

OCCIDENTAL CHEMICAL CORPORATION, OCCIDENTAL TOWER -- CHROMIC ACID-FLAKE --  
6810-00-264-6517

===== Product Identification =====

Product ID:CHROMIC ACID-FLAKE

MSDS Date:01/01/1998

FSC:6810

NIIN:00-264-6517

Status Code:A

MSDS Number: CKYLL

=== Responsible Party ===

Company Name:OCCIDENTAL CHEMICAL CORPORATION, OCCIDENTAL TOWER

Address:5005 LYNDON B JOHNSON FWY

Box:809050

City:DALLAS

State:TX

ZIP:752

44-6198

Country:US

Info Phone Num:800-752-5151/972-404-3800

Emergency Phone Num:800-733-3665/ 972-404-3228

Resp. Party Other MSDS Num.:M4824

Preparer's Name:NOT PROVIDED

CAGE:0AH54

=== Contractor Identification ===

Company Name:OCCIDENTAL CHEMICAL CORPORATION

Address:5005 LYNDON B JOHNSON FWY

Box:City:DALLAS

State:TX

ZIP:75244-6198

Country:US

Phone:800-752-5151/972-404-3800

CAGE:0AH54

Company Name:PHOENIX INDUSTRIES INC

Address:1519 CHAMBERLAYNE PARKWAY

Box:City:RICHMOND

State:VA

ZIP:23222

Count

ry:US  
Phone:804-264-5183/FAX: 264-5535  
Contract Num:SP0450-01-M-D646  
CAGE:0YED2

=====  
Composition/Information on Ingredients  
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Ingred Name:CHROMIUM OXIDE (CRO3)  
CAS:1333-82-0  
RTECS #:GB6650000  
Minumum % Wt:99.  
Maxumum % Wt:100.  
Other REC Limits:NOT PROVIDED  
OSHA PEL:SEE TABLE Z-2  
ACGIH TLV:0.05 MG/M3

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Hazards Identification  
=====

LD50 LC50 Mixture:LD50 (ORAL, RAT) 52 MG/KG  
Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES  
Re  
ports of Carcinogenicity:NTP:YES IARC:YES OSHA:NO  
Health Hazards Acute and Chronic:INHALATION: VAPOR, MIST/ LIQUID MAY  
CAUSE SEVERE BURNS OF NASAL SEPTUM AND RESPIRATORY TRACT. MAY CAUSE  
KIDNEY AND LIVER DAMAGE. EYES: CAN CAUSE SEVERE DAMAGE INCLUDING  
BURNS AND BLINDNESS. SKIN: CAN CAUSE SEVERE BURNS. CONTACT WITH  
BROKEN SKIN MAY LEAD TO FORMATION OF FIRMLY MARGINATED "CHROME  
SORES". MAY CAUSE ALLERGIC CONTACT DERMATITIS. DERMAL ABSORPTION OF  
LARGE AMOUNTS MAY RESUL  
T IN KIDNEY F AILURE AND DEATH. INGESTION:  
CAN CAUSE SEVERE TISSUE DESTRUCTION. KIDNEY FAILURE MAY FOLLOW AND  
RESULT IN DEATH. MAY CAUSE LIVER DAMAGE. CHRONIC: MAY CAUSE  
CONJUNCTIVITIS,"CHROME SORES" ON SKIN, ULCER ATION AND PERFORATION  
OF NASAL SEPTUM.  
Explanation of Carcinogenicity:NTP AND IARC HAVE DETERMINED THAT THERE  
IS SUFFICIENT EVIDENCE FOR THE CARCINOGENICITY OF HEXAVALENT  
CHROMIUM COMPOUNDS BOTH IN HUMANS AND EXPERIMENTAL ANIMALS.  
HOWEVER, THE HEXAVALENT CH  
ROMIUM COMPOUNDS RESPONSIBLE (FOR HUMAN  
CARCINOGENICITY) CANNOT BE SPECIFIED.  
Effects of Overexposure:INHALATION: VAPOR, MIST/ LIQUID MAY CAUSE  
SEVERE BURNS OF NASAL SEPTUM AND RESPIRATORY TRACT. EYES: CAN CAUSE  
SEVERE BURNS AND BLINDNESS. SKIN: CAN CAUSE SEVERE BURNS. CONTACT  
WITH BROKEN SKIN MAY LEA D TO FORMATION OF FIRMLY MARGINATED  
"CHROME SORES". MAY CAUSE ALLERGIC CONTACT DERMATITIS. INGESTION:  
CAN CAUSE SEVERE TISSUE DESTRUCTION.

Medical Cond Aggravated by Exposu

re:PRE-EXISTING DISORDERS AFFECTING  
TARGET ORGANS.

