

Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS)

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation: Cleaning Solution, Chromic-Sulfuric Acid Solution
for Cleaning Laboratory Glassware

Product Number: RCP21500

Other Identifying Product Numbers:

1.2. Recommended Use and Restrictions on Use

General Laboratory Reagent

1.3. Details of the Supplier of the Safety Data Sheet

Company: Cole-Parmer Instrument Company

Address: 625 EAST BUNKER COURT

VERNON HILLS, IL 60061 USA

Telephone: 800-323-4340

1.4. Emergency Telephone Number (24 hours)

CHEMTREC (USA)

800-424-9300

CHEMTREC (International)

1+ 703-527-3887

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SECTION 2: Hazard(s) Identification

2.1. Classification of the Substance or Mixture

For the full text of the Hazard and Precautionary Statements listed below, see Section 16.

Hazard Class	Category	Hazard Statements	Precautionary Statements:
Acute Toxicity - Oral	Category 4	H302	P264, P270, P301+P312, P330, P501
Acute Toxicity - Inhalation	Category 2	H330	P260, P271, P285, P304+P340, P310, P320, P403+P233, P405, P501
Skin Corrosion / Irritation	Category 1	H314	P260, P264, P280, P301+P330+P331, P303+P361+P353, P363, P304+P340, P310, P321, P305+P351+P338, P405, P501
Eye Damage / Irritation	Category 1	H318	P280, P305+P351+P338, P310
Respiratory Sensitizer	Category 1	H334	P261, P285, P304+P341, P342+P311, P501
Skin Sensitizer	Category 1	H317	P261, P272, P280, P302+P352, P332+P313, P321, P363, P501
Carcinogenicity	Category 1	H350	P201, P202, P280, P308+P313, P405, P501
Reproductive Toxicity	Category 1	H360	P201, P202, P280, P308+P313, P405, P501
Corrosive to Metals	Category 1	H290	P234, P390, P406
Hazardous to the Aquatic Environment (Acute)	Category 3	H402	P273, P501
Hazardous to the Aquatic Environment (Chronic)	Category 3	H412	P273, P501

2.2. GHS Label Elements

Pictograms:



Signal Word: **Danger**

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Hazard Statements:

Hazard Number	Hazard Statement
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H350	May cause cancer.
H360	May damage fertility or the unborn child.
H402	Harmful to aquatic life.
H412	Harmful to aquatic life with long lasting effects.

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Precautionary Statements:

Precautionary Number	Precautionary Statement
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P234	Keep only in original container.
P260	Do not breathe fumes, mist, vapors, or spray.
P261	Avoid breathing fumes, mist, vapors, or spray.
P264	Wash arms, hands and face thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing must not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves and eye protection.
P285	In case of inadequate ventilation wear respiratory protection.
P301+P312	IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell.
P301+P330+P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P304+P341	IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical attention.
P310	Immediately call a POISON CENTER or physician.
P320	Specific treatment is urgent (Wash areas of contact with water. If possible, wipe off areas of contact with dry cloth before flushing with water).
P321	Specific treatment (Wash areas of contact with water. If possible, wipe off areas of contact with dry cloth before flushing with water).
P330	Rinse mouth.
P332+P313	If skin irritation occurs: Get medical attention.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER or physician.
P363	Wash contaminated clothing before reuse.
P390	Absorb spillage to prevent material damage.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P406	Store in corrosive resistant container with a resistant inner liner.
P501	Dispose of contents in accordance with local, state, federal and international regulations.

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2.4. Hazards not Otherwise Classified or Covered by GHS

Data not available.

SECTION 3: Composition / Information on Ingredients

3.1. Components of Substance or Mixture

Chemical Name	Formula	Molecular Weight	CAS Number	Weight%
Sulfuric Acid	H ₂ SO ₄	98.07 g/mol	7664-93-9	91.36
Water	H ₂ O	18.01 g/mol	7732-18-5	7.50
Sodium Dichromate Dihydrate	Na ₂ Cr ₂ O ₇ ·2H ₂ O	298.00 g/mol	7789-12-0	0.65
Chromium (VI) Oxide	CrO ₃	99.99 g/mol	1333-82-0	0.49

SECTION 4: First-Aid Measures

4.1. General First Aid Information

Eye Contact: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Eye contact causes tissue damage and blindness.

Inhalation: IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.

Skin Contact: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Skin contact causes burns, blistering, local necrosis, and membrane ulceration. Burns may be 2nd or 3rd degree.

Ingestion: IF SWALLOWED: rinse mouth. Do NOT induce vomiting. Do not induce vomiting. Give large quantity of water. Call a physician immediately.

