



MATERIAL SAFETY DATA SHEET

Name: Chromic acid Material Safety Data Sheet
Synonym: Chromic acid; Chromic anhydride; Chromium(VI) oxide; Chromium trioxide
Supplier: Huangshi Yucheng Trade Co., LTD
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Section 1: CHEMICAL PRODUCT

MSDS Name: Chromic acid
Synonym: Chromic acid; Chromic anhydride; Chromium(VI) oxide; Chromium trioxide.
CAS: 1333-82-0

Section 2 - COMPOSITION, INFORMATION ON INGREDIENTS

CAS#	Chemical Name	content	EINECS#	UN
1333-82-0	Chromic acid	99.8%	215-607-8	1463

Hazard Symbols: T O C N
Risk Phrases: 25 35 43 8 49 50/53

Section 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Toxic if swallowed. Causes severe burns. May cause sensitization by skin contact. Contact with combustible material may cause fire. May cause cancer by inhalation. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Potential Health Effects

Eye:

May cause irreversible eye injury. Contact with eyes may cause severe irritation, and possible eye burns.

Skin:

May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material.

May cause irritation with burning pain, itching and redness.

May cause deep, penetrating ulcers of the skin.

May be absorbed through damaged or abraded skin in harmful amounts. Chronic exposure to water insoluble hexavalent chromium compounds has been shown to be associated with lung cancer and gastrointestinal tract tumors.

Ingestion:

Harmful if swallowed. May cause severe gastrointestinal tract irritation with nausea, vomiting and possible burns. May cause liver and kidney damage.

Inhalation:

May cause irritation of the respiratory tract with burning pain in the nose and throat, coughing, wheezing, shortness of breath and pulmonary edema. May cause asthmatic attacks due to allergic sensitization of the respiratory tract.

Chronic:

Prolonged or repeated inhalation may cause nosebleeds, nasal congestion, erosion of the teeth, perforation of the nasal septum, chest pain and bronchitis. Prolonged or repeated eye contact may cause conjunctivitis. Prolonged or repeated skin contact may cause sensitization dermatitis and possible destruction and/or ulceration.

Chronic ingestion may cause effects similar to those of acute ingestion. Chronic exposure to water insoluble hexavalent chromium compounds has been shown to be associated with lung cancer and gastrointestinal tract tumors.

Section 4 - FIRST AID MEASURES

Eyes:

Get medical aid immediately. Extensive irrigation with water is required (at least 30 minutes).

Skin:

Get medical aid. Wash clothing before reuse. Rinse area with large amounts of water for at least 15 minutes. Destroy contaminated shoes.

Ingestion:

If victim is conscious and alert, give 2-4 cupfuls of milk or water.

Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation:

Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation.

Notes to Physician:

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. Strong oxidizer. Contact with other material may cause fire. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Wear appropriate protective clothing to prevent contact with skin and eyes. Wear a self-contained breathing apparatus (SCBA) to prevent contact with thermal decomposition products. Containers may explode in the heat of a fire. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas.

Extinguishing Media:

Use extinguishing media most appropriate for the surrounding fire.



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May require flooding with water in order to eliminate hazardous reactions since the materials generate their own oxygen.

Section 6 - ACCIDENTAL RELEASE MEASURES

General Information:

Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal. Avoid generating dusty conditions.

Provide ventilation. Do not use combustible materials such as paper towels to clean up spill.

Section 7 - HANDLING and STORAGE

Handling:

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Avoid contact with skin and eyes. Keep container tightly closed. Avoid contact with clothing and other combustible materials. Avoid ingestion and inhalation. Use with adequate ventilation. Discard contaminated shoes.

Storage:

Store in a cool, dry, well-ventilated location. Separate from combustible materials, halogens, sulfides, metals. See also NFPA 430, Code for the Storage of Liquid and Solid Oxidizers.

Section 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls:

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.

