



## MATERIAL SAFETY DATA SHEETS

139

Chromic acid

### 1. CHEMICAL IDENTITY

**Chemical Name :** Chromic acid

**Chemical Classification:** Toxic , Explosive, Oxidizing  
**Trade Name :**

**Synonyms:**

**Formula :** CrH2O4      **CAS No:** 7738-94-5      **UN No:** 1463 (Solid), 1

#### Regulated Identification

**Shipping Name :** Chromic acid      **Hazchem Code :** 1W / 2X

**Codes / Label :** Class 5.1 / 8, Toxic, Explosive, Oxidizing      **Hazardous Waste ID No :**

HAZARDOUS INGREDIENTS	C.A.S. No.	HAZARDOUS INGREDIENTS	C.A.S. No.
1 Chromic acid	7738-94-5	3	
2		4	

### 2. PHYSICAL / CHEMICAL DATA

**Boiling Pt. °C:** 250 (decomposes)  
**Physical State:** Solid      **Appearance:** Dark purplish-red solid

**Melting Pt °C:** 196  
**Vapour Pressure @ 35°C mmHg:**      **Odour:** Odourless

**Vapour Density(Air =1):**      **Solubility in water at 30°C g/100ml:** Highly soluble in water. 1.1X10+6 mg/l @ 17 deg C  
**Others:** Soluble in alcohol and mineral acids. Soluble in sulfuric acid and nitric acid.

**Specific Gravity (Water =1 ):** 2.70 g/cm<sup>3</sup> (20 deg C)      **pH :**

### 3. FIRE / EXPLOSION HAZARD DATA

**Flammability :** No      **LEL:**      **Flash Point °C in OC:**

**TDG Flammability:**      **UEL:**      **Flash Point °C in CC:**

**Autoignition Temperature °C :**

**Explosion sensitivity to impact:** Stable

**Explosion sensitivity to static Electricity:**

**Hazardous Combustion Products :** Fire may produce irritating, corrosive and/or toxic gases. Will ignite on contact with acetic and alcohol. Hazard may be quite evident. Can ignite organic matter on contact.

**Hazardous Polymerization :** Will not occur

**Combustible Liquid:** No      **Explosive Material:** No      **Corrosive Material** No

**Flammable Material:** No      **Oxidiser :** Yes      **Others:**

**Pyrophoric Material:** No      **Organic Peroxide :** No

### 4. REACTIVITY DATA

- Chemical Stability** : Normally stable. Reactive under extreme conditions. Containers may explode when involved in fire. Violent reaction with powerful reducers.
- Incompatibility with other material** : Acetic acid, acetic anhydride, acetone, alcohols, alkali metals organics and other easily oxidized materials (such as paper, wood, sulfur, aluminum, and plastics).
- Reactivity** : Dangerously reactive. Substance is a strong oxidant. Reacts violently with combustible materials and reducing agents, causing fire and explosion hazard. Attacks metals in presence of moisture.
- Hazardous Reaction Products** :

## 5. HEALTH HAZARD DATA

**Routes of entry:** Inhalation, Ingestion, Skin and Eyes

### Effects of Exposure / Symptoms:

Ingestion: Causes irritation and burns. Inhalation: Inhalation of dust is toxic. Causes irritation and burns. Severe over exposure may result in death. Skin & Eyes: May cause severe burns.

### Emergency Treatment :

**Inhalation:** Move patient to fresh air. Monitor for respiratory distress. Administer oxygen and assist ventilation as required. Treat bronchospasm with beta2 agonist and corticosteroid aerosols.

**Skin:** Remove and isolate contaminated clothing and shoes. Immediately flush with running water for at least 20 minutes.

**Eyes:** Wash eyes thoroughly for at least 15 min.; flush contacted skin areas with water; remove contaminated clothing and wash before reuse.

**Ingestion:** Call a physician. Do not induce vomiting.

<b>LD50 (oral-rat) mg/kg:</b>		<b>STEL:</b>	0.06 mg/m <sup>3</sup>
<b>LC50 (rat) mg/kg:</b>		<b>Odour Threshold:</b>	
<b>Permissible Exposure Limit:</b>	0.1 mg/m <sup>3</sup>	<b>TLV (ACGIH) :</b>	0.05 mg/m <sup>3</sup>

NFPA Hazard Signals	Health	Flammability	Reactivity	Special
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## 6. PREVENTIVE MEASURES

**Personal Protective Equipment** : Approved respirators, vaseline for lubrication of nostrils, rubberized outer wear and safety goggles are required. Rubber is poor and PVC not recommended for gloves, white creams should not be relied upon. They can be used to cover unprotected area. Do not use synthetic clothes as part of outer wear, must be rubberized fabric. Wear positive pressure self-contained breathing apparatus (SCBA).

**Handling** : Avoid direct physical contact. Use appropriate, approved safety equipment. Untrained individuals should not handle this chemical or its container. Handling should occur in a chemical fume hood.

**Storage** : Isolate. Protect from physical damage. Separate from combustible, organic or other readily oxidizable materials. Protect from moisture. Avoid storage on wooden floors.

**Precautions** :

## 7. EMERGENCY / FIRST AID MEASURES

### FIRE:

**Fire Extinguishing Media** : Water

**Special Procedure** : Use water in flooding quantities as fog. Cool all affected containers

with flooding quantities of water. Apply water from as far a distance as possible.

**Unusual Hazards** : Decomposing. Material will form a hot viscous foam and caution should be exercised against possibility of steam explosion.

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**EXPOSURE: First Aid Measures:**

**Inhalation:** Move patient to fresh air. Monitor for respiratory distress. Administer oxygen and assist ventilation as required. Treat bronchospasm with beta2 agonist and corticosteroid aerosols.

**Skin:** Remove and isolate contaminated clothing and shoes. Immediately flush with running water for at least 20 minutes.

**Eyes:** Wash eyes thoroughly for at least 15 min.; flush contacted skin areas with water; remove contaminated clothing and wash before reuse.

**Ingestion:** Call a physician. Do not induce vomiting.

**Antidotes / Dosages:**

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**SPILLS :**

**Steps To Be Taken** : Keep sparks, flames, and other sources of ignition away. Keep material out of water sources and sewers. Neutralize spilled material with crushed limestone, soda ash, or lime.

**Waste Disposal Method:** Refer 'Additional Information'.

**8. ADDITIONAL INFORMATION / REFERENCES**

Spillage treatment: Land spill: Dig a pit, pond, lagoon, holding area to contain liquid or solid material. Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water. Neutralize with agricultural lime (CaO), crushed limestone (CaCO<sub>3</sub>) or sodium bicarbonate (NaHCO<sub>3</sub>). Water spill: Neutralize with agricultural lime (CaO), crushed limestone (CaCO<sub>3</sub>), or sodium bicarbonate (NaHCO<sub>3</sub>). Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates.

**9. MANUFACTURERS / SUPPLIERS DATA**

<b>NAME OF FIRM :</b>	<b>Contact person</b>
<b>MAILING ADDRESS :</b>	<b>in Emergency :</b>
<b>TELEPHONE / TELEX NOS :</b>	<b>Local Bodies involved :</b>
<b>TELEGRAPHIC ADDRESS :</b>	<b>Standard Packing :</b>
<b>OTHERS :</b>	<b>Trem Card Details / Ref :</b>

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