===== First Aid Measures =====

First Aid:EYES: IMMEDIATELY FLUSH WITH WATER FOR AT LEAST 15 MINUTES, HOLDING EYELIDS APART. GET MEDICAL ATTENTION IMMEDIATELY. SKIN: IMMEDIATELY FLUSH CONTAMINATED AREAS WITH WATER THEN WASH WITH SOAP AND WATER. GET MEDICAL ATTENTION IMMEDIATELY. INHALATION: REMOVE TO FRESH AIR. IF BREATHING IS DIFFICULT, HAVE A TRAINED PERSON ADMINISTER OXYGEN. IF BREATHING HAS STOPPED, HAVE A TRAINED PERSON ADMINISTER ARTIFICIAL RESPIRATION. IF CONSCIOUS, IRRIGATE NASAL PASSAGES. GET MEDICAL ATTENTION IMMEDIATELY. INGESTION: DO NOT INDUCE VOMITING. GIVE PLENTY OF WATER/MILK. GET MEDICAL ATTENTION AT ONCE. GIVE 5-10 G M ASCORBIC ACID AND REPEAT MANY TIMES.

===== Fire Fighting Measures =====

Flash Point:NON-FLAMMABLE

Extinguishing Media:NON-FLAMMABLE/NON-COMBUSTIBLE. USE AGENTS APPROPRIATE FOR SURROUNDING FIRE.

Fire Fighting Procedures:WEAR NIOSH/MSHA APPROVED POSITIVE PRESSURE SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE CLOTHING. UNDER FIRE CONDITIONS, DECOMPOSING MATERIAL MAY FORM A HOT, VISCOUS FOAM.

Unusual Fire/Explosion Hazard:OXIDIZER. AVOID CONTACT WITH ORGANIC MATERIALS.

===== Accidental Release Measures =====

Spill Release Procedures:WEAR FULL PROTECTIVE EQUIPMENT INCLUDING A NIOSH/MSHA APPROVED POSITIVE PRESSURE SELF-CONTAINED BREATHING APPARATUS. STOP LEAKS. REMOVE AS MUCH AS POSSIBLE. THEN TREAT SPILL AREA WITH A REDUCING AGENT. NEUTRALIZE WITH A WEAK BASE. SOAK UP WITH INERT ABSORBENT MATERIAL (E.G. SAND) AND PLACE IN A CLOSED, LABELLED CONTAINER AND STORE IN A SAFE PLACE TO AWAIT DISPOSAL.

Neutralizing Agent:SODIUM BICARBONATE, SODA ASH OR LIME. REDUCERS: SODIUM BISULFITE OR SULFITE, FERROUS SULFATE OR CHLORIDE.

===== Handling and Storage =====

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Handling and Storage Precautions: STORE IN TIGHTLY CLOSED, LABELLED CONTAINERS AWAY FROM COMBUSTIBLE MATERIALS. AVOID CONTACT WITH INCOMPATIBLE MATERIALS.

Other Precautions: WEAR PERSONAL PROTECTIVE EQUIPMENT. DO NOT GET IN EYES, ON SKIN OR CLOTHING. AVOID PROLONGED OR REPEATED EXPOSURE. AVOID BREATHING AIRBORNE PARTICULATES; WEAR RESPIRATORY PROTECTION WHEN EXPOSURE IS POSSIBLE. WASH CONTAMINATED CLOTHING BEFORE REUSE. WASH THOROUGHLY WITH SOAP AND WATER AFTER HANDLING .

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===== Exposure Controls/Personal Protection =====

Respiratory Protection: WEAR A NIOSH/MSHA APPROVED RESPIRATOR FOLLOWING MANUFACTURER'S RECOMMENDATIONS, WHERE DUSTS, MISTS, FUMES OR VAPORS MAY OCCUR.

Ventilation: THE WORK AREA SHOULD BE ISOLATED & CONTAINED & PROVIDED WITH ADEQUATE LOCAL EXHAUST VENTILATION OR OTHER CONTROLS WHERE DUST OR FUMES MAY BE GENERATED.

Protective Gloves: WEAR CHEMICAL RESISTANT GLOVES SUCH AS PVC OR NITRILE.

Eye Protection: WEAR CHEMICAL SAFETY GOGGLES PLUS FULL FACE SHIELD TO PROTECT AGAINST SPLASHING

Other Protective Equipment: PROTECTIVE CLOTHING SHOULD BE WORN AND CHANGED AT LEAST DAILY. EMERGENCY SHOWER AND EYEWASH FACILITY SHOULD BE IN CLOSE PROXIMITY (ANSI Z358.1).

Work Hygienic Practices: WASH CONTAMINATED CLOTHING WITH SOAP AND WATER AND DRY BEFORE REUSE. ADVISE THE LAUNDRY OF THE MATERIAL CONTAMINATING THE CLOTHING.

Supplemental Safety and Health

THE NUMBER OF PERSONS EXPOSED SHOULD BE MINIMIZED. CERTAIN PROCESSES

LIKE CHROME PIGMENT PRODUCTION, HIGH TEMPERATURE WELDING OR CUTTING, ETC., MAY FORM MATERIAL MORE HAZARDOUS TO HUMANS THAN THIS PRODUCT. THE MATERIALS MAY BE THE FORMATION OF SLIGHTLY SOLUBLE SALTS OR FUMES WHICH ARE KNOWN TO BE HUMAN CARCINOGENS.

