



# Fisher Scientific

Part of Thermo Fisher Scientific

## SAFETY DATA SHEET

Creation Date 16-Nov-2010

Revision Date 10-Mar-2014

Revision Number 1

### 1. Identification

**Product Name** Sodium dichromate dihydrate

**Cat No. :** S258-3; S258-4; S258-5

**Synonyms** Sodium bichromate

**Recommended Use** Laboratory chemicals.

**Uses advised against** No Information available

**Details of the supplier of the safety data sheet**

**Company**

Fisher Scientific  
One Reagent Lane  
Fair Lawn, NJ 07410  
Tel: (201) 796-7100

**Emergency Telephone Number**

CHEMTREC®, Inside the USA: 800-424-9300  
CHEMTREC®, Outside the USA: 001-703-527-3887

### 2. Hazard(s) identification

**Classification**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Oxidizing solids	Category 2
Acute oral toxicity	Category 3
Acute dermal toxicity	Category 4
Acute Inhalation Toxicity - Dusts and Mists	Category 2
Skin Corrosion/irritation	Category 1 B
Serious Eye Damage/Eye Irritation	Category 1
Respiratory Sensitization	Category 1
Skin Sensitization	Category 1
Germ Cell Mutagenicity	Category 1B
Carcinogenicity	Category 1B
Reproductive Toxicity	Category 1B
Specific target organ toxicity (single exposure)	Category 3
Target Organs - Respiratory system.	
Specific target organ toxicity - (repeated exposure)	Category 1
Target Organs - Liver, Kidney, Blood.	

**Label Elements**

**Signal Word**

Danger

**Hazard Statements**

May intensify fire; oxidizer  
Toxic if swallowed  
Harmful in contact with skin  
Causes severe skin burns and eye damage  
May cause respiratory irritation  
May cause an allergic skin reaction  
Fatal if inhaled  
May cause allergy or asthma symptoms or breathing difficulties if inhaled  
May cause genetic defects  
May cause cancer  
May damage fertility. May damage the unborn child  
Causes damage to organs through prolonged or repeated exposure



### Precautionary Statements

#### Prevention

Obtain special instructions before use  
Do not handle until all safety precautions have been read and understood  
Use personal protective equipment as required  
Wash face, hands and any exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product  
Do not breathe dust/fume/gas/mist/vapors/spray  
Use only outdoors or in a well-ventilated area  
Wear respiratory protection  
In case of inadequate ventilation wear respiratory protection  
Contaminated work clothing should not be allowed out of the workplace  
Wear protective gloves  
Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
Keep/Store away from clothing/ other combustible materials  
Take any precaution to avoid mixing with combustibles

#### Response

Immediately call a POISON CENTER or doctor/physician

#### Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

#### Skin

Wash contaminated clothing before reuse  
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower  
If skin irritation or rash occurs: Get medical advice/attention

#### Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

#### Ingestion

Rinse mouth  
Do NOT induce vomiting

#### Fire

In case of fire: Use CO<sub>2</sub>, dry chemical, or foam for extinction

#### Storage

Store locked up  
Store in a well-ventilated place. Keep container tightly closed

#### Disposal

Dispose of contents/container to an approved waste disposal plant

#### Hazards not otherwise classified (HNOC)

Very toxic to aquatic life with long lasting effects  
WARNING! This product contains a chemical known in the State of California to cause cancer, birth defects or other reproductive

harm.

### 3. Composition / information on ingredients

Component	CAS-No	Weight %
Sodium dichromate dihydrate	7789-12-0	>95
Sodium dichromate	10588-01-9	-

### 4. First-aid measures

<b>General Advice</b>	Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.
<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.
<b>Skin Contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.
<b>Inhalation</b>	Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Immediate medical attention is required.
<b>Ingestion</b>	Do not induce vomiting. Call a physician or Poison Control Center immediately.
<b>Most important symptoms/effects</b>	Causes burns by all exposure routes. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause allergic skin reaction. . Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation: Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing
<b>Notes to Physician</b>	Treat symptomatically

