

Safety Data Sheet

1. IDENTIFICATION

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| Product Identifier: | Sodium Chromate Solution, 20% w/v Aqueous |
| Product Code(s): | S1117 |
| Synonyms: | Chromic Acid, Disodium Salt Solution; Chromium Disodium Oxide Solution; Disodium Chromate Solution |
| Recommended Use: | For manufacturing, industrial, and laboratory use only. Use as a laboratory reagent. |
| Uses Advised Against: | Not for food, drug, or household use. |
| Supplier: | Rocky Mountain Reagents, Inc. 4621 Technology Drive, Golden, CO 80403 Phone: (303) 762-0800 Fax: (303) 762-1240 |
| Emergency Phone Number: | (800) 255-3924 (VelocityEHS) |

2. HAZARDS IDENTIFICATION

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| Hazard Classifications: | Acute Toxicity – Oral: | Category 4 |
| | Acute Toxicity – Dermal: | Category 3 |
| | Skin Corrosion/Irritation: | Category 2 |
| | Eye Damage/Irritation: | Category 1 |
| | Sensitization – Respiratory: | Category 1 |
| | Sensitization – Skin: | Category 1 |
| | Germ Cell Mutagenicity: | Category 1B |
| | Carcinogenicity: | Category 1B |
| | Toxic to Reproduction: | Category 1B |
| | Specific Target Organ Toxicity (Repeated Exposure): | Category 1 |

Signal Word: DANGER

Hazard Statements: Harmful if swallowed.
Toxic in contact with skin.
Causes severe skin burns and eye damage.
Causes serious eye damage.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
May cause genetic defects.
May cause cancer.
May damage fertility or the unborn child.
May cause damage to organs through prolonged or repeated exposure.

Pictograms:



Precautionary Statements:

- Prevention:** Wear protective gloves, protective clothing, eye protection, and face protection. Wash thoroughly after handling. Do not breathe fumes, mists, vapors, or spray. In case of inadequate ventilation, wear respiratory protection. Contaminated work clothing must not be allowed out of the workplace. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not eat, drink, or smoke when using this product.
- Response:** Immediately call a poison center or doctor. If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Wash with plenty of water. Call a poison center or doctor if you feel unwell. If skin irritation occurs: Get medical attention. Take off contaminated clothing and wash it before reuse. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. 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 doctor. If exposed or concerned: Get medical attention.
- Storage:** Store locked up.
- Disposal:** Dispose of contents and container in accordance with local, regional, national, and international regulations.
- Hazards Not Otherwise Classified:** Toxic to aquatic life. Avoid release to the environment.
- Toxicity Statement:** Not applicable.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

| Component | Common Name / Synonyms | CAS# | Chemical Formula | % by Weight |
|-------------------------------|---------------------------------|-----------|--|-------------|
| Water | Water | 7732-18-5 | H ₂ O | 81.2 |
| Sodium Chromate, Tetrahydrate | Disodium Chromate, Tetrahydrate | 231-889-5 | Na ₂ CrO ₄ • 4H ₂ O | 18.8 |

Trade Secret Statement: Not applicable.

4. FIRST AID MEASURES

First Aid Procedures:

Inhalation: Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention if symptoms occur.

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| Ingestion: | Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, keep head low so that vomit does not enter lungs. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately. |
| Skin Contact: | Wash skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. Get medical attention if symptoms occur. |
| Eye Contact: | Check for and remove contact lenses. Immediately flush eyes with gentle but large stream of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention if symptoms occur. |
| General Advice: | Poison information centers in each state can provide additional assistance for scheduled poisons. Ensure that medical personnel and those providing first aid are aware of the material(s) involved and take precautions to protect themselves. |

Symptoms and Effects: Inhalation may cause allergic reaction, sore throat, difficulty breathing, coughing, and thirst. Ingestion may cause allergic reaction, ulcers, cramps, nausea, vomiting, abdominal pain, muscle weakness, and dilated pupils. Skin contact may cause dermatitis, burns, and allergic reaction. Eye contact may cause burns, blurred vision, conjunctivitis, and dilated pupils. Prolonged or repeated exposure may cause organ damage, allergic reactions, mutagenic effects, reproductive effects, and cancer.

**Immediate Medical Care/
Special Treatment:** Get medical attention immediately if feeling unwell or concerned. Treat symptomatically. Symptoms may be delayed.

5. FIREFIGHTING MEASURES

Suitable Extinguishing Media: Water spray, dry powder, alcohol resistant foam, carbon dioxide.

Unsuitable Extinguishing Media: Do not use a solid (straight) water stream, as it may scatter and spread fire.

Hazardous Combustion Products: Chromium oxides, sodium oxides.

