













# Dichromate Cleaning Solution

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<b>Chromium Trioxide, ACS (1333-82-0)</b>	
LD50 oral rat	52 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	57 mg/kg (Equivalent or similar to OECD 402, 24 h, Rabbit, Male / female, Experimental value, Dermal, 14 day(s))
LC50 inhalation rat (mg/l)	0.217 mg/l (EPA OTS 798.1150: Acute inhalation toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation (aerosol), 14 day(s))
ATE US (oral)	52 mg/kg body weight
ATE US (dermal)	57 mg/kg body weight
ATE US (vapors)	0.217 mg/l/4h
ATE US (dust, mist)	0.217 mg/l/4h
Additional information	An oral toxicity study of chromium trioxide conducted on rats in 1989 found the average LD50 to be 51.9 mg/kg.

<b>Water (7732-18-5)</b>	
LD50 oral rat	≥ 90000 mg/kg
ATE US (oral)	90000 mg/kg body weight

Skin corrosion/irritation	: Causes severe skin burns.
Serious eye damage/irritation	: Assumed to cause serious eye damage
Respiratory or skin sensitization	: May cause an allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.
Germ cell mutagenicity	: May cause genetic defects.
Carcinogenicity	: May cause cancer (Inhalation).

<b>Chromium Trioxide, ACS (1333-82-0)</b>	
IARC group	1 - Carcinogenic to humans
National Toxicology Program (NTP) Status	Known Human Carcinogens

Reproductive toxicity	: Suspected of damaging fertility or the unborn child.
STOT-single exposure	: Not classified
STOT-repeated exposure	: Causes damage to organs (kidneys, liver, respiratory system, Skin, eyes) through prolonged or repeated exposure.

<b>Chromium Trioxide, ACS (1333-82-0)</b>	
STOT-repeated exposure	Causes damage to organs (kidneys, liver, respiratory system, Skin, eyes) through prolonged or repeated exposure.

Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available
Likely routes of exposure	: Skin and eye contact.
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met. Harmful if swallowed. Harmful if inhaled. Toxic in contact with skin.
Symptoms/effects	: Causes severe skin burns and eye damage. May cause genetic defects. Suspected of damaging fertility or the unborn child. Causes damage to organs (kidneys, liver) through prolonged or repeated exposure.
Symptoms/effects after inhalation	: Danger of serious damage to health by prolonged exposure through inhalation. Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. May cause cancer by inhalation.
Symptoms/effects after skin contact	: Repeated exposure to this material can result in absorption through skin causing significant health hazard. Toxic in contact with skin.
Symptoms/effects after eye contact	: Causes serious eye damage.
Symptoms/effects after ingestion	: Swallowing a small quantity of this material will result in serious health hazard.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - water	: Toxic to aquatic life with long lasting effects.
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<b>Chromic Acid, 10% w/v</b>	
LC50 fish 1	400 mg/l

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<b>Chromium Trioxide, ACS (1333-82-0)</b>	
LC50 fish 1	58.5 mg/l (96 h, Brachydanio rerio, Fresh water, Read-across)
EC50 Daphnia 1	0.063 mg/l (48 h, Daphnia magna, Fresh water, Read-across)

### 12.2. Persistence and degradability

<b>Chromic Acid, 10% w/v</b>	
Persistence and degradability	May cause long-term adverse effects in the environment.

<b>Chromium Trioxide, ACS (1333-82-0)</b>	
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

<b>Water (7732-18-5)</b>	
Persistence and degradability	Not established.

### 12.3. Bioaccumulative potential

<b>Chromic Acid, 10% w/v</b>	
Bioaccumulative potential	Not established.

<b>Chromium Trioxide, ACS (1333-82-0)</b>	
BCF fish 1	4.6 – 72 (Cyprinus carpio, Test duration: 6 weeks)
BCF fish 2	16 (Pisces)
BCF other aquatic organisms 1	192 (Mytilidae, Chrome)
BCF other aquatic organisms 2	125 (Ostreidae, Chrome)
Bioaccumulative potential	Not bioaccumulative.

<b>Water (7732-18-5)</b>	
Bioaccumulative potential	Not established.

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Other information : Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to comply with local, state and federal regulations.