===== Physical/Chemical Properties =====

HCC:D3

NRC/State Lic Num: NOT RELEVANT

Melt/Freeze Pt: =197.2C, 387.F

Decomp Temp: Decomp Text: NOT PROVIDED

Spec Gravity: 2.70@25C (WATER=1)

pH: 1.1 FOR

A 1%  
Solubility in Water:63%@25C, HIGHLY SOLUBLE  
Appearance and Odor:SOLID DARK RED FLAKES OR POWDER; NO ODOR  
Corrosion Rate:NOT PROVIDED

===== Stability and Reactivity Data =====

Stability Indicator/Materials to Avoid:YES  
ACIDS, ALKALIS, METALS. THIS PRODUCT IS A STRONG OXIDIZING AGENT, EVEN  
IN SOLUTION. AVOID CONTACT WITH STRONG ACIDS, ALKALIS, ORGANIC  
MATERIALS, OILS, GREASES, OR ANY EASILY OXIDIZABLE MATERIAL.  
CORROSIVE TO SOME METALS. TH

Stability Co  
ndition to Avoid:HEAT. DO NOT STORE IN HUMID PLACES.  
Hazardous Decomposition Products:NONE.

===== Toxicological Information =====

Toxicological Information:ACUTE ORAL LD50: (RAT) 52 MG/KG (BOTH SEXES).  
ACUTE DERMAL LD50: (RABBIT) 57 MG/KG (BOTH SEXES). ACUTE INHALATION  
LC50: (RAT, 4HR) 217 MG/M3. PRIMARY SKIN IRRITATION:  
DR Y SOLID MOISTENED DRY SOLID  
MOISTENED 4 HRS  
4 HRS 24 HRS 24 HRS  
ERYTHEMA  
2/6 6/6 EDEMA  
0/6 5/6 NECROSIS 0/6 1/6 CORROSION  
  
1/1 1/1

===== Ecological Information =====

Ecological:CHROMIUM OXIDE AND CHROMIUM HAVE BEEN FOUND TO EXHIBIT  
MODERATE TO HIGH TOXICITY TO AQUATIC AND TERRESTRIAL ORGANISMS.  
CHROMIUM OXIDE WILL PERSIST PRIMARILY AS CHROME (III) AND CHROME  
(VI) IN WATER AND SOIL SYSTEMS. MATERIAL RELEASED TO THE  
ATMOSPHERE IS SUBJECT TO  
DEPOSITION WITH PARTICULATES OR RAINFALL.  
UNDER CERTAIN ENVIRONMENTAL CONDITIONS CHROMIUM MAY BE SUBJECT TO  
LOW LEVELS OF BIOACCUMULATION IN BOTH AQUATIC AND TERRESTRIAL  
PLANTS AND ANIMALS. THERE IS NO INDICATION OF BIOMAGNIFICATION IN  
THE FOOD CHAIN. PRECAUTIONS SHOULD BE TAKEN TO PREVENT THE  
ACCIDENTAL RELEASE OF THIS MATERIAL TO THE ENVIRONMENT.

===== Disposal Considerations =====

Waste Disposal Methods:TREAT WITH A REDUCING AGENT T

O CONVERT

HEXAVALENT CHROMIUM TO TRIVALENT CHROMIUM, THEN NEUTRALIZE WITH A WEAK BASE. THE SOLID MATERIAL MEETING TREATMENT STANDARDS MAY BE DISPOSED OF VIA AN APPROVED CHEMICAL WASTE LANDFILL IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REQUIREMENTS.

===== MSDS Transport Information =====

Transport Information:DOT PROPER SHIPPING NAME: CHROMIUM TRIOXIDE, ANHYDROUS DOT HAZARD CLASS: 5.1 (8) DOT IDENTIFICATION NO: UN1463 DOT PACKING G  
GROUP: II DOT HAZARDOUS SUBSTANCE: RQ 10 LBS (CHROMIC ACID) DOT MARINE POLLUTANT(S): NA ADDITIONAL DESCRIPTION REQUIREMENT: TOXIC

===== Regulatory Information =====

SARA Title III Information:THIS PRODUCT CONTAINS A TOXIC CHEMICAL OR CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 AND 40 CFR 372: 1333-8 2-0 CHROMIUM OXIDE (CRO3) 99-100%.

SARA/TITL

SECTION III HAZARD CATEGORIES: IMMEDIATE(ACUTE) HEALTH: YES REACTIVE HAZARD NO DELAYED(CHRONIC) HEALTH: YES SUDDEN RELEASE OF PRESSURE NO FIRE HAZARD: YES.

Federal Regulatory Information:ALL COMPONENTS OF THIS PRODUCT THAT ARE REQUIRED TO BE ON THE TSCA INVENTORY ARE LISTED ON THE INVENTORY.

State Regulatory Information:STATE OF CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986 (PROPOSITION 65): WARNING: THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

===== Other Information =====

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