### 5. Fire-fighting measures

<b>Unsuitable Extinguishing Media</b>	No information available
<b>Flash Point</b>	No information available
<b>Method -</b>	No information available
<b>Autoignition Temperature</b>	
<b>Explosion Limits</b>	
<b>Upper</b>	No data available
<b>Lower</b>	No data available
<b>Oxidizing Properties</b>	Oxidizer
<b>Sensitivity to Mechanical Impact</b>	No information available
<b>Sensitivity to Static Discharge</b>	No information available

#### Specific Hazards Arising from the Chemical

The product causes burns of eyes, skin and mucous membranes. Oxidizer: Contact with combustible/organic material may cause fire. May ignite combustibles (wood paper, oil, clothing, etc.). Do not allow run-off from fire fighting to enter drains or water courses.

#### Hazardous Combustion Products

Highly toxic fumes Sodium oxides Chromium oxide

#### 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. Thermal decomposition can lead to release of irritating gases and vapors.

**NFPA**

**Health**  
4

**Flammability**  
0

**Instability**  
1

**Physical hazards**  
OX

## 6. Accidental release measures

**Personal Precautions**

Use personal protective equipment. Evacuate personnel to safe areas. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid dust formation.

**Environmental Precautions**

Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained. Should not be released into the environment. See Section 12 for additional ecological information. Avoid release to the environment. Collect spillage.

**Methods for Containment and Clean Up**

Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation. Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Sweep up and shovel into suitable containers for disposal.

## 7. Handling and storage

**Handling**

Use only under a chemical fume hood. Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Do not ingest. Do not breathe vapors/dust. Avoid dust formation. Keep away from clothing and other combustible materials.

**Storage**

Keep containers tightly closed in a dry, cool and well-ventilated place. Corrosives area. Do not store near combustible materials.

## 8. Exposure controls / personal protection

**Exposure Guidelines**

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sodium dichromate dihydrate	TWA: 0.05 mg/m <sup>3</sup>	(Vacated) Ceiling: 0.1 mg/m <sup>3</sup> Ceiling: 0.1 mg/m <sup>3</sup>	IDLH: 15 mg/m <sup>3</sup> TWA: 0.0002 mg/m <sup>3</sup>
Sodium dichromate	TWA: 0.05 mg/m <sup>3</sup>	(Vacated) Ceiling: 0.1 mg/m <sup>3</sup> Ceiling: 0.1 mg/m <sup>3</sup>	IDLH: 15 mg/m <sup>3</sup> TWA: 0.0002 mg/m <sup>3</sup>

Component	Quebec	Mexico OEL (TWA)	Ontario TWAEV
Sodium dichromate dihydrate	TWA: 0.05 mg/m <sup>3</sup>	TWA: 0.05 mg/m <sup>3</sup> TWA: 0.5 mg/m <sup>3</sup>	TWA: 0.05 mg/m <sup>3</sup>
Sodium dichromate	TWA: 0.05 mg/m <sup>3</sup>	TWA: 0.05 mg/m <sup>3</sup> TWA: 0.5 mg/m <sup>3</sup>	TWA: 0.05 mg/m <sup>3</sup>

Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH IDLH: The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health

**Engineering Measures**

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

**Personal Protective Equipment****Eye/face Protection**

Tightly fitting safety goggles. Face-shield.

**Skin and body protection**

Long sleeved clothing.

**Respiratory Protection**

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

**9. Physical and chemical properties**

<b>Physical State</b>	Solid
<b>Appearance</b>	Orange
<b>Odor</b>	Odorless
<b>Odor Threshold</b>	No information available
<b>pH</b>	3.5-3.9 5% aq.sol
<b>Melting Point/Range</b>	357 °C / 674.6 °F
<b>Boiling Point/Range</b>	400 °C / 752 °F @ 760 mmHg
<b>Flash Point</b>	No information available
<b>Evaporation Rate</b>	Not applicable
<b>Flammability (solid,gas)</b>	No information available
<b>Flammability or explosive limits</b>	
<b>Upper</b>	No data available
<b>Lower</b>	No data available
<b>Vapor Pressure</b>	No information available
<b>Vapor Density</b>	Not applicable
<b>Specific Gravity</b>	No information available
<b>Solubility</b>	No information available
<b>Partition coefficient; n-octanol/water</b>	No data available
<b>Autoignition Temperature</b>	
<b>Decomposition Temperature</b>	400 °C
<b>Viscosity</b>	Not applicable
<b>Molecular Formula</b>	Cr <sub>2</sub> Na <sub>2</sub> O <sub>7</sub> · 2 H <sub>2</sub> O
<b>Molecular Weight</b>	298

