

Safety Data Sheet
According to the (US) Hazard Communication Standard (29 CFR 1910.1200)

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name	Chromic Acid Solution, 5.0% (w/v)	
NCL Catalog Number	C-20	
Product Description	Laboratory chemical	
Supplier	NCL of Wisconsin, Inc. Telephone: 1-800-648-7836 Email: nclabs@nclabs.com	PO Box 8, Birnamwood, WI 54414 Fax: 715-449-2454 Emergency Contact: 1-800-424-9300 (Chemtrec)

SECTION 2: HAZARDS IDENTIFICATION

GHS Classification

Acute Toxicity	Oral Category 4
Acute Toxicity	Dermal Category 4
Acute Toxicity	Inhalation Category 4
Skin Corrosion	Category 1A
Serious Eye Damage	Category 1
Respiratory Sensitization	Category 1
Skin Sensitization	Category 1
Germ Cell Mutagenicity	Category 1B
Carcinogenicity	Category 1A
Reproductive Toxicity	Category 2
Specific Target Organ Toxicity	Repeated Exposure Category 1
Aquatic Chronic	Category 2



Signal Word Danger

Hazard Statements

H302+H312+H332	Harmful if swallowed, in contact with skin or if inhaled.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H334	May cause 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 if inhaled.
H411	Toxic to aquatic life with long lasting effects.

Precautionary Statements

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe mist/vapors/spray.
P264	Wash exposed skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	Wear respiratory protection.

P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P312	Call a POISON CENTER or doctor if you feel unwell.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P312	Call a POISON CENTER or doctor if you feel unwell.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P363	Wash contaminated clothing before reuse.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310	Immediately call a POISON CENTER or doctor.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P391	Collect spillage.
P405	Store locked up.
P501	Dispose of contents/container to comply with local, state and federal regulations.
Other Hazards Not Contributing to the Classification	None under normal conditions.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Identity Not applicable
Common Name Not applicable

Substance

Name	CAS #	Approximate %
Water	7732-18-5	95
Chromic Acid	1333-82-0	5

SECTION 4: FIRST AID MEASURES

Description of First Aid Measures

General First Aid Measures Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention.

If Inhaled Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/physician. If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor.

In Case of Skin Contact Immediately call a POISON CENTER or doctor. Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention.

In Case of Eye Contact Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

If Swallowed Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor.

Most Important Symptoms/Effects Acute and Delayed

Symptoms/Injuries 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.

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.

After Skin Contact Repeated exposure to this material can result in absorption through skin causing significant health hazard. Toxic in contact with skin.

After Eye Contact Causes serious eye damage.

After Ingestion Swallowing a small quantity of this material will result in serious health hazard.

Indication of Immediate Medical Attention and Special Treatment Needed

Seek medical advice if you feel unwell.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable Extinguishing Media Do not use a heavy water stream.

Special Hazards Arising from the Chemical Thermal decomposition generates corrosive vapors.

Special Protective Actions for Fire-Fighters Wear self-contained breathing apparatus and protective clothing. Keep exposed containers cool with water spray. Dilute toxic gases with water spray.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Personal Precautions Use personal protective equipment (see section 8). Safety glasses, gloves, gas/dust mask. Avoid dust formation. Avoid breathing dust, vapors, mist or gas. Ensure adequate ventilation and evacuate personnel to safe areas.

Environmental Precautions Prevent entry to surface and ground waters.

Methods and Materials for Containment and Cleaning Up Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Ensure compliance with local, state and federal regulations.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling Avoid contact with eyes and skin. Avoid breathing vapors. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

Conditions for Safe Storage Including any Incompatibilities Keep in original container, tightly closed and stored in a cool, dry, ventilated area. Protect container from physical damage and direct sunlight. Isolate from incompatible substances. Protect from moisture. Do not store on wooden floor.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Chromic Acid (1333-82-0)		
USA ACGIH	ACGIH TWA (mg/m ³)	0.05 mg/m ³
USA OSHA	OSHA PEL (TWA) (mg/m ³)	0.005 mg/m ³

Appropriate Engineering Controls Material should be handled or transferred in a fume hood or with equivalent ventilation. Maintain eye-wash fountain and quick-drench facilities in work area.

Individual Protection Measures Avoid all unnecessary exposure.

Eye/Face Protection Use chemical safety goggles and/or a full face shield where splashing is possible. Contact lenses should not be worn when working with this material. Maintain eye-wash fountain and quick-drench facilities in work area.

Skin Protection Protective gloves and additional protection including impervious boots, apron, or coveralls, as needed in areas of unusual exposure to prevent skin contact.

Respiratory Protection Wear appropriate mask.