4.2. Most Important Symptoms and Effects, Acute and Delayed

Harmful if swallowed. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Causes serious eye damage. Fatal if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause cancer. May damage fertility or the unborn child. Corrosive liquid. Causes severe burns. Contains Hexavalent Chromium compound, which is a known carcinogen. Eye contact causes tissue damage and blindness. Ingestion causes corrosion of the mucosa of the mouth, throat and esophagus with stomach discomfort and pain. If ingested, dilute with large quantity of water. Do not induce vomiting. Call a physician. Wash areas of contact with plenty of water for at least 15 minutes. If possible, wipe off areas of contact with dry cloth before flushing with water, as water contact will generate heat. EYE CONTACT: Eye contact causes tissue damage and blindness. SKIN CONTACT: Skin contact causes burns, blistering, local necrosis, and membrane ulceration. Burns may be 2nd or 3rd degree. CHRONIC EFFECTS / CARCINOGENICITY: May affect the skin, liver, kidneys and blood.

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4.3. Medical Attention or Special Treatment Needed

Immediately call a POISON CENTER or physician. Specific treatment is urgent (Wash areas of contact with water. If possible, wipe off areas of contact with dry cloth before flushing with water). Specific treatment (Wash areas of contact with water. If possible, wipe off areas of contact with dry cloth before flushing with water). Irrigate immediately with large quantity of water for at least 15 minutes. Call a physician if irritation develops. Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen. If possible, wipe off areas of contact with dry cloth before flushing contact areas with water for at least 15 minutes. Flushing immediately with water will generate a large amount of heat upon contact with sulfuric acid. Call a physician. Dispose of cloth by soaking in water. Neutralize the soaking solution with dilute sodium hydroxide solution, then flush the neutralized rinse water down the drain with excess water and treat the cloth as solid

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing Media

Dry chemical, foam, or carbon dioxide. Reacts with water producing heat and toxic fumes.

5.2. Specific Hazards Arising from the Substance or Mixture

Not combustible. Strong dehydrating agent, which may cause ignition of finely divided materials on contact. Reaction with metals may produce hydrogen gas. Oxides of sulfur may be produced in fire.

5.3. Special Protective Equipment for Firefighters

Wear special protective clothing and positive pressure self-contained breathing apparatus. Butyl rubber, natural rubber, Neoprene, polyethylene, polyvinyl chloride, Teflon, Viton, or Saranex barrier recommended.

SECTION 6: Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Wear protective gloves and eye protection. In case of inadequate ventilation wear respiratory protection.

6.2. Cleanup and Containment Methods and Materials

Keep water away from release. Stop or control the leak, if this can be done without undue risk. Control runoff and isolate discharged material for proper disposal.

SECTION 7: Handling and Storage

7.1. Precautions for Safe Handling and Storage Conditions

Store in corrosive resistant container with a resistant inner liner. As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage. Do not mix with bases. Contact with water will generate heat.

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SECTION 8: Exposure Controls / Personal Protection

8.1 Control Parameters

Chemical Name	Limit Type	Country	Exposure Limit	Information Source
Chromium (VI) Oxide (1333-82-0)	PEL	USA	"5 µg/m³ TWA (See 29 CFR 1910.1026, as Cr); 2.5 µg/m³ Action Level (as Cr)" As Chromium(VI) compounds [RR-00026-0]	U.S. - OSHA - Specifically Regulated Chemicals with PELs
Chromium (VI) Oxide (1333-82-0)	TWA	USA	"5 µg/m³ TWA" As Chromium(VI) compounds [RR-00026-0]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Chromium (VI) Oxide (1333-82-0)	TLV-STEL	USA	"0.0005 mg/m³ STEL (inhalable particulate matter, as Cr(VI))" As Hexavalent chromium inorganic water-soluble compounds [RR-53130-6]	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Chromium (VI) Oxide (1333-82-0)	TLV-TWA	USA	"0.0002 mg/m³ TWA (inhalable particulate matter, as Cr(VI))" As Hexavalent chromium inorganic water-soluble compounds [RR-53130-6]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Chromium (VI) Oxide (1333-82-0)	PEL-Ceiling	USA	"0.1 mg/m³ Ceiling (applies to any operations or sectors for which the Hexavalent Chromium standard [29 CFR 1910.1026] is stayed or is otherwise not in effect, as CrO3)" As Chromates [RR-01554-3]	U.S. - OSHA - Final PELs - Ceiling Limits
Chromium (VI) Oxide (1333-82-0)	TWA	USA	"5 µg/m³ TWA" As Chromium(VI) compounds [RR-00026-0]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)