**10. Stability and reactivity**

<b>Reactive Hazard</b>	Yes
<b>Stability</b>	Stable under normal conditions. Oxidizer: Contact with combustible/organic material may cause fire.
<b>Conditions to Avoid</b>	Incompatible products. Excess heat. Combustible material.
<b>Incompatible Materials</b>	Organic materials, Acids, Water, Strong bases, Acid anhydrides, Metals, Reducing agents, Powdered metals, Strong reducing agents, Combustible material
<b>Hazardous Decomposition Products</b>	Highly toxic fumes, Sodium oxides, Chromium oxide
<b>Hazardous Polymerization</b>	Hazardous polymerization does not occur.
<b>Hazardous Reactions</b>	None under normal processing.

**11. Toxicological information****Acute Toxicity****Product Information****Component Information**

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sodium dichromate	= 46 mg/kg ( Rat )	= 960 mg/kg ( Rabbit )	= 0.124 mg/L ( Rat ) 4 h

**Toxicologically Synergistic Products** No information available

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Irritation** Causes burns by all exposure routes

**Sensitization** No information available

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Sodium dichromate dihydrate	7789-12-0	Not listed	Not listed	A1	Not listed	A1
Sodium dichromate	10588-01-9	Group 1	Known	A1	X	A1

*IARC: (International Agency for Research on Cancer)*

*NTP: (National Toxicity Program)*

*ACGIH: (American Conference of Governmental Industrial Hygienists)*

*Mexico - Occupational Exposure Limits - Carcinogens*

*IARC: (International Agency for Research on Cancer)*

*Group 1 - Carcinogenic to Humans*

*Group 2A - Probably Carcinogenic to Humans*

*Group 2B - Possibly Carcinogenic to Humans*

*NTP: (National Toxicity Program)*

*Known - Known Carcinogen*

*Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen*

*A1 - Known Human Carcinogen*

*A2 - Suspected Human Carcinogen*

*A3 - Animal Carcinogen*

*ACGIH: (American Conference of Governmental Industrial Hygienists)*

*Mexico - Occupational Exposure Limits - Carcinogens*

*A1 - Confirmed Human Carcinogen*

*A2 - Suspected Human Carcinogen*

*A3 - Confirmed Animal Carcinogen*

*A4 - Not Classifiable as a Human Carcinogen*

*A5 - Not Suspected as a Human Carcinogen*

**Mutagenic Effects** Mutagenic

**Reproductive Effects** Possible risk of impaired fertility.

**Developmental Effects** No information available.

**Teratogenicity** Teratogenic effects have occurred in experimental animals.

**STOT - single exposure** Respiratory system

**STOT - repeated exposure** Liver Kidney Blood

**Aspiration hazard** No information available

**Symptoms / effects, both acute and delayed** Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation: Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing

**Endocrine Disruptor Information** No information available

**Other Adverse Effects** See actual entry in RTECS for complete information.

## 12. Ecological information

### Ecotoxicity

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment. May cause long-term adverse effects in the environment. Do not allow material to contaminate ground water system.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Sodium dichromate	Not listed	33.2: 96 h Pimephales promelas mg/L LC50 flow-through 213: 96 h Lepomis macrochirus mg/L LC50 static 69: 96 h Oncorhynchus mykiss mg/L LC50 flow-through	Not listed	EC50: = 1.4 mg/L (Daphnia magna) 24 h, EC50: 0.098 - 0.129 mg/L (Daphnia magna) 48 h,

