

## 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	Chromic Acid Solution
CAS #	7738-94-5
Common Synonyms	Chromium Trioxide Solution, Chromium (VI) Oxide Solution
Manufacturer	Sentury Reagents, Inc. 2515 Commerce Dr. Rock Hill, SC 29730
Telephone	803-327-6880
Fax	803-327-3872
Emergency Phone #	PERS: 800-633-8253
International #	011-801-629-0667
Account	10613

## 2. HAZARDS IDENTIFICATION

### OSHA Hazards

Oxidizer, Carcinogen, Target Organ Effect, Highly toxic by inhalation, Toxic by ingestion, Toxic by skin absorption, Corrosive, Teratogen, Reproductive hazard, Mutagen

### Target Organs

Kidney, Lungs, Liver, Nerves, Blood, Eyes, Skin, Respiratory system

### GHS Classification

Oxidizing liquid (Category 1)  
 Acute toxicity, Oral (Category 3)  
 Acute toxicity, Inhalation (Category 2)  
 Acute toxicity, Dermal (Category 3)  
 Skin corrosion (Category 1A)  
 Serious eye damage (Category 1)  
 Respiratory sensitisation (Category 1)  
 Skin sensitisation (Category 1)  
 Germ cell mutagenicity (Category 1B)  
 Carcinogenicity (Category 1A)  
 Reproductive toxicity (Category 2)  
 Specific target organ toxicity - repeated exposure, Inhalation (Category 1)  
 Acute aquatic toxicity (Category 1)  
 Chronic aquatic toxicity (Category 1)

### GH3 Label elements, including precautionary statements

Pictogram



Signal word DANGER

### Hazard statement(s)

H271	May cause fire or explosion; strong oxidizer.
H301 + H311	Toxic if swallowed or in contact with skin
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H330	Fatal if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H340 May cause genetic defects.  
H350 May cause cancer.  
H361 Suspected of damaging fertility or the unborn child.  
H372 Causes damage to organs through prolonged or repeated exposure if inhaled.  
H410 Very toxic to aquatic life with long lasting effects.

#### Precautionary statement(s)

P201 Obtain special instructions before use.  
P220 Keep/Store away from clothing/ combustible materials.  
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P284 Wear respiratory protection.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a POISON CENTER or doctor/ physician.  
P501 Dispose of contents/ container to an approved waste disposal plant.

#### HMIS Classification

**Health hazard:** 4  
**Chronic Health Hazard:** \*  
**Flammability:** 0  
**Physical hazards:** 2  
**Personal protection** F

#### NFPA Rating

**Health hazard:** 4  
**Fire:** 0  
**Reactivity Hazard:** 2  
**Special hazard:** OX

#### Potential Health Effects

**Inhalation** May be fatal if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.  
**Skin** Toxic if absorbed through skin. Causes skin burns.  
**Eyes** Causes eye burns. Causes severe eye burns.  
**Ingestion** Toxic if swallowed.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula :  $\text{CrO}_3$   
Molecular Weight : 99.99 g/mol

Component		Concentration
<b>Chromium trioxide</b> Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)		
CAS-No.	7738-94-5	39 - 61%
EC-No.	215-607-8	
Index-No.	024-001-00-0	
<b>Water</b>		39-61%
CAS-No.	7732-18-5	

### 4. FIRST AID MEASURES

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

**In case of eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

**If swallowed**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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**5. FIRE-FIGHTING MEASURES****Conditions of flammability**

Not flammable or combustible.

**Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special protective equipment for firefighters**

Wear self contained breathing apparatus for fire fighting if necessary.

**Hazardous combustion products**

Hazardous decomposition products formed under fire conditions. - Chromium oxides

**Further information**

Use water spray to cool unopened containers.

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**6. ACCIDENTAL RELEASE MEASURES****Personal precautions**

Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

**Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

**Methods and materials for containment and cleaning up**

Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

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**7. HANDLING AND STORAGE****Precautions for safe handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking.

**Conditions for safe storage**

Keep container tightly closed in a dry and well-ventilated place.

Hygroscopic Heat sensitive.

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**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Basis
Chromium trioxide	1333-82-0	TWA	0.001 mg/m3	USA. NIOSH Recommended Exposure Limits
Remarks	Potential Occupational Carcinogen See Appendix C See Appendix A			
	See Table Z-2 for the exposure limit for any operations or sectors where the exposure limit in §			
	1910.1026 is stayed or is otherwise not in effect Substance listed; for more information see OSHA document 1910.1026			
	See 1910.1026. See Table Z-2 for the exposure limit for any operations or sectors where the exposure limit in 1910.1026 is stayed or are otherwise not in effect.			