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Chromium (VI) Oxide (1333-82-0)	PEL	USA	"5 µg/m³ TWA (See 29 CFR 1910.1026, as Cr); 2.5 µg/m³ Action Level (as Cr)" As Chromium(VI) compounds [RR-00026-0]	U.S. - OSHA - Specifically Regulated Chemicals with PELs
Chromium (VI) Oxide (1333-82-0)	PEL	USA	5 µg/m³ TWA (See 29 CFR 1910.1026, as Cr); 2.5 µg/m³ Action Level (as Cr)	U.S. - OSHA - Specifically Regulated Chemicals with PELs
Chromium (VI) Oxide (1333-82-0)	TWA	USA	5 µg/m³ TWA	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Chromium (VI) Oxide (1333-82-0)	PEL-Ceiling	USA	0.1 mg/m³ Ceiling (applies to any operations or sectors for which the Hexavalent Chromium standard [29 CFR 1910.1026] is stayed or is otherwise not in effect, as CrO ₃)	U.S. - OSHA - Final PELs - Ceiling Limits
Chromium (VI) Oxide (1333-82-0)	PEL	USA	"5 µg/m³ TWA (See 29 CFR 1910.1026, as Cr); 2.5 µg/m³ Action Level (as Cr)" As Chromium(VI) compounds [RR-00026-0]	U.S. - OSHA - Specifically Regulated Chemicals with PELs
Chromium (VI) Oxide (1333-82-0)	TWA	USA	"5 µg/m³ TWA" As Chromium(VI) compounds [RR-00026-0]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Chromium (VI) Oxide (1333-82-0)	PEL	USA	"5 µg/m³ TWA (See 29 CFR 1910.1026, as Cr); 2.5 µg/m³ Action Level (as Cr)" As Chromium(VI) compounds [RR-00026-0]	U.S. - OSHA - Specifically Regulated Chemicals with PELs
Chromium (VI) Oxide (1333-82-0)	TWA	USA	"5 µg/m³ TWA" As Chromium(VI) compounds [RR-00026-0]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Chromium (VI) Oxide (1333-82-0)	TLV-TWA	USA	0.0002 mg/m³ TWA (inhalable particulate matter, as Cr(VI))	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Chromium (VI) Oxide (1333-82-0)	TLV-STEL	USA	0.0005 mg/m³ STEL (inhalable particulate matter, as Cr(VI))	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Sulfuric Acid (7664-93-9)	TWA	USA	1 mg/m³ TWA	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)

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Sulfuric Acid (7664-93-9)	TLV-TWA	USA	0.2 mg/m ³ TWA (thoracic particulate matter)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Sodium Dichromate Dihydrate (7789-1; TWA)		USA	"5 µg/m ³ TWA" As Chromium(VI) compounds [RR-00026-0]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Sodium Dichromate Dihydrate (7789-1; TLV-STEL)		USA	"0.0005 mg/m ³ STEL (inhalable particulate matter, as Cr(VI))" As Hexavalent chromium inorganic water-soluble compounds [RR-53130-6]	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Sodium Dichromate Dihydrate (7789-1; TLV-TWA)		USA	"0.0002 mg/m ³ TWA (inhalable particulate matter, as Cr(VI))" As Hexavalent chromium inorganic water-soluble compounds [RR-53130-6]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Sodium Dichromate Dihydrate (7789-1; PEL-Ceiling)		USA	"0.1 mg/m ³ Ceiling (applies to any operations or sectors for which the Hexavalent Chromium standard [29 CFR 1910.1026] is stayed or is otherwise not in effect, as CrO ₃)" As Chromates [RR-01554-3]	U.S. - OSHA - Final PELs - Ceiling Limits
Sodium Dichromate Dihydrate (7789-1; PEL)		USA	"5 µg/m ³ TWA (See 29 CFR 1910.1026, as Cr); 2.5 µg/m ³ Action Level (as Cr)" As Chromium(VI) compounds [RR-00026-0]	U.S. - OSHA - Specifically Regulated Chemicals with PELs
Sodium Dichromate Dihydrate (7789-1; TLV-TWA)		USA	"0.0002 mg/m ³ TWA (inhalable particulate matter, as Cr(VI))" As Hexavalent chromium inorganic water-soluble compounds [RR-53130-6]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

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Sodium Dichromate Dihydrate (7789-1; TLV-STEL	USA	"0.0005 mg/m ³ STEL (inhalable particulate matter, as Cr(VI))" As Hexavalent chromium inorganic water-soluble compounds [RR-53130-6]	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Sodium Dichromate Dihydrate (7789-1; TWA	USA	"5 µg/m ³ TWA" As Chromium(VI) compounds [RR-00026-0]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Sodium Dichromate Dihydrate (7789-1; PEL-Ceiling	USA	"0.1 mg/m ³ Ceiling (applies to any operations or sectors for which the Hexavalent Chromium standard [29 CFR 1910.1026] is stayed or is otherwise not in effect, as CrO ₃)" As Chromates [RR-01554-3]	U.S. - OSHA - Final PELs - Ceiling Limits
Sodium Dichromate Dihydrate (7789-1; PEL	USA	"5 µg/m ³ TWA (See 29 CFR 1910.1026, as Cr); 2.5 µg/m ³ Action Level (as Cr)" As Chromium(VI) compounds [RR-00026-0]	U.S. - OSHA - Specifically Regulated Chemicals with PELs
Sodium Dichromate Dihydrate (7789-1; TWA	USA	"5 µg/m ³ TWA" As Chromium(VI) compounds [RR-00026-0]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Sodium Dichromate Dihydrate (7789-1; PEL	USA	"5 µg/m ³ TWA (See 29 CFR 1910.1026, as Cr); 2.5 µg/m ³ Action Level (as Cr)" As Chromium(VI) compounds [RR-00026-0]	U.S. - OSHA - Specifically Regulated Chemicals with PELs
Sodium Dichromate Dihydrate (7789-1; PEL	USA	5 µg/m ³ TWA (See 29 CFR 1910.1026, as Cr); 2.5 µg/m ³ Action Level (as Cr)	U.S. - OSHA - Specifically Regulated Chemicals with PELs
Sodium Dichromate Dihydrate (7789-1; TWA	USA	5 µg/m ³ TWA	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)

