

# Safety Data Sheet

## Chromic Acid Crystals

### Section 1 - Chemical Product and Company Identification

**SDS Name:** Chromic Acid Crystals

**Catalog Numbers:** SO-785

**Company Identification:** Transene Company, Inc., DBA ROWLEY BIOCHEMICAL, Inc.  
10 ELECTRONICS AVENUE  
DANVERS, MA 01923

**For information, call:** 978-739-4883

**Emergency Number:** 800-424-9300

**For CHEMTREC assistance, call:** 800-424-9300

### Section 2 - Hazards Identification

#### GHS Classifications

H271-Oxidizing solids: 1

H301-Acute toxicity, oral: 3

H310-Acute toxicity, dermal: 2

H314-Skin corrosion/irritation: 1A

H317-Sensitisation, skin: 1

H318-Serious eye damage/eye irritation: 1

H330-Acute toxicity, inhalation: 2

H334-Sensitisation, respiratory: 1

H335-Specific target organ toxicity, single exposure; Respiratory tract irritation: 3

H340-Germ cell mutagenicity: 1B

H350-Carcinogenicity: 1A

H361-Reproductive toxicity: 2

H372-Specific target organ toxicity, repeated exposure: 1

H400-Hazardous to the aquatic environment, acute hazard: 1

H410-Hazardous to the aquatic environment, long-term hazard: 1

#### Pictogram or Hazard Symbols and Hazard Statement(s):



Signal Word: Danger

## **Hazard Statements:**

H271-May cause fire or explosion; strong oxidizer  
H301-Toxic if swallowed  
H310-Fatal in contact with skin  
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  
H335-May cause respiratory irritation  
H340-May cause genetic defects  
H350-May cause cancer  
H361-Suspected of damaging fertility or the unborn child  
H372-Causes damage to the organs through prolonged or repeated exposure (target organs: kidney, liver, and blood)  
H400-Very toxic to aquatic life  
H410-Very toxic to aquatic life with long lasting effects

## **Precautionary Statements:**

P201-Obtain special instructions before use.  
P202-Do not handle until all safety precautions have been read and understood.  
P210-Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.  
P220-Keep away from clothing and other combustible materials.  
P260-Do not breathe dust/fume/gas/mist/vapours/spray.  
P261-Avoid breathing dust/fume/gas/mist/vapours/spray.  
P262-Do not get in eyes, on skin, or on clothing.  
P264-Wash 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 should not be allowed out of the workplace.  
P273-Avoid release to the environment.  
P280-Wear protective gloves/protective clothing/eye protection/face protection.  
P283-Wear fire resistant or flame retardant clothing.  
P284-In case of inadequate ventilation wear respiratory protection.  
P301+P310-If swallowed: Immediately call a Poison Center/doctor.  
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/shower.  
P304+P340-If inhaled: 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.  
P306+P360-If on clothing: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.  
P308+P313-If exposed or concerned: Get medical advice/attention.  
P310-Immediately call a Poison Center/doctor.  
P312-Call a Poison Center/doctor if you feel unwell.  
P314-Get medical advice/attention if you feel unwell.  
P330-Rinse mouth.  
P333+P313-If skin irritation or rash occurs: Get medical advice/attention.  
P342+P311-If experiencing respiratory symptoms: Call a Poison Center/doctor.  
P361+P364-Take off immediately all contaminated clothing and wash it before reuse.

P362+P364-Take off contaminated clothing and wash it before reuse.  
P363-Wash contaminated clothing before reuse.  
P370+P378-In case of fire: Use dry chemical, carbon dioxide, dry sand, or alcohol-resistant foam to extinguish.  
P371+P380+P375-In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.  
P391-Collect spillage.  
P403+P233-Store in a well-ventilated place. Keep container tightly closed.  
P405-Store locked up.  
P420-Store separately.  
P501-Dispose of contents/container in accordance with local/regional/national/international regulations.

### Section 3 - Composition, Information on Ingredients

CAS#	Chemical Name	Weight Percent
1333-82-0	Chromic Acid (Chromium(VI) oxide)	≤100

### Section 4 - First Aid Measures

**Eye Exposure:** May result in corneal injury and possible burns. Both liquid and vapor are corrosive. In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Get immediate medical attention.