**Persistence and Degradability** based on information available. May persist

**Bioaccumulation/ Accumulation** No information available.

**Mobility** Will likely be mobile in the environment due to its water solubility.

### 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

### 14. Transport information

#### DOT

**UN-No** UN3087  
**Proper Shipping Name** OXIDIZING SOLID, TOXIC, N.O.S.  
**Proper technical name** Sodium dichromate dihydrate  
**Hazard Class** 5.1  
**Subsidiary Hazard Class** 6.1  
**Packing Group** II

#### TDG

**UN-No** UN3087  
**Proper Shipping Name** OXIDIZING SOLID, TOXIC, N.O.S.  
**Hazard Class** 5.1  
**Subsidiary Hazard Class** 6.1  
**Packing Group** II

#### IATA

**UN-No** UN3087  
**Proper Shipping Name** OXIDIZING SOLID, TOXIC, N.O.S.  
**Hazard Class** 5.1  
**Subsidiary Hazard Class** 6.1  
**Packing Group** II

#### IMDG/IMO

**UN-No** UN3087  
**Proper Shipping Name** OXIDIZING SOLID, TOXIC, N.O.S.  
**Hazard Class** 5.1  
**Subsidiary Hazard Class** 6.1  
**Packing Group** II

### 15. Regulatory information

All of the components in the product are on the following Inventory lists: X = listed

#### International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
Sodium dichromate dihydrate	-	-	-	-	-		X	-	X	X	-
Sodium dichromate	X	X	-	234-190-3	-		X	X	X	X	X

#### Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

**U.S. Federal Regulations****TSCA 12(b)**

Component	TSCA 12(b)
Sodium dichromate dihydrate	Section 6
Sodium dichromate	Section 6

**SARA 313**

Component	CAS-No	Weight %	SARA 313 - Threshold Values %
Sodium dichromate dihydrate	7789-12-0	>95	0.1
Sodium dichromate	10588-01-9	-	0.1

**SARA 311/312 Hazardous Categorization**

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

**Clean Water Act**

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Sodium dichromate dihydrate	-	-	X	-
Sodium dichromate	X	10 lb	X	-

**Clean Air Act**

Component	HAPS Data	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Sodium dichromate dihydrate	X		-
Sodium dichromate	X		-

**OSHA Occupational Safety and Health Administration**

Component	Specifically Regulated Chemicals	Highly Hazardous Chemicals
Sodium dichromate dihydrate	5 µg/m <sup>3</sup> TWA 2.5 µg/m <sup>3</sup> Action Level	-
Sodium dichromate	5 µg/m <sup>3</sup> TWA 2.5 µg/m <sup>3</sup> Action Level	-

**CERCLA**

Component	Hazardous Substances RQs	CERCLA EHS RQs
Sodium dichromate	10 lb	-

**California Proposition 65**

This product contains the following Proposition 65 chemicals:

Component	CAS-No	California Prop. 65	Prop 65 NSRL	Category
Sodium dichromate dihydrate	7789-12-0	Carcinogen Developmental Female Reproductive Male Reproductive	0.001 µg/day	Developmental Carcinogen
Sodium dichromate	10588-01-9	Carcinogen Developmental Female Reproductive Male Reproductive	0.001 µg/day	Developmental Carcinogen

**State Right-to-Know**

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Sodium dichromate dihydrate	-	X	X	X	X
Sodium dichromate	X	X	X	X	X



**U.S. Department of Transportation**

Reportable Quantity (RQ): N  
DOT Marine Pollutant N  
DOT Severe Marine Pollutant N

**U.S. Department of Homeland Security**

This product does not contain any DHS chemicals.

**Other International Regulations**

**Mexico - Grade** No information available

**Canada**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

**WHMIS Hazard Class** C Oxidizing materials  
D1A Very toxic materials  
D2A Very toxic materials  
E Corrosive material

**16. Other information**

**Prepared By** Regulatory Affairs  
Thermo Fisher Scientific  
Email: EMSDS.RA@thermofisher.com

**Creation Date** 16-Nov-2010

**Revision Date** 10-Mar-2014

**Print Date** 10-Mar-2014

**Revision Summary** This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

**Disclaimer**

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

**End of SDS**