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Sodium Dichromate Dihydrate (7789-1; PEL-Ceiling	USA	0.1 mg/m ³ Ceiling (applies to any operations or sectors for which the Hexavalent Chromium standard [29 CFR 1910.1026] is stayed or is otherwise not in effect, as CrO ₃)	U.S. - OSHA - Final PELs - Ceiling Limits
Sodium Dichromate Dihydrate (7789-1; TWA	USA	"5 µg/m ³ TWA" As Chromium(VI) compounds [RR-00026-0]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Sodium Dichromate Dihydrate (7789-1; PEL	USA	"5 µg/m ³ TWA (See 29 CFR 1910.1026, as Cr); 2.5 µg/m ³ Action Level (as Cr)" As Chromium(VI) compounds [RR-00026-0]	U.S. - OSHA - Specifically Regulated Chemicals with PELs
Sodium Dichromate Dihydrate (7789-1; PEL	USA	"5 µg/m ³ TWA (See 29 CFR 1910.1026, as Cr); 2.5 µg/m ³ Action Level (as Cr)" As Chromium(VI) compounds [RR-00026-0]	U.S. - OSHA - Specifically Regulated Chemicals with PELs
Sodium Dichromate Dihydrate (7789-1; TWA	USA	"5 µg/m ³ TWA" As Chromium(VI) compounds [RR-00026-0]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Sodium Dichromate Dihydrate (7789-1; PEL	USA	"5 µg/m ³ TWA (See 29 CFR 1910.1026, as Cr); 2.5 µg/m ³ Action Level (as Cr)" As Chromium(VI) compounds [RR-00026-0]	U.S. - OSHA - Specifically Regulated Chemicals with PELs
Sodium Dichromate Dihydrate (7789-1; TWA	USA	"5 µg/m ³ TWA" As Chromium(VI) compounds [RR-00026-0]	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Sodium Dichromate Dihydrate (7789-1; TLV-TWA	USA	0.0002 mg/m ³ TWA (inhalable particulate matter, as Cr(VI))	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Sodium Dichromate Dihydrate (7789-1; TLV-STEL	USA	0.0005 mg/m ³ STEL (inhalable particulate matter, as Cr(VI))	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)

8.2. Exposure Controls

Engineering Controls: Use only outdoors or in a well-ventilated area. No specific controls are needed. Normal room ventilation is adequate.

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Respiratory Protection: In case of inadequate ventilation wear respiratory protection. Normal room ventilation is adequate.

Skin Protection: Wear protective gloves and eye protection. Chemical resistant gloves.

Eye Protection: Wear protective gloves and eye protection. Safety glasses or goggles.

8.3. Personal Protective Equipment

Wear protective gloves and eye protection. In case of inadequate ventilation wear respiratory protection. Normal room ventilation is adequate. Chemical resistant gloves. Safety glasses or goggles.

SECTION 9: Physical and Chemical Properties

9.1. Basic Physical and Chemical Properties

Appearance: Brown liquid

Physical State: Liquid

Odor: Data not available.

Odor Threshold: Data not available.

pH: Strongly acidic

Melting/Freezing Point: Data not available.

Initial Boiling Point/Range: Approximately 300°C - Approximately 300°C

Flash Point: Data not available.

Evaporation Rate: Data not available.

Flammability: Data not available.

Flammability/Explosive Limits: Data not available.

Vapor Pressure: Data not available.

Vapor Density: Data not available.

Relative Density: 1.8

Solubility: Data not available.

Partition Coefficient: Data not available.

Auto-Ignition Temperature: Data not available.

Decomposition Temperature: Data not available.

Viscosity: Data not available.

Explosive Properties: Data not available.

Oxidizing Properties: Data not available.

SECTION 10: Stability and Reactivity

10.1. Reactivity and Chemical Stability

Stable under normal conditions of use and storage.

