



Safety Data Sheet

12/16/15

Chromium Formate Solution

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Chromium Formate Solution

Manufacturer: Sentury Reagents, Inc.
2515 Commerce Drive
Rock Hill, SC
29730

Telephone: 803-327-6880

Fax: 803-327-3872

In Case of Emergency Call: PERS - 800-633-8253 International: 011-801-629-0667
Acct. 10613 (24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

Classification Skin Corrosion/Irritant 1B Serious Eye Damage/Irritant 1B Acute Toxicity Oral 4
Skin Sensitizer 1B Respiratory Sensitizer 1B

Signal Word Danger

OSHA Hazards: Carcinogen, Target Organ Effect, Toxic by ingestion, Skin sensitizer, Irritant, Mutagen

Target Organs: Lungs, Kidney, Liver, Blood, Skin, Eyes

Pictograms:



Hazard

Statements H302 - Harmful if swallowed
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
H335 - May cause respiratory irritation

Precautionary Statements

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P302+ P352 - IF ON SKIN: Wash with plenty of soap and water
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P308 + P313 - IF exposed or concerned: Get medical attention/advice

HMIS Classification
Health Hazard: 2
Flammability: 0
Physical hazards: 1
Personal protection: C

NFPA Rating
Health Hazard: 2
Fire: 0
Reactivity Hazard: 1

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS #	EC No.	Classification	Reach Reg No.
Chromium (III) formate hexahydrate	48-65		-	-	Not Available

4. FIRST-AID MEASURES

Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Skin Contact	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Consult a physician if necessary.
Inhalation	Move to fresh air. If breathing becomes difficult, give oxygen. May cause allergic respiratory reaction. If symptoms arise, call a physician.
Ingestion	Clean mouth with water and afterwards drink plenty of water. DO NOT induce vomiting unless directed to do so by a physician or poison control center.
Notes to Physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flammable Properties	Not flammable.
Flash Point	Not determined
Suitable Extinguishing Media	Dry chemical, CO ₂ , water spray or regular foam.
Hazardous Combustion Products	Formic acid gas.
Explosion Data	
Sensitivity to Mechanical Impact	Not sensitive.
Sensitivity to Static Discharge	Not sensitive.
Protective Equipment and Precautions for Firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Avoid contact with skin, eyes and clothing. Use personal protective equipment. Ensure adequate ventilation.
Methods for Containment	Prevent further leakage or spillage if safe to do so.
Methods for Cleaning Up	Avoid dust formation. Pick up and transfer to properly labeled containers. Wash spill site with soap solution and flush area with copious amounts of water

7. HANDLING AND STORAGE

Handling	Handle in accordance with good industrial hygiene and safety practice. Hygroscopic.
Storage	Keep container tightly closed in a dry and well-ventilated place. Hygroscopic.
Incompatible Products	Oxidizing agents.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Component	Exposure Limits	Basis	Entity
Chromium (III) formate hexahydrate	TWA: 0.5 mg/m ³	TWA: 0.5 mg/m ³	IDLH: 25 mg/m ³ TWA: 0.5 mg/m ³

Engineering Measures	Showers Eyewash stations Ventilation systems.
Personal Protective Equipment	
Eye/Face Protection	Tightly fitting safety goggles.
Skin and Body Protection	Wear protective gloves/clothing.
Respiratory Protection	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Dark green
Odor	No information available
Odor Threshold	No information available
Decomposition Temperature °C	No information available
Freezing Point	No information available
Initial Boiling Point	No information available
Physical State	liquid
pH	(as 5% solution) ~2.5
Flash Point	Not determined
Autoignition Temperature	No data available
Boiling Point/Range	No data available
Melting Point/Range	No data available
Flammability Limits in Air	

Upper	No data available
Lower	No data available
Explosive Properties	No information available
Oxidizing Properties	No information available
Evaporation Rate	No data available
MMHG @ 37.8 C	No data available
Vapor Density	No data available
Specific Gravity	No data available
Solubility	No information available
Partition Coefficient (n-octanol/water)	No data available
Viscosity	No information available

10. STABILITY AND REACTIVITY

Chemical Stability	Stable
Possibility of Hazardous Reactions	Will not occur.
Conditions to Avoid	Hygroscopic.
Incompatible Materials	Oxidizing agents.
Hazardous Decomposition Products	Formic acid gas.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information Corrosive, causes burns. Harmful if swallowed. Sensitizer.

Chemical Name	LD50 Oral	LC50 Inhalation	LC50 Inhalation
Chromium (III) formate hexahydrate	1790 mg/kg (Rat)		

Chronic Toxicity

Chronic Toxicity No known effect based on information supplied.

Target Organ Effects Liver, kidney, and respiratory system.

12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method	Dispose of material in accordance with all federal, state, and local regulations.
Contaminated Packaging	Dispose of in accordance with all federal, state and local regulations.

14. TRANSPORTATION INFORMATION

US DOT	UN3264, Corrosive liquid, acidic, inorganic, n.o.s., (Chromium Formate Solution), 8, III
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TDG	UN3264, Corrosive liquid, acidic, inorganic, n.o.s., (Chromium Formate Solution), 8, III
IMDG	UN3264, Corrosive liquid, acidic, inorganic, n.o.s., (Chromium Formate Solution), 8, III
Marine Pollutant	No
IATA/ICAO	UN3264, Corrosive liquid, acidic, inorganic, n.o.s., (Chromium Formate Solution), 8, III

15. REGULATORY INFORMATION

REACH Title VII Restrictions No information available.

Chemical Name	Dangerous Substances	Organic Solvents	Harmful Substances Whose Names Are to be Indicated on the Label	Pollution Release and Transfer Registry (Class II):	Pollution Release and Transfer Registry (Class I):	Poison and Deleterious Substances Control Law:
Chromium (III) Formate	>=0.1	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Component	ISHA - Harmful Substances Prohibited for Manufacturing, Importing, Transferring, or Supplying	ISHA - Harmful Substances Requiring Permission	Toxic Chemical Classification Listing (TCCL) - Toxic Chemicals	Toxic Release Inventory (TRI) - Group I	Toxic Release Inventory (TRI) - Group II	
Chromium (III) Formate hexahydrate	Not applicable	Not applicable	Not applicable	>= 0.1 %	Not applicable	

International Inventories

TSCA	DOES NOT COMPLY
EINECS/ELINCS	DOES NOT COMPLY
ENCS	COMPLIES
IECSC	COMPLIES
KECL	DOES NOT COMPLY
PICCS	COMPLIES
AICS	COMPLIES

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Component	CWA - Reportable	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous
Chromium (III) chloride hexahydrate (95-100)		X		

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product contains the following substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act:

Chemical Name	CAS-No	Weight %	HAPS data	VOC Chemicals	Class 1 Ozone Depletors	Class 2 Ozone
Chromium (III) chloride hexahydrate		48-65	Present (includes any unique chemical substance that contains Chromium as part of its infrastructure)			

CERCLA

Chemical	Hazardous Substances RQs	Extremely Hazardous Substances
Chromium (III) chloride hexahydrate		1 lb

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Chromium (III) chloride hexahydrate	X	X	X	X	X

International Regulations

Mexico - Grade

Chemical	Carcinogen Status	Exposure Limits
Chromium (III) Formate hexahydrate		Mexico: TWA 0.5 mg/m ³

Canada

WHMIS Hazard

Class D2A Very toxic materials
 D2B Toxic materials
 E Corrosive material



16. OTHER INFORMATION

Further information:

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sentury Reagents, Inc., shall not be held liable for any damage resulting from handling or from contact with the above product.