**Dermal Exposure:** Obtain immediate medical attention: May cause skin sensitization, and allergic reaction. Both liquid and vapor are corrosive to exposed skin. In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention.

**Oral Exposure:** If swallowed, obtain immediate medical attention. Will cause severe burns to the mouth and severe and permanent damage to the digestive tract. Causes gastrointestinal burns and perforation of the digestive tract. Do NOT induce vomiting. Call a physician or Poison Control Center immediately.

**Inhalation Exposure:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. Get immediate medical attention.

**Note: Chromic acid is highly toxic. It is absorbed via both the lungs and the gastrointestinal tract. It can cause burns and ulcerations on the skin and mucous membranes and irritations in the upper respiratory tract. It can lead to sensitization and allergic reactions of the respiratory tract and damage to nasal mucous membranes. It may cause an allergic skin reaction. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation. Chromic acid is corrosive. Use only under a chemical fume hood. Always wear personal protective equipment.**

## Section 5 - Fire Fighting Measures

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating gases may be generated by thermal decomposition or combustion.

**Extinguishing media:** Use dry chemical, carbon dioxide, dry sand, or alcohol-resistant foam.

**Hazardous Combustion Products:** Chromium oxides, irritating and toxic fumes and gases.

**Flash Point:** Not available

**Autoignition Temperature:** Not available

**Explosion Limits, Lower:** Not available

**Upper:** Not available

**NFPA Rating:** (estimated) Health: 4; Flammability: 0; Instability: 1

**Note: Chromic acid is an oxidizer. Contact with combustible/organic material may cause fire. May ignite combustibles (wood paper, oil, clothing, etc.). Contact with chromic acid causes burns of the eyes, skin, and mucous membranes. Do not release the material or run-off from fire to the environment. Do not release into drains.**

## Section 6 - Accidental Release Measures

**Procedure(s) of Personal Precaution(s):**

Wear personal protective equipment. Do not ingest or inhale. Do not get on skin or clothing. Do not get in eyes. Ensure adequate ventilation. Avoid dust formation.

**Methods for Cleaning up:** Dike and cover the contaminated areas with absorbent, non-combustible material such as sand, earth, or vermiculite. Neutralize with alkaline material such as soda ash or lime. Keep away from clothing and other combustible materials. Avoid generating dusty conditions. Carefully sweep up and containerize for proper disposal. Do not release to the environment. Do not release to drains.

## Section 7 - Handling and Storage

Use care when handling. Wear personal protective equipment. Wash thoroughly after handling. Use only under a chemical fume hood. Do not get in eyes, on skin, or on clothing. Do not ingest. Do not breathe vapors/dust. Keep away from clothing and other combustible materials. Keep container closed tightly. Avoid dust formation. Do not store near combustibles or in direct sunlight. Store in a cool, dry, and well-ventilated area away from incompatible substances. Store in corrosives area. Do not use with metal tools or items. Protect from moisture. Protect from heat. Keep away from incompatible materials.

## Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

**Personal Protective Equipment**

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

**Exposure Limits:**

Chemical Name	ACGIH - TLV	NIOSH - IDLH	OSHA - Final PELs
Chromic Acid CAS#1333-82-0	0.0005 mg/m <sup>3</sup> Skin STEL 0.0002 mg/m <sup>3</sup> TWA	0.0002 mg/m <sup>3</sup> TWA 15 mg/m <sup>3</sup> IDLH	0.1 mg/m <sup>3</sup> Ceiling

**OSHA Vacated PELs:** Chromic Acid: 0.1 mg/m<sup>3</sup> Ceiling

## Section 9 - Physical and Chemical Properties

**Physical State:** Solid

**Appearance:** Reddish-violet

**Odor:** Odorless

**Vapor Pressure:** Not applicable

**Odor Threshold:** Not available

**Vapor Density:** Not applicable

**pH:** <1 at 100 g/L at 20°C (68°F)

**Relative Density:** Approx. 2.7

**Melting point/freezing point:** 196°C (384.8°F)

**Solubility:** Soluble in water

**Boiling Point:** Not available

**Flash Point:** Not available

**Evaporation Rate:** Not available

**Flammability (solid, gas):** Not available

**Partition coefficient: n-octanol/water:** Not available

**Autoignition Temperature:** Not available

**Decomposition Temperature:** 198°C (388.4°F)

**Viscosity:** Not available

**Specific Gravity/Density:** Not available

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable at room temperature in closed containers under normal storage and handling conditions. This material is an oxidizer. Contact with combustible/organic material may cause fire.