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10.2. Possibility of Hazardous Reactions

Data not available.

10.3. Conditions to Avoid and Incompatible Materials

Keep only in original container. Organics, chlorates, carbides, fulminates, picrates, alkalines, reducing agents, nitrates, Acetic Acid, oxidizing agents, metals, reducing agents.

10.4. Hazardous Decomposition Products

Will not occur.

SECTION 11: Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity - Oral Exposure:

Harmful if swallowed. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth. Dispose of contents in accordance with local, state, federal and international regulations.

Acute Toxicity - Dermal Exposure:

Not applicable.

Acute Toxicity - Inhalation Exposure:

Fatal if inhaled. Do not breathe fumes, mist, vapors, or spray. Use only outdoors or in a well-ventilated area. In case of inadequate ventilation wear respiratory protection. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. Specific treatment is urgent (Wash areas of contact with water. If possible, wipe off areas of contact with dry cloth before flushing with water). Store in a well-ventilated place. Keep container tightly closed. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Acute Toxicity - Other Information:

LD50, Oral, Rat: 2140 mg/kg (Sulfuric Acid), details of toxic effects not reported other than lethal dose value, 80 mg/kg (Chromium Trioxide), respiratory, hair and gastrointestinal effects noted, 50 mg/kg (Sodium Dichromate) liver and kidney effects noted.

Skin Corrosion and Irritation:

Causes severe skin burns and eye damage. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection. IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water. If possible, wipe off areas of contact with dry cloth before flushing with water). IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Serious Eye Damage and Irritation:

Causes serious eye damage. Wear protective gloves and eye protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

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Respiratory Sensitization:

May cause allergy or asthma symptoms or breathing difficulties if inhaled. Avoid breathing fumes, mist, vapors, or spray. In case of inadequate ventilation wear respiratory protection. IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or physician. Dispose of contents in accordance with local, state, federal and international regulations.

Skin Sensitization:

May cause an allergic skin reaction. Avoid breathing fumes, mist, vapors, or spray. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves and eye protection. IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical attention. Specific treatment (Wash areas of contact with water. If possible, wipe off areas of contact with dry cloth before flushing with water). Wash contaminated clothing before reuse. Dispose of contents in accordance with local, state, federal and international regulations.

Germ Cell Mutagenicity:

Not applicable.

Carcinogenicity:

May cause cancer. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves and eye protection. IF exposed or concerned: Get medical attention. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Reproductive Toxicity:

May damage fertility or the unborn child. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves and eye protection. IF exposed or concerned: Get medical attention. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Specific Target Organ Toxicity from Single Exposure:

Not applicable.

Specific Target Organ Toxicity from Repeated Exposure:

Not applicable.

Aspiration Hazard:

Not applicable.

Additional Toxicology Information:

Data not available.

SECTION 12: Ecological Information

12.1. Ecotoxicity

Harmful to aquatic life. Avoid release to the environment. Dispose of contents in accordance with local, state, federal and international regulations. Harmful to aquatic life with long lasting effects. Avoid release to the environment. Dispose of contents in accordance with local, state, federal and international regulations.

12.2. Persistence and Degradability

Data not available.

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12.3. Bioaccumulative Potential

Data not available.

12.4. Mobility in Soil

Data not available.

12.5. Other Adverse Ecological Effects

Data not available.

SECTION 13: Disposal Considerations

13.1. Waste Treatment Methods

Data not available.

SECTION 14: Transportation Information

14.1. Transportation by Land-Department of Transportation (DOT, United States of America)

Sizes: 500 mL

UN Number: UN1830

Proper Shipping Name: Sulphuric Acid Solution

Hazard Class: 8

Packing Group: II

Hazard Label(s):



14.2. Transportation by Air - International Air Transport Association (IATA)

Sizes: 500 mL

UN Number: UN1830

Proper Shipping Name: Sulphuric Acid Solution

Hazard Class: 8

Packing Group: II

Hazard Label(s):



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14.3 Transportation of Dangerous Goods (TDG, Canada)

Sizes: 500 mL

UN Number: UN1830

Proper Shipping Name: SULPHURIC ACID SOLUTION

Hazard Class: 8

Packing Group: II

Hazard Label(s):



SECTION 15: Regulatory Information

15.1. Occupational Safety and Health Administration (OSHA) Hazards

Chromium (VI) Oxide (CAS # 1333-82-0): "5 µg/m³ TWA (See 29 CFR 1910.1026, as Cr); 2.5 µg/m³ Action Level (as Cr)" As Chromium(VI) compounds [RR-00026-0]

Chromium (VI) Oxide (CAS # 1333-82-0): 5 µg/m³ TWA (See 29 CFR 1910.1026, as Cr); 2.5 µg/m³ Action Level (as Cr)