Specific Hazards: Oxidizer. Contact with combustible and organic material may cause fire. May accelerate burning when involved in a fire. Excessive thermal conditions may cause decomposition and yield corrosive and/or toxic fumes. May decompose upon heating to produce corrosive and/or toxic fumes.

**Special Protective Equipment/
Precautions for Firefighters:** As in any fire, wear MSHA/NIOSH-approved (or equivalent), self-contained, positive-pressure or pressure-demand breathing apparatus and full protective gear. In the event of fire and/or explosion, do not breathe fumes.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions and Protective Equipment: Isolate hazard area and keep unnecessary and unprotected personnel away from the area of the leak or spill. Wear appropriate personal protective equipment (see Section 8). Avoid contact with eyes, skin, and clothing.

Emergency Procedures: In case of chemical emergency, or if unsure how to address an accidental release, consult a professional (see Section 1).

Methods for Containment: Stop the flow of material if this is without risk. Prevent entry into waterways, sewer, basements, or confined areas. Dike the spilled material, where this is possible. Product should not be released to the environment. Contain and recover liquid when possible.

Methods for Cleanup: Absorb spill with an inert material (e.g. vermiculite, dry sand, earth, cloth, or fleece) and place in a non-combustible container for reclamation or disposal. Do not flush to sewer. Clean contaminated surface thoroughly. Residues from spills can be diluted with water. Never return spills in original containers for reuse. Clean up in accordance with all applicable regulations.

7. HANDLING AND STORAGE

Handling: Wear personal protective equipment (see Section 8). Provide sufficient air exchange and/or exhaust in work areas. Avoid contact with skin, eyes, clothing, and combustible materials. Do not breathe vapors or spray mist. Do not ingest. When using, do not eat, drink, or smoke. Keep away from incompatible materials (see Section 10). Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling. Containers of this material may be hazardous when empty, as they retain product residues. Observe all warnings and precautions listed for this product.

Storage: Store in a cool, dry, ventilated area. Store in a segregated and approved area away from incompatible materials (see Section 10). Store in original container. Keep containers tightly closed and upright. Keep away from food, drink, and animal foodstuffs. Keep out of the reach of children. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of this product.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Limits:

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| Water: | No information found. | | |
| Sodium Chromate, Tetrahydrate: | ACGIH (TLV): | 0.05 mg/m ³ | |
| | OSHA (PEL): | 0.1 mg/m ³ | |
| | NIOSH (REL): | 0.001 mg/m ³ | |

Engineering Controls: Ensure adequate ventilation. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal Protective Measures:

Eye/Face Protection: Wear safety glasses with side shields or safety goggles. Wear a face shield. Maintain approved eye wash station and accessible rinse facilities in work area.

Skin Protection: Wear appropriate chemical resistant clothing (with long sleeves) and appropriate chemical resistant gloves.

Respiratory Protection: An air-purifying, NIOSH-approved respirator with appropriate cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Use a positive-pressure, air-supplied respirator if there is any potential for an uncontrolled release, if exposure levels are unknown, or if any other circumstances exist where air-purifying respirators may not provide adequate protection.

Specific Requirements for Personal Protective Equipment: Ensure that glove material is compatible with this product. This information is available from glove manufacturers.

9. PHYSICAL AND CHEMICAL PROPERTIES

Unless otherwise indicated, all properties are given at 25 °C and standard pressure.

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| Appearance: | Clear, yellow, transparent liquid. |
| Odor: | Odorless. |
| Odor Threshold: | No information found. |
| Formula Weight: | 234.03 as sodium chromate, tetrahydrate |
| pH: | No information found. |
| Melting/Freezing Point: | No information found. |
| Boiling Point/Range: | No information found. |
| Decomposition Temperature: | No information found. |
| Flash Point: | Not applicable. |
| Auto-ignition Temperature: | Not applicable. |
| Flammability: | Not applicable. |
| Flammability/Explosive Limits: | Not applicable. |
| Solubility: | Miscible with water. |
| Vapor Pressure: | No information found. |
| Vapor Density: | No information found. |
| Specific Gravity: | 1.064 (Water = 1) |
| Evaporation Rate: | No information found. |
| Viscosity: | No information found. |
| Partition Coefficient (n-octanol/water): | No information found. |

10. STABILITY AND REACTIVITY

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| Reactivity Data: | Corrosive. Oxidizer. See Section 11. |
| Chemical Stability: | Stable under normal conditions. |
| Conditions to Avoid: | Heat, incompatible materials. |
| Incompatible Materials: | Reducing agents, combustible materials, organic materials, metals. |
| Hazardous Decomposition Products: | Chromium oxides, sodium oxides. |
| Possibility of Hazardous Reactions: | May react vigorously or violently if exposed to extreme thermal conditions or to the incompatible materials listed above. Excessive thermal conditions may yield hazardous decomposition products listed above. |
| Hazardous Polymerization: | Will not occur. |

11. TOXICOLOGICAL INFORMATION

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| Routes of Exposure: | Inhalation, ingestion, skin contact, eye contact. |
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| Acute Effects: | Harmful if swallowed, inhaled, or exposed to the skin or eyes. May cause burns to the eyes, skin, respiratory tract, and gastrointestinal tract. May affect the respiratory system and cardiovascular system. |
| Chronic Effects: | Prolonged or repeated exposure may affect the kidneys, liver, bones, lungs, genetic material, skin, and eyes; may cause allergic reactions, mutagenic effects, reproductive effects, and cancer. |
| Toxicological Data: | Water: Not applicable. |
| | Sodium Chromate, Tetrahydrate: LD ₅₀ Oral, Rat: 197 mg/kg (estimated from sodium chromate, anhydrous) LD ₅₀ Dermal, Rabbit: 101 mg/kg Corrosive to skin and eyes based on human and animal data. Causes adverse reproductive effects based on animal data. Causes mutagenic effects based on animal data. |
| Symptoms of Exposure: | Irritation, burns, dermatitis, allergic reaction, ulceration, blurred vision, conjunctivitis, sore throat, difficulty breathing, coughing, pulmonary edema, thirst, cramps, nausea, vomiting, abdominal pain, muscle weakness, mydriasis. |
| Carcinogenic Effects: | This product may cause cancer. |
| OSHA HCS: | Sodium Chromate, Tetrahydrate: Specifically regulated carcinogen |
| IARC: | Sodium Chromate, Tetrahydrate: Group 1 – Carcinogenic to humans |
| NTP: | Sodium Chromate, Tetrahydrate: Known to be a human carcinogen |
| ACGIH: | Sodium Chromate, Tetrahydrate: A1 – Confirmed human carcinogen |

12. ECOLOGICAL INFORMATION

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| Ecotoxicological Data: | Water: Not applicable. |
| | Sodium Chromate, Tetrahydrate: No information found. |
| Persistence and Degradability: | No information found. |
| Environmental Effects: | Expected to be toxic aquatic organisms. Avoid release to the environment. |

13. DISPOSAL INFORMATION

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| Disposal Instructions: | All wastes must be handled in accordance with local, state, and federal regulations. Minimize exposure to product waste (see Section 8). Do not dispose unused waste down drains or into sewers. |
| Contaminated Packaging: | Because emptied containers retain product residue, follow label warnings even after container is emptied. Offer rinsed packaging material to local recycling facilities. |
| Waste Codes: | No information found. |

14. TRANSPORT INFORMATION

DOT:

UN Number: UN2922

Proper Shipping Name: Corrosive liquids, toxic, n.o.s. (Sodium chromate tetrahydrate)

Hazard Class: 8 (6.1)

Packing Group: III

ERG Number: 154

Environmental Hazard Regulations: No information found.

Other Transport Precautions: DOT Reportable Quantity: Sodium Chromate, Tetrahydrate: 10 lb

15. REGULATORY INFORMATION

U.S. Federal Regulations:

OSHA: This product is considered a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Inventory: All components of this product are on the U.S. TSCA Inventory.

U.S. EPCRA (SARA Title III):

Section 302: No information found.

Sections 311/312:

| Hazard Category | List (Yes/No) |
|----------------------------------|---------------|
| Section 311 – Hazardous Chemical | Yes |
| Immediate Hazard | Yes |
| Delayed Hazard | Yes |
| Fire Hazard | No |
| Pressure Hazard | No |
| Reactivity Hazard | No |

Section 313: Sodium Chromate

CERCLA Reportable Quantities: No information found.

California Proposition 65: WARNING: This product can expose you to chemicals including hexavalent chromium compounds, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

International Inventories:

| Country or Region | Inventory Name | On Inventory (Yes/No)* |
|-------------------|--|------------------------|
| Australia | Australian Inventory of Chemical Substances (AICS) | Yes |
| Canada | Domestic Substances List (DSL) | Yes |
| Canada | Non-Domestic Substances List (NDSL) | No |
| China | Inventory of Existing Chemical Substances in China (IECSC) | Yes |
| Europe | European Inventory of Existing Commercial Chemical Substances (EINECS) | Yes |
| Europe | European List of Notified Chemical Substances (ELINCS) | No |
| Japan | Inventory of Existing and New Chemical Substances (ENCS) | Yes |
| Korea | Existing Chemicals List (ECL) | Yes |
| Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | Yes |

*A "Yes" indicates that the listed components of this product comply with the inventory requirements administered by the governing country or region.

16. OTHER INFORMATION**Disclaimer:**

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Reason for Revision:

Not applicable.