**Conditions to Avoid:** Incompatible materials, ignition sources, excess heat. Exposure to moist air or water. Combustible materials. Avoid dust formation.

**Incompatibilities with other materials:** Bases, alcohols, amines, ammonia, hydrocarbons, ketones, acetone, acid anhydrides, metals, reducing agents, finely powdered metals, alkali metals, hydrogen-hydrogen compounds, hydrazine and derivatives, nitrates, nitric acid, and combustible materials.

**Hazardous Decomposition Products:** Chromium oxides, irritating and toxic fumes and gases.

## Section 11 - Toxicological Information

**CAS#1333-82-0 Chromic Acid: RTECS#: GB6650000**

LD50 Oral: 80 mg/kg (rat)

LD50 Dermal: 57 mg/kg (rabbit)

LC50 Inhalation: 217 mg/m<sup>3</sup> 4h (rat)

**Carcinogenicity:** Chromic Acid CAS#1333-82-0 is not listed by OSHA. Chromic Acid is listed by IARC (Group 1, Carcinogenic to Humans), NTP (Known Carcinogen), ACGIH (A1, Known Human Carcinogen), and California Prop. 65 as a developmental carcinogen (female and male reproductive).

**Information on the likely routes of exposure:** Routes of entry anticipated: oral, dermal, inhalation, and eye.

**Epidemiology:** Not available.

**Teratogenicity:** Teratogenic effects have occurred in experimental animals.

**Reproductive Effects:** Possible risk of impaired fertility.

**Developmental Effects:** Not available.

**Neurotoxicity:** Not available.

**Mutagenicity:** Mutagenic Ames test – positive.

**Specific Target Organ Toxicity, Single Exposure:** Respiratory system.

**Specific Target Organ Toxicity, Repeated Exposure:** Kidney, liver and blood.

**Symptoms associated with exposure:** Chromic acid is highly toxic and corrosive. It is absorbed via both the lungs and the gastrointestinal tract. It can cause burns and ulcerations on the skin and mucous membranes and is destructive to the tissues in the upper respiratory tract, eyes, and skin. It can lead to sensitization and allergic reactions of the respiratory tract and damage to nasal mucous membranes. It may cause an allergic skin reaction. Symptoms of an allergic reaction may include rash, itching, flushing, hives, swelling, trouble breathing, tingling of the hands and feet, dizziness/lightheadedness, chest pain, and muscle pain. Eye contact may cause redness, burning, and blindness. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.

Other symptoms of exposure include cough, wheezing, shortness of breath, headache, nausea, and stomach irregularities.

**The toxicological properties of this material have not been thoroughly investigated.**

#### Section 12 - Ecological Information

**Ecotoxicity:** Very toxic to aquatic life with long lasting effects. Do not release to the environment. Do not release to drains.

**CAS#1333-82-0 Chromic Acid:**

LC50, freshwater fish: 40 mg/L 96h static (colisa fasciatus)

EC50, water flea: 0.035 mg/L 48h (daphnia magna)

**Persistence and degradability:** Not available.

**Bio-accumulative potential:** Not available.

**Mobility:** Will likely be mobile in the environment due to its water solubility.

#### Section 13 - Disposal Considerations

**DISPOSAL:** Dispose of in accordance with all federal, state, and local regulations.

#### Section 14 - Transport Information

**DOT**

Proper shipping name: CHROMIUM TRIOXIDE, ANHYDROUS

UN1463

PG II

Hazard class 5.1 (8, 6.1)

#### Section 15 - Regulatory Information

#### Canada Regulatory Information

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the SDS contains all the information required by the CPR.

Section 16 - Additional Information
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**SDS Creation Date:** 5-9-22

**Revision #1:** 6-2-25

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