Sodium Dichromate Dihydrate (CAS # 7789-12-0): "5 µg/m³ TWA (See 29 CFR 1910.1026, as Cr); 2.5 µg/m³ Action Level (as Cr)" As Chromium(VI) compounds [RR-00026-0]

Sodium Dichromate Dihydrate (CAS # 7789-12-0): 5 µg/m³ TWA (See 29 CFR 1910.1026, as Cr); 2.5 µg/m³ Action Level (as Cr)

15.2. Superfund Amendments and Reauthorization Act (SARA) 302 Extremely Hazardous Substances

Sulfuric Acid (CAS # 7664-93-9): 1000 lb EPCRA RQ

Sulfuric Acid (CAS # 7664-93-9): 1000 lb TPQ

15.3. Superfund Amendments and Reauthorization Act (SARA) 311/312 Hazardous Chemicals

Sulfuric Acid (CAS # 7664-93-9): 1000 lb final RQ; 454 kg final RQ

Sodium Dichromate Dihydrate (CAS # 7789-12-0): 10 lb final RQ; 4.54 kg final RQ

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15.4. Superfund Amendments and Reauthorization Act (SARA) 313 Toxic Release Inventory (TRI)

Chromium (VI) Oxide (CAS # 1333-82-0): "0.1 % de minimis concentration (includes any unique chemical substance that contains Chromium as part of that chemical's infrastructure except for Chromite ore mined in the Transvaal Region of South Africa and the unreacted ore component of the Chromite ore processing residue (COPR), no de minimis concentration has been assigned to this chemical category, listed under Chemical Category N090)" As Chromium(VI) compounds [RR-00026-0]

Chromium (VI) Oxide (CAS # 1333-82-0): 0.1 % de minimis concentration (includes any unique chemical substance that contains Chromium as part of that chemical's infrastructure except for Chromite ore mined in the Transvaal Region of South Africa and the unreacted ore component of the Chromite ore processing residue (COPR), no de minimis concentration has been assigned to this chemical category, listed under Chemical Category N090)

Sulfuric Acid (CAS # 7664-93-9): 1.0 % de minimis concentration (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size)

Sodium Dichromate Dihydrate (CAS # 7789-12-0): "0.1 % de minimis concentration (includes any unique chemical substance that contains Chromium as part of that chemical's infrastructure except for Chromite ore mined in the Transvaal Region of South Africa and the unreacted ore component of the Chromite ore processing residue (COPR), no de minimis concentration has been assigned to this chemical category, listed under Chemical Category N090)" As Chromium(VI) compounds [RR-00026-0]

Sodium Dichromate Dihydrate (CAS # 7789-12-0): 0.1 % de minimis concentration (includes any unique chemical substance that contains Chromium as part of that chemical's infrastructure except for Chromite ore mined in the Transvaal Region of South Africa and the unreacted ore component of the Chromite ore processing residue (COPR), no de minimis concentration has been assigned to this chemical category, listed under Chemical Category N090)

15.5. Massachusetts Right-to-Know Substance List

Chromium (VI) Oxide (CAS # 1333-82-0): Carcinogen; Extraordinarily hazardous

Sulfuric Acid (CAS # 7664-93-9): Extraordinarily hazardous

Sulfuric Acid (CAS # 7664-93-9): Present

Sodium Dichromate Dihydrate (CAS # 7789-12-0): Present

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15.6. Pennsylvania Right-to-Know Hazardous Substances

Chromium (VI) Oxide (CAS # 1333-82-0): "Environmental hazard" As Chromium compounds [RR-00634-8]

Chromium (VI) Oxide (CAS # 1333-82-0): "Environmental hazard; Special hazardous substance" As Chromium compounds, hexavalent [RR-00026-0];

"Environmental hazard" As Chromium compounds [RR-00634-8]

Chromium (VI) Oxide (CAS # 1333-82-0): "Present" As Chromium compounds [RR-00634-8]

Chromium (VI) Oxide (CAS # 1333-82-0): "Present" As Chromium compounds, hexavalent [RR-00026-0]

Chromium (VI) Oxide (CAS # 1333-82-0): "Present" As Chromium compounds, hexavalent [RR-00026-0];

"Present" As Chromium compounds [RR-00634-8]

Chromium (VI) Oxide (CAS # 1333-82-0): Environmental hazard

Chromium (VI) Oxide (CAS # 1333-82-0): Environmental hazard; Special hazardous substance

Chromium (VI) Oxide (CAS # 1333-82-0): Present

Chromium (VI) Oxide (CAS # 1333-82-0): Special hazardous substance

Sulfuric Acid (CAS # 7664-93-9): Environmental hazard

Sulfuric Acid (CAS # 7664-93-9): Environmental hazard (listed under Sulfuric acid)

Sulfuric Acid (CAS # 7664-93-9): Present

Sulfuric Acid (CAS # 7664-93-9): Present (listed under Sulfuric acid)

