





Sodium Dichromate Dihydrate		Pricing >
Linear Formula	$\text{Na}_2\text{Cr}_2\text{O}_7 \cdot 2\text{H}_2\text{O}$	
Pubchem CID	108005	
MDL Number	MFCD00149166	
EC No.	234-190-3	
IUPAC Name	disodium; oxido-(oxido(dioxo) chromio)oxy-dioxochromium; dihydrate	
Beilstein/Reaxys No.	N/A	
SMILES	[Na+].[Na+].[O-][Cr](=O)(=O)O[Cr]([O-])(=O)=O.O.O	
InchI Identifier	InChI=1S/2Cr.2Na.2H2O.7O/h;;;;2*1H2;;;;;/q;;2*+1;;;;;2*-1	
InchI Key	JYDRNIYTFCBIFC-UHFFFAOYSA-N	
Signal Word	Danger	
Hazard Statements	H272-H301-H312-H314-H317-H330-H334-H340-H350-H360FD-H372-H410	
Hazard Codes	T+, N, O	
Risk Codes	45-46-60-61-8-21-25-26-34-42/43-48/23-50/53	
Safety Statements	53-45-60-61	
RTECS Number	HX7750000	
Transport Information	UN 3086 6.1/PG 1	
WGK Germany	3	
GHS Pictograms	GHS03 Oxidizer  GHS05 Corrosive  GHS06 Skull and Crossbones  GHS08 Health Hazard 	

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SAFETY DATA SHEET

Date Accessed: 05/05/2024

Date Revised: 01/15/2022

SECTION 1. IDENTIFICATION

Product Identifiers: All applicable American Elements product codes for CAS #7789-12-0

Relevant identified uses of the substance:
Scientific research and development

Supplier details:
American Elements
10884 Weyburn Ave.
Los Angeles, CA 90024
Tel: +1 310-208-0551
Fax: +1 310-208-0351

Emergency telephone number:
Domestic, North America +1 800-424-9300
International +1 703-527-3887

SECTION 2. HAZARDS IDENTIFICATION

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 CO₂, 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.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component CAS-No Weight %

Sodium dichromate dihydrate 7789-12-0 >95

Sodium dichromate 10588-01-9 -

SECTION 4. FIRST AID MEASURES

General Advice

Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Immediate medical attention is required.

Skin Contact

Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

Inhalation

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.

Ingestion

Do not induce vomiting. Call a physician or Poison Control Center immediately.

Most important symptoms/effects

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

Notes to Physician: Treat symptomatically

SECTION 5. FIREFIGHTING MEASURES

Unsuitable Extinguishing Media No data available

Flash Point No data available

Method - No data available

Autoignition Temperature

Explosion Limits

Upper No data available

Lower No data available

Oxidizing Properties Oxidizer

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

Sensitivity to Mechanical Impact No data available
Sensitivity to Static Discharge No data available

SECTION 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 groundwater 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.

SECTION 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.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

ACGIH - American Conference of Governmental Industrial Hygienists

Instability 1

OSHA - Occupational Safety and Health Administration

Physical hazards OX

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

Component ACGIH TLV OSHA PEL NIOSH IDLH

Sodium dichromate dihydrate TWA: 0.05 mg/m³

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.

(Vacated) Ceiling: 0.1 mg/m³ Ceiling: 0.1 mg/m³

IDLH: 15 mg/m³ TWA: 0.0002 mg/m³ Sodium dichromate TWA: 0.05 mg/m³

Personal Protective Equipment

(Vacated) Ceiling: 0.1 mg/m³ Ceiling: 0.1 mg/m³

IDLH: 15 mg/m³ TWA: 0.0002 mg/m³

Revision Date 10-Mar-2014

Eye/face Protection Tightly fitting safety goggles. Face-shield.

Health 4

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.

Component Quebec Mexico OEL (TWA) Ontario TWAEV

Sodium dichromate dihydrate TWA: 0.05 mg/m³ TWA: 0.05 mg/m³

TWA: 0.5 mg/m³ TWA: 0.05 mg/m³

Sodium dichromate TWA: 0.05 mg/m³ TWA: 0.05 mg/m³

TWA: 0.5 mg/m³ TWA: 0.05 mg/m³

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State Solid
Appearance Orange
Odor Odorless
Odor Threshold No data available
pH 3.5-3.9 5% aq.sol
Melting Point/Range 357 °C / 674.6 °F
Boiling Point/Range 400 °C / 752 °F @ 760 mmHg
Flash Point No data available
Evaporation Rate N/A
Flammability (solid,gas) No data available
Flammability or explosive limits
Upper No data available
Lower No data available
Vapor Pressure No data available
Vapor Density N/A
Specific Gravity No data available
Solubility No data available
Partition coefficient; n-octanol/water No data available
Autoignition Temperature
Decomposition Temperature 400 °C
Viscosity N/A
Molecular Formula $\text{Cr}_2 \text{Na}_2 \text{O}_7 \cdot 2 \text{H}_2 \text{O}$
Molecular Weight 298

SECTION 10. STABILITY AND REACTIVITