



J.T. Baker Inc.
222 Red School Lane
Phillipsburg, NJ 08865

24-Hour Emergency Telephone 908-859-2151
National Response Center 800-424-8802
Chemtrec 800-424-9300

MATERIAL SAFETY DATA SHEET

FICHE
SIGNALETIQUE

HOJAS DE DATOS
DE SEGURIDAD

National Response In Canada
CANUTEC 613-996-6666

Outside U.S. and Canada
Chemtrec 202-483-7616

C4400 -04
Effective: 05/01/89

Chromium Trioxide

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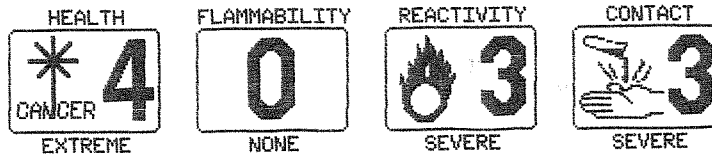
J.T.BAKER INC., 222 Red School Lane, Phillipsburg, NJ 08865

SECTION I - PRODUCT IDENTIFICATION

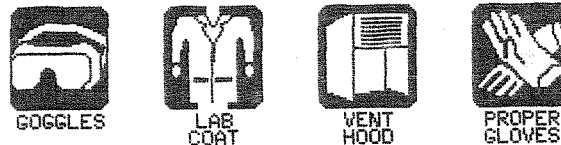
Product Name: Chromium Trioxide
Common Synonyms: Chromium (VI) Oxide; Chromic Acid; Chromium Anhydride
Chemical Family: Chromium Compounds
Formula: CrO_3
Formula Wt.: 99.99
CAS No.: 1333-82-0
NIOSH/RTECS No.: GB6650000
Product Use: Laboratory Reagent
Product Codes: 1639,5535,1638,5466,1642

PRECAUTIONARY LABELING

BAKER SAE-T-DATA* System



Laboratory Protective Equipment



U.S. Precautionary Labeling

POISON! DANGER!

HARMFUL IF SWALLOWED OR INHALED. MAY CAUSE BURNS OR EXTERNAL ULCERS. CAUTION: CONTAINS CHROMIUM (VI), CANCER HAZARD. STRONG OXIDIZER. CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE.

Keep from contact with clothing and other combustible materials. Do not store near combustible materials. Do not get in eyes, on skin, on clothing. Do not breathe dust. Keep in tightly closed container. Use with adequate ventilation. Wash thoroughly after handling. In case of fire, soak with water. In case of spill, sweep up and remove. Flush spill area with water.

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PRECAUTIONARY LABELING (CONTINUED)

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International Labeling

Avoid contact with eyes. After contact with skin, wash immediately with plenty of water. Keep container tightly closed.

SAF-T-DATA* Storage Color Code: Yellow (reactive)

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SECTION II - COMPONENTS

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<u>Component</u>	<u>CAS No.</u>	<u>Weight %</u>	<u>OSHA/PEL</u>	<u>ACGIH/TLV</u>
Chromium Trioxide	1333-82-0	98-100	N/E	N/E

TLV is for Chromium (VI) compounds, Water soluble, as Cr. PEL (Ceiling) is for Chromic acid and chromates, as CrO₃.

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SECTION III - PHYSICAL DATA

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Boiling Point: N/A

Vapor Pressure (mmHg): N/A

Melting Point: 197°C (386°F)
(at 760 mm Hg)

Vapor Density (air=1): N/A

Specific Gravity: 2.70
(H₂O=1)

Evaporation Rate: N/A

Solubility(H₂O): Appreciable (>10%)

% Volatiles by Volume: N/A
(21°C)

pH: 3.9 (1% solution)

Odor Threshold (ppm): N/A

Physical State: Solid

Coefficient Water/Oil Distribution: N/A

Appearance & Odor: Dark red crystals. Odorless.



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SECTION IV - FIRE AND EXPLOSION HAZARD DATA

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Flash Point (Closed Cup): N/A

NEPA 704M Rating: 3-0-1 OXY

Autoignition Temperature: N/A

Flammable Limits: Upper - N/A

Lower - N/A

Fire Extinguishing Media

Use water spray.

Special Fire-Fighting Procedures

Firefighters should wear proper protective equipment and self-contained breathing apparatus with full facepiece operated in positive pressure mode. Move containers from fire area if it can be done without risk. Use water to keep fire-exposed containers cool.

Unusual Fire & Explosion Hazards

Strong oxidizer. Contact with other material may cause fire. Can react violently with shock, friction, or heat.

Toxic Gases Produced

none identified

Explosion Data-Sensitivity to Mechanical Impact

None identified.

Explosion Data-Sensitivity to Static Discharge

None identified.

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SECTION V - HEALTH HAZARD DATA

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Threshold Limit Value (TLV/TWA): 0.05 mg/m³

TLV is for Chromium (VI) compounds, Water soluble, as Cr.

Short-Term Exposure Limit (STEL): Not Established

Permissible Exposure Limit (PEL): 0.1 mg/m³

PEL (Ceiling) is for Chromic acid and chromates, as CrO₃.



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SECTION V - HEALTH HAZARD DATA (CONTINUED)

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Toxicity of components

Intraperitoneal Mouse LD₅₀ for Chromium Trioxide 29 mg/kg
Carcinogenicity: NTP: Yes IARC: Yes Z List: Yes OSHA Reg: Yes

Carcinogenicity

This substance is listed as a NTP human carcinogen and an IARC human carcinogen (Group 1).

Reproductive Effects

None identified.

Effects of Overexposure

INHALATION: excessive inhalation is irritating, may cause respiratory system damage, ulceration of mucous membranes

SKIN CONTACT: severe irritation or burns

EYE CONTACT: severe irritation or burns

SKIN ABSORPTION: none identified

INGESTION: severe gastrointestinal irritation, burns to mouth and throat

CHRONIC EFFECTS: none identified

Target Organs

blood, respiratory system, lungs, liver, kidneys, eyes, skin

Medical Conditions Generally Aggravated by Exposure

none identified

Primary Routes of Entry

inhalation, ingestion, skin contact, eye contact



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 SECTION V - HEALTH HAZARD DATA (CONTINUED)
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Emergency and First Aid Procedures

- INGESTION: CALL A PHYSICIAN. If swallowed, if conscious, immediately induce vomiting.
- INHALATION: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
- SKIN CONTACT: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before re-use.
- EYE CONTACT: In case of eye contact, immediately flush with plenty of water for at least 15 minutes.

SARA/TITLE III HAZARD CATEGORIES and LISTS

Acute: Yes Chronic: Yes Flammability: Yes Pressure: No Reactivity: No

Extremely Hazardous Substance: No
 CERCLA Hazardous Substance: Yes Contains Chromium (RQ = 1 LB)
 SARA 313 Toxic Chemicals: Yes Contains Chromium
 Generic Class: C15

TSCA Inventory: Yes
 State Lists: For products sold in the state of California, the state requires that we provide to users and their employees the following message: WARNING: THIS PRODUCT IS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

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 SECTION VI - REACTIVITY DATA
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- Stability: Stable Hazardous Polymerization: Will not occur
- Conditions to Avoid: heat
- Incompatibles: combustible materials, strong reducing agents, organic materials
- Decomposition Products: none identified



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SECTION VII - SPILL & DISPOSAL PROCEDURES

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Steps to be Taken in the Event of a Spill or Discharge

Wear self-contained breathing apparatus and full protective clothing. Keep combustibles (wood, paper, oil, etc.) away from spilled material. With clean shovel, carefully place material into clean, dry container and cover; remove from area. Flush spill area with water.

Disposal Procedure

Dispose in accordance with all applicable federal, state, and local environmental regulations.

EPA Hazardous Waste Number: D001 (Ignitable Waste)

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SECTION VIII - INDUSTRIAL PROTECTIVE EQUIPMENT

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Ventilation: Use general or local exhaust ventilation to meet TLV requirements.

Respiratory Protection: Respiratory protection required if airborne concentration exceeds TLV. At concentrations up to 1 ppm, a high-efficiency particulate respirator is recommended. Above this level, a self-contained breathing apparatus is advised.

Eye/Skin Protection: Safety goggles, uniform, apron, proper gloves are recommended.

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SECTION IX - STORAGE AND HANDLING PRECAUTIONS

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SAF-T-DATA* Storage Color Code: Yellow (reactive)

Storage Requirements

Keep container tightly closed. Store separately and away from flammable and combustible materials.

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SECTION X - TRANSPORTATION DATA AND ADDITIONAL INFORMATION

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SECTION X - TRANSPORTATION DATA AND ADDITIONAL INFORMATION (CONTINUED)

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Domestic (D.O.T.)

Proper Shipping Name: Chromic acid, solid
Hazard Class: Oxidizer
UN/NA: NA1463 Reportable Quantity: 1 LBS.
Labels: OXIDIZER
Regulatory References: 49CFR 172.101; 173.164

International (I.M.O.)

Proper Shipping Name: Chromium trioxide, anhydrous
Hazard Class: 5.1
UN: UN1463 Marine Pollutants: No
Labels: OXIDIZER, CORROSIVE
Regulatory References: 49CFR 172.102; Part 176; IMO

I.M.O. Page: 5038
Packaging Group: II

A. (I.C.A.O.)

Proper Shipping Name: Chromium trioxide, anhydrous
Hazard Class: 5.1
UN: UN1463
Labels: OXIDIZER, CORROSIVE
Regulatory References: 49CFR 172.101; 173.6; Part 175; ICAO/IATA

Packaging Group: II

U.S. Customs Harmonization Number: 28191000005

N/A = Not Applicable or Not Available
N/E = Not Established

The information in this Material Safety Data Sheet meets the requirements of the United States OCCUPATIONAL SAFETY AND HEALTH ACT and regulations promulgated thereunder (29 CFR 1910.1200 et. seq.) and the Canadian WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM. This document is intended only as a guide to the appropriate precautionary handling of the material by a person trained in, or supervised by a person trained in, chemical handling. The user is responsible for determining the precautions and dangers of this chemical for his or her particular application. Depending on usage, protective clothing including eye and face guards and respirators must be used to avoid contact with material or breathing chemical vapors/fumes.

Exposure to this product may have serious adverse health effects. This chemical may interact with other substances. Since the potential uses are so varied, Baker cannot warn of all of the potential dangers of use

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 or interaction with other chemicals or materials. Baker warrants that the chemical meets the specifications set forth on the label. BAKER DISCLAIMS ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED WITH REGARD TO THE PRODUCT SUPPLIED HEREUNDER, ITS MERCHANTABILITY OR ITS FITNESS FOR A PARTICULAR PURPOSE.

The user should recognize that this product can cause severe injury and even death, especially if improperly handled or the known dangers of use are not heeded. READ ALL PRECAUTIONARY INFORMATION. As new documented general safety information becomes available, Baker will periodically revise this Material Safety Data Sheet.

Note: CHEMTREC, CANUTEC, and NATIONAL RESPONSE CENTER emergency telephone numbers are to be used ONLY in the event of CHEMICAL EMERGENCIES involving a spill, leak, fire, exposure, or accident involving chemicals. All non-emergency questions should be directed to Customer Service (1-800-JTBAKER) for assistance.

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 Approved by Quality Assurance Department.