Water (CAS # 7732-18-5): "Present" As Ethyl alcohol and water [RR-00802-6]

Water (CAS # 7732-18-5): Present

Sodium Dichromate Dihydrate (CAS # 7789-12-0): "Environmental hazard" As Chromium compounds [RR-00634-8]

Sodium Dichromate Dihydrate (CAS # 7789-12-0): "Environmental hazard" As Chromium compounds [RR-00634-8];

"Present (also regulated under Dichromates)" As Bichromates [RR-01620-6]

Sodium Dichromate Dihydrate (CAS # 7789-12-0): "Environmental hazard; Special hazardous substance" As Chromium compounds, hexavalent [RR-00026-0];

"Environmental hazard" As Chromium compounds [RR-00634-8]

Sodium Dichromate Dihydrate (CAS # 7789-12-0): "Environmental hazard; Special hazardous substance" As Chromium compounds, hexavalent [RR-00026-0];

"Environmental hazard" As Chromium compounds [RR-00634-8];

"Present (also regulated under Dichromates)" As Bichromates [RR-

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15.7. New Jersey Worker and Community Right-to-Know Components

Chromium (VI) Oxide (CAS # 1333-82-0): "carcinogen" As Chromium(VI) compounds [RR-00026-0]

Chromium (VI) Oxide (CAS # 1333-82-0): "SN 2245 500 lb TPQ (Category Code N090. Includes any unique chemical substance that contains the named metal as part of that chemical structure)" As Chromium compounds [RR-00634-8]

Chromium (VI) Oxide (CAS # 1333-82-0): "sn 2245" As Chromium compounds [RR-00634-8]

Chromium (VI) Oxide (CAS # 1333-82-0): "sn 3575" As Chromium(VI) compounds [RR-00026-0];

"sn 2245" As Chromium compounds [RR-00634-8]

Chromium (VI) Oxide (CAS # 1333-82-0): carcinogen

Chromium (VI) Oxide (CAS # 1333-82-0): carcinogen; teratogen

Chromium (VI) Oxide (CAS # 1333-82-0): sn 0437

Chromium (VI) Oxide (CAS # 1333-82-0): sn 2245

Chromium (VI) Oxide (CAS # 1333-82-0): SN 2245 500 lb TPQ (Category Code N090. Includes any unique chemical substance that contains the named metal as part of that chemical structure)

Chromium (VI) Oxide (CAS # 1333-82-0): sn 3575

Sulfuric Acid (CAS # 7664-93-9): carcinogen; corrosive; reactive - second degree

Sulfuric Acid (CAS # 7664-93-9): sn 1761

Sulfuric Acid (CAS # 7664-93-9): SN 1761 500 lb TPQ

Sulfuric Acid (CAS # 7664-93-9): sn 1762

Sodium Dichromate Dihydrate (CAS # 7789-12-0): "carcinogen" As Chromium(VI) compounds [RR-00026-0]

Sodium Dichromate Dihydrate (CAS # 7789-12-0): "SN 2245 500 lb TPQ (Category Code N090. Includes any unique chemical substance that contains the named metal as part of that chemical structure)" As Chromium compounds [RR-00634-8]

Sodium Dichromate Dihydrate (CAS # 7789-12-0): "sn 2245" As Chromium compounds [RR-00634-8]

Sodium Dichromate Dihydrate (CAS # 7789-12-0): "sn 3575" As Chromium(VI) compounds [RR-00026-0];

"sn 2245" As Chromium compounds [RR-00634-8]

Sodium Dichromate Dihydrate (CAS # 7789-12-0): carcinogen

Sodium Dichromate Dihydrate (CAS # 7789-12-0): sn 1695

Sodium Dichromate Dihydrate (CAS # 7789-12-0): sn 2245

Sodium Dichromate Dihydrate (CAS # 7789-12-0): SN 2245 500 lb TPQ (Category Code N090.

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15.8. California Proposition 65