Ecology - waste materials : Hazardous waste due to toxicity. Avoid release to the environment.

## SECTION 14: Transport information

### Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN1755 Chromic acid solution, 8, II  
UN-No.(DOT) : UN1755  
Proper Shipping Name (DOT) : Chromic acid solution  
Transport hazard class(es) (DOT) : 8 - Class 8 - Corrosive material 49 CFR 173.136  
Packing group (DOT) : II - Medium Danger  
Hazard labels (DOT) : 8 - Corrosive





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Dangerous for the environment : Yes  
 Marine pollutant : Yes



DOT Packaging Non Bulk (49 CFR 173.xxx) : 202  
 DOT Packaging Bulk (49 CFR 173.xxx) : 242  
 DOT Special Provisions (49 CFR 172.102) : B2 - MC 300, MC 301, MC 302, MC 303, MC 305, and MC 306 and DOT 406 cargo tanks are not authorized.  
 IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.  
 T8 - 4 178.274(d)(2) Normal..... Prohibited  
 TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.  
 TP12 - This material is considered highly corrosive to steel.

DOT Packaging Exceptions (49 CFR 173.xxx) : 154  
 DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 1 L  
 DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 30 L  
 DOT Vessel Stowage Location : C - The material must be stowed "on deck only" on a cargo vessel and on a passenger vessel.  
 DOT Vessel Stowage Other : 40 - Stow "clear of living quarters",44 - Stow "away from" oxidizers,89 - Segregation same as for oxidizers,100 - Stow "away from" flammable solids

Other information : No supplementary information available.

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

##### Chromic Acid, 10% w/v

SARA Section 311/312 Hazard Classes	Health hazard - Acute toxicity (any route of exposure) Health hazard - Skin corrosion or Irritation Health hazard - Serious eye damage or eye irritation Health hazard - Respiratory or skin sensitization Health hazard - Germ cell mutagenicity Health hazard - Carcinogenicity Health hazard - Reproductive toxicity Health hazard - Specific target organ toxicity (single or repeated exposure)
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All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Chromium Trioxide, ACS	CAS-No. 1333-82-0	10%
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<b>Chromium Trioxide, ACS (1333-82-0)</b>	
EPA TSCA Regulatory Flag	R - R - indicates a substance that is the subject of a TSCA section 6 risk management rule.
RQ (Reportable quantity, section 304 of EPA's List of Lists)	10 lb
SARA Section 311/312 Hazard Classes	Physical hazard - Oxidizer (liquid, solid or gas) Health hazard - Acute toxicity (any route of exposure) Health hazard - Carcinogenicity Health hazard - Respiratory or skin sensitization Health hazard - Germ cell mutagenicity Health hazard - Reproductive toxicity Health hazard - Serious eye damage or eye irritation Health hazard - Skin corrosion or Irritation Health hazard - Specific target organ toxicity (single or repeated exposure)

### 15.2. International regulations

#### CANADA

No additional information available

#### Water (7732-18-5)

Listed on the Canadian DSL (Domestic Substances List)

#### EU-Regulations

No additional information available

#### National regulations

No additional information available

### 15.3. US State regulations

**⚠ WARNING:** This product can expose you to Chromium Trioxide, ACS, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

## SECTION 16: Other information

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Revision date : 01/24/2020

Other information : None.

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Full text of H-phrases: see section 16:

H271	May cause fire or explosion; strong oxidizer
H301	Toxic if swallowed
H302	Harmful if swallowed
H310	Fatal in contact with skin
H311	Toxic in contact with skin
H314	Causes severe skin burns and eye damage
H317	May cause an allergic skin reaction
H330	Fatal if inhaled
H332	Harmful if inhaled
H334	May cause an 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
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H411	Toxic to aquatic life with long lasting effects

NFPA health hazard

: 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

NFPA fire hazard

: 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity

: 0 - Material that in themselves are normally stable, even under fire conditions.

NFPA specific hazard

: OX - Materials that posses oxidizing properties.

Hazard Rating

Health

: 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

Flammability

: 0 Minimal Hazard - Materials that will not burn

Physical

: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Personal protection

: J  
J - Splash goggles, Gloves, Synthetic apron, Dust & vapor respirator

