable protective clothing, gloves and eye/face protection. S 45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

16. OTHER INFORMATION


R PHRASES: R 20/21/22: Harmful by inhalation, in contact with skin and if swallowed. R 33: Danger of cumulative effects.
effects. R 35: Causes severe burns. R 52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Use of the substance/preparation: Determination of Chemical Oxygen Demand

Revision Summary: Updates in Section(s) 14,

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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