Chromium (VI) Oxide (CAS # 1333-82-0): "carcinogen, 2/27/1987" As Chromium hexavalent compounds [RR-00026-0]
Chromium (VI) Oxide (CAS # 1333-82-0): "developmental toxicity, 12/19/2008" As Chromium(VI) compounds [RR-00026-0]
Chromium (VI) Oxide (CAS # 1333-82-0): "female reproductive toxicity 12/19/08" As Chromium hexavalent compounds [RR-00026-0]
Chromium (VI) Oxide (CAS # 1333-82-0): "male reproductive toxicity, 12/19/08" As Chromium hexavalent compounds [RR-00026-0]
Chromium (VI) Oxide (CAS # 1333-82-0): carcinogen, 2/27/1987
Chromium (VI) Oxide (CAS # 1333-82-0): developmental toxicity, 12/19/2008
Chromium (VI) Oxide (CAS # 1333-82-0): female reproductive toxicity 12/19/08
Chromium (VI) Oxide (CAS # 1333-82-0): male reproductive toxicity, 12/19/08
Sulfuric Acid (CAS # 7664-93-9): "carcinogen, 3/14/2003" As Strong inorganic acid mists containing sulfuric acid [RR-03978-1]
Sulfuric Acid (CAS # 7664-93-9): carcinogen, 3/14/2003
Sodium Dichromate Dihydrate (CAS # 7789-12-0): "carcinogen, 2/27/1987" As Chromium hexavalent compounds [RR-00026-0]
Sodium Dichromate Dihydrate (CAS # 7789-12-0): "developmental toxicity, 12/19/2008" As Chromium(VI) compounds [RR-00026-0]
Sodium Dichromate Dihydrate (CAS # 7789-12-0): "female reproductive toxicity 12/19/08" As Chromium hexavalent compounds [RR-00026-0]
Sodium Dichromate Dihydrate (CAS # 7789-12-0): "male reproductive toxicity, 12/19/08" As Chromium hexavalent compounds [RR-00026-0]
Sodium Dichromate Dihydrate (CAS # 7789-12-0): carcinogen, 2/27/1987
Sodium Dichromate Dihydrate (CAS # 7789-12-0): developmental toxicity, 12/19/2008
Sodium Dichromate Dihydrate (CAS # 7789-12-0): female reproductive toxicity 12/19/08
Sodium Dichromate Dihydrate (CAS # 7789-12-0): male reproductive toxicity, 12/19/08

15.9. Canada Domestic Substances List / Non-Domestic Substances List (DSL/NDSL)

Chromium (VI) Oxide (CAS # 1333-82-0): Present (DSL)
Sulfuric Acid (CAS # 7664-93-9): Present (DSL)
Water (CAS # 7732-18-5): Present (DSL)
Sodium Dichromate Dihydrate (CAS # 7789-12-0): Present (DSL)

15.10. United States of America Toxic Substances Control Act (TSCA) List

All components of this solution are listed as active on the TSCA Inventory or are mixtures (hydrates) of active items listed on the TSCA Inventory.

Chromium (VI) Oxide (CAS # 1333-82-0): Present [R] (ACTIVE)
Sulfuric Acid (CAS # 7664-93-9): Present (ACTIVE)
Water (CAS # 7732-18-5): Present (ACTIVE)
Sodium Dichromate Dihydrate (CAS # 7789-12-0): Present [R] (ACTIVE)

15.11. European Inventory of Existing Commercial Chemical Substances (EINECS), European List of Notified Chemical Substances (ELINCS), and No Longer Polymers (NLP)

Chromium (VI) Oxide (CAS # 1333-82-0): 215-607-8
Sulfuric Acid (CAS # 7664-93-9): 231-639-5
Water (CAS # 7732-18-5): 231-791-2
Sodium Dichromate Dihydrate (CAS # 7789-12-0): 234-190-3

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SECTION 16: Other Information

16.1. Full Text of Hazard Statements and Precautionary Statements

May be corrosive to metals. Harmful if swallowed. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Fatal if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause cancer. May damage fertility or the unborn child. Harmful to aquatic life with long lasting effects.

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep only in original container. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing must not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves and eye protection. In case of inadequate ventilation wear respiratory protection.

IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. IF ON SKIN: Wash with plenty of soap and water. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical attention. Specific treatment is urgent (Wash areas of contact with water. If possible, wipe off areas of contact with dry cloth before flushing with water). If skin irritation occurs: Get medical attention. If experiencing respiratory symptoms: Call a POISON CENTER or physician. Wash contaminated clothing before reuse. Absorb spillage to prevent material damage.

Store in a well-ventilated place. Keep container tightly closed. Store locked up. Store in corrosive resistant container with a resistant inner liner.

Dispose of contents in accordance with local, state, federal and international regulations.

16.2. Miscellaneous Hazard Classes

Canadian Carcinogenicity Hazard Class: Not Applicable.

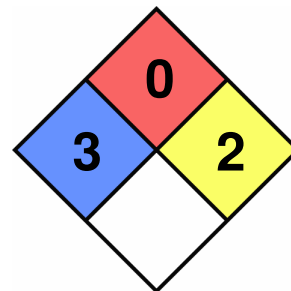
Physical Hazards Not Otherwise Classified (PHNOC): Not Applicable.

Health Hazards Not Otherwise Classified (HHNOC): Not Applicable.

Biohazardous Infectious Materials Hazard Class: Not Applicable.

16.3. National Fire Protection Association (NFPA) Rating

Health: 3
Flammability: 0
Reactivity: 2
Special Hazard:



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16.4. Document Revision

Last Revision Date: 2023-09-13

DISCLAIMER

When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and COLE-PARMER INSTRUMENT COMPANY assumes no legal responsibility or liability whatsoever resulting from its use.