Exposure Limits

CAS# 1333-82-0: United Kingdom, WEL - TWA: (listed as chromium (vi) compounds): 0 mg/m³ TWA (as Cr) United Kingdom, WEL - STEL: (listed as chromium (vi) compounds): mg/m³ STEL (as Cr) Belgium - TWA: (listed as chromium (vi) compounds- water soluble) 0.05 mg/m³ VLE (as Cr) France - VME:

0.05 mg/m³ VME (as Cr) France - VLE: 0.1 mg/m³ VLE (as Cr) Germany: (listed as chromium (vi) compounds): 0.05

mg/m³ VME (as Cr) Japan: (listed as chromium (vi) compounds): 0.05 mg/m³ OEL (as Cr) 0.01 mg/m³ OEL (certain compounds, as Cr) Malaysia: (listed as chromium (vi) compounds- water soluble): 0.0 mg/m³ TWA (as Cr) Netherlands: (listed as chromium (vi) compounds- water soluble): mg/m³ STEL Netherlands: (listed as chromium (vi) compounds- water soluble): 0.025 mg/m³ MAC Russia: 0.01 mg/m³

TWA Spain: 0.05 mg/m³ VLA-ED 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 a chemical apron. Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear a chemical apron. Wear appropriate protective gloves to prevent skin exposure.

Respirators:

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Solid

Color: dark red to purple

Odor: odorless

pH: No information

Vapor Pressure: Not available.

Viscosity: No information

Boiling Point: 482 deg F

Freezing/Melting Point: 385 deg F

Autoignition Temperature: None available.

Flash Point: 250 deg C (482.00 deg F)

Explosion Limits, lower: Not available.

Explosion Limits, upper: Not available.

Decomposition Temperature: 482 F

Solubility in water: Soluble.

Specific Gravity/Density: 2.7 (Water=1)

Molecular Formula: CrO₃

Molecular Weight: 99.99

Section 10 - STABILITY AND REACTIVITY

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Dust generation, excess heat.

Incompatibilities with Other Materials:

Metals, reducing agents, halogens, dimethyl formamide, pyridine, combustible materials, sulfides.

Hazardous Decomposition Products:

Chromium fumes.

Hazardous Polymerization: Has not been reported.



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Section 11 - TOXICOLOGICAL INFORMATION

RTECS#:

CAS# 1333-82-0: GB6650000 LD50/LC50:

CAS# 1333-82-0: Oral, mouse: LD50 = 127 mg/kg; Oral, rat: LD50 = 80 mg/kg.

Carcinogenicity:

Chromium trioxide - California: carcinogen, initial date 2/27/87 (listed as Chromium (VI) NTP: Known carcinogen IARC: Group 1 carcinogen (listed as Chromium (VI) compounds).

Other:

See actual entry in RTECS for complete information.

Section 12 - ECOLOGICAL INFORMATION

No other information available.

Section 13 - DISPOSAL CONSIDERATIONS

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - TRANSPORT INFORMATION

Shipping Name: Chromic acid

Hazard Class: 5.1

UN Number: 1463

Packing group: II

Section 15 - REGULATORY INFORMATION

Hazard Symbols: T O C N

Risk Phrases:

R 49 May cause cancer by inhalation.

R 25 Toxic if swallowed.

R 35 Causes severe burns.

R 43 May cause sensitization by skin contact.

R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R 8 Contact with combustible material may cause fire.

Safety Phrases:

S 53 Avoid exposure - obtain special instructions before use.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 60 This material and its container must be disposed of as hazardous waste.

S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

WGK (Water Danger/Protection)

CAS# 1333-82-0: 3

Canada

CAS# 1333-82-0 is listed on Canada's DSL List.

CAS# 1333-82-0 is listed on Canada's Ingredient Disclosure List.

US FEDERAL

TSCA

CAS# 1333-82-0 is listed on the TSCA inventory

Section 16 - OTHER INFORMATION

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