Other Information Do not eat, drink or smoke when using this product.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State Liquid

Color	Orange to red-orange
Odor	Slightly acidic
Odor Threshold	Not determined
pH	Not determined
Melting Point/Freezing Point	Not determined
Initial Boiling Point and Boiling Range	Not determined
Flash Point	Not determined
Oxidizing Properties	May intensify fire
Evaporation Rate	Not determined
Flammability (Solid, Gas)	Not determined
Upper/Lower Flammability/Explosive Limits	Not determined
Vapor Pressure	Not determined
Vapor Density	Not determined
Relative Density	Not determined
Solubility	Soluble in water
Partition Coefficient: n-octanol/water	Not determined
Auto-Ignition Temperature	Not determined
Decomposition Temperature	Not determined
Viscosity	Not determined

SECTION 10: STABILITY AND REACTIVITY

Reactivity	Thermal decomposition generates corrosive vapors.
Chemical Stability	Stable under ordinary conditions of use and storage.
Possibility of Hazardous Reactions	May react violently with reducing agents.
Conditions to Avoid	Direct sunlight and extremely high or low temperatures.
Incompatible Materials	Reducing agents, oils, greases, organic and oxidizable materials. Will ignite on contact with acetic acid and alcohol.
Hazardous Decomposition Products	Decomposes at high temperatures to form oxygen and trivalent chromium oxide.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Toxicity Harmful if swallowed, in contact with skin, or if inhaled.

Chromic Acid, 10% w/v	
LD50 oral rat	500 mg/kg
LD50 dermal rat	550 mg/kg
LD50 dermal rabbit	570 mg/kg
LC50 inhalation rat (mg/l)	2.17 mg/l/4h
Water (7732-18-5)	
LD50 oral rat	>90000 mg/kg

Skin Corrosion/Irritation	Causes severe skin burns.
Serious Eye Damage/Irritation	Causes serious eye damage.
Respiratory or Skin Sensitization	May cause 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). IARC: Group 3 Carcinogenic to humans.
Reproductive Toxicity	Suspected of damaging fertility or the unborn child.
Specific Target Organ Toxicity (Single Exposure)	Not classified
Specific Target Organ Toxicity (Repeated Exposure)	Causes damage to organs (kidneys, liver, respiratory system, skin, and eyes) through prolonged or repeated exposure.
Aspiration Hazard	Not classified

Potential Adverse Human Health Effects and Symptoms	Harmful if swallowed, in contact with skin, or if inhaled.
Symptoms/Injuries 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/Injuries After Skin Contact	Repeated exposure to this material can result in absorption through the skin causing significant health hazard. Toxic in contact with skin.
Symptoms/Injuries After Eye Contact	Causes serious eye damage.
Symptoms/Injuries After Ingestion	Swallowing a small quantity of this material will result in serious health hazard.
Other Information	Damage to the lungs, kidney injury may occur. Prolonged or repeated exposure can cause vomiting, diarrhea, and lung irritation. Causes stomach irregularities.

SECTION 12: ECOLOGICAL INFORMATION

Ecology – Water Toxicity Toxic to aquatic life with long lasting effects.

Chromic Acid, 10% w/v	
LC50 fish 1	400 mg/l
Chromic Acid (1333-82-0)	
LC50 fish 1	40 mg/l (96 h; Colisa fasciatus)
EC50 Daphnia 1	0.8 mg/l (48 h; Daphnia magna)

Persistence and Degradability May cause long-term adverse effects to the environment.

Bioaccumulative Potential	
BCF fish 1	4.6-72 (Cyprinus carpio)
BCF fish 2	16 (Pisces)
BCF other aquatic organisms 1	192 (Mytilidae)
BCF other aquatic organisms 2	125 (Ostreidae)

Mobility in Soil Not established

Other Adverse Effects Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Methods of Disposal

Disposal Recommendations Dispose of contents/containers in accordance with local, state and federal regulations. Hazardous waste shall not be mixed together with other waste.

Other Information Hazardous waste due to toxicity. Avoid release to the environment.

SECTION 14: TRANSPORT INFORMATION

UN Number	1755
UN Shipping Name	Chromic Acid Solution
Transport Hazard Class(es)	8 – Corrosive material.
Packing Group	II
Environmental Hazards	Not applicable
Transport in Bulk	Not applicable
Other Precautions	Not applicable

SECTION 15: REGULATORY INFORMATION

Chromic Acid (1333-82-0)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on SARA Section 313 (Specific Toxic Chemical Listings)

Reportable Quantity	10 lb
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SECTION 16: OTHER INFORMATION

Revision Date: 04/07/2015

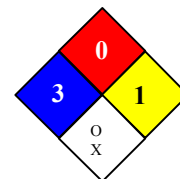
NFPA Hazards

Health Hazard 3: Short exposure could cause serious temporary or moderate residual injury.

Fire Hazard 0: Materials that will not burn under typical fire conditions.

Reactivity/Instability 1: May become unstable at elevated temperatures and pressures, may be mildly water reactive.

Specific Hazard OX- This denotes an oxidizer, a chemical which can greatly increase the rate of combustion/fire.



HMIS III Rating

Health 4: Life-threatening, major or permanent damage may result from single or repeated overexposures.

Flammability 0: Materials that will not burn.

Physical Hazard 1: Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors.

Personal Protection J

C-20	
Health	4
Flammability	0
Physical Hazard	1
Personal Protection	J

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END OF SAFETY DATA SHEET