**Personal protective equipment****Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100

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(US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### **Hand protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

#### **Eye protection**

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### **Skin and body protection**

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Hygiene measures**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### **Eye protection**

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### **Skin and body protection**

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Hygiene measures**

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

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## **9. PHYSICAL AND CHEMICAL PROPERTIES**

### **Appearance**

Form	crystalline
Colour	violet

### **Safety data**

pH	no data available
Melting point/	no data available
Freezing point	-20°C to -45°C
Boiling point	no data available
Flash point	not applicable
Ignition temperature	no data available
Autoignition	
temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	no data available
Density	1.36-1.70
Water solubility	soluble
Partition coefficient:	
n-octanol/	no data available
Relative vapour	
density	no data available
Odour	no data available
Odour Threshold	no data available
Evaporation rate	no data available

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## **10. STABILITY AND REACTIVITY**

### **Chemical stability**

Stable under recommended storage conditions.

### **Possibility of hazardous reactions**

no data available

### **Conditions to avoid**

Heat. Avoid moisture.

**Materials to avoid**

Organic materials, Phosphorus, Powdered metals

**Hazardous decomposition products**

Hazardous decomposition products formed under fire conditions. - Chromium oxides Other decomposition products - no data available

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**11. TOXICOLOGICAL INFORMATION****Acute toxicity****Oral LD50**

LD50 Oral - rat - male and female - 52 mg/kg

**Inhalation LC50**

LC50 Inhalation - rat - male - 4 h - 217 mg/m<sup>3</sup>

**Dermal LD50**

LD50 Dermal - rabbit - male and female - 57 mg/kg

**Other information on acute toxicity**

no data available

**Skin corrosion/irritation**

Skin - rabbit - Corrosive - 24 h

**Serious eye damage/eye irritation**

Eyes - rabbit - Corrosive to eyes

**Respiratory or skin sensitisation**

no data available

**Germ cell mutagenicity**

May alter genetic material.

In vivo tests showed mutagenic effects

**Carcinogenicity**

This is or contains a component that has been reported to be carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.

Human carcinogen.

IARC: 1 - Group 1: Carcinogenic to humans (Chromium trioxide)

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: Known to be human carcinogen (Chromium trioxide)

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity**

May cause reproductive disorders.

**Teratogenicity**

Suspected human reproductive toxicant

**Specific target organ toxicity - single exposure (Globally Harmonized System)**

no data available

**Specific target organ toxicity - repeated exposure (Globally Harmonized System)**

no data available

**Aspiration hazard**

no data available

**Potential health effects****Inhalation**

May be fatal if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

**Ingestion**

Toxic if swallowed.

**Skin**  
**Eyes**

Toxic if absorbed through skin. Causes skin burns.  
Causes eye burns. Causes severe eye burns.

**Signs and Symptoms of Exposure**

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea

**Synergistic effects**

no data available

**Additional Information**

RTECS: GB6650000

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## 12. ECOLOGICAL INFORMATION

### Toxicity

Toxicity to fish	LC50 - Tilapia mossambica - 21.05 - 141.38 mg/l - 96.0 h LC0 - Leuciscus idus (Golden orfe) - 100 mg/l - 48.0 h
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 0.8 mg/l - 48 h

**Persistence and degradability**

no data available

**Bioaccumulative potential**

no data available

**Mobility in soil**

no data available

**PBT and vPvB assessment**

no data available

**Other adverse effects**

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life with long lasting effects.

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## 13. DISPOSAL CONSIDERATIONS

### Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

**Contaminated packaging**

Dispose of as unused product.

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## 14. TRANSPORT INFORMATION

### DOT (US)

UN number: 1755 Class: 8 Packing group: II  
Proper shipping name: Chromic Acid Solution  
Reportable Quantity (RQ): 10 lbs  
Marine pollutant: Yes  
Poison Inhalation Hazard: No

### IMDG

UN number: 1755 Class: 8 Packing group: II	EMS-No: F-A, S-Q
Proper shipping name: Chromic Acid Solution	
Marine pollutant: Yes	

### IATA

UN number: 1755 Class: 8 Packing group: II  
Proper shipping name: Chromic Acid Solution

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## 15. REGULATORY INFORMATION

### OSHA Hazards

Oxidizer, Carcinogen, Target Organ Effect, Highly toxic by inhalation, Toxic by ingestion, Toxic by skin absorption, Corrosive, Teratogen, Reproductive hazard, Mutagen

### SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

### SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

	CAS-No.	Revision Date
Chromium Trioxide	1333-82-0	1993-04-24
<b>SARA 311/312 Hazards</b>		
Reactivity Hazard, Acute Health Hazard, Chronic Health Hazard		
<b>Massachusetts Right To Know Components</b>		
Chromium Trioxide	1333-82-0	1993-04-24
<b>Pennsylvania Right To Know Components</b>		
Chromium Trioxide	1333-82-0	1993-04-24
<b>New Jersey Right To Know Components</b>		
Chromium Trioxide	1333-82-0	1993-04-24
<b>California Prop. 65 Components</b>		
WARNING! This product contains a chemical known to the State of California to cause cancer. Chromium Trioxide	1333-82-0	1993-04-24

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## 16. OTHER INFORMATION

### Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sentury Reagents, Inc., shall not be held liable for any damage resulting from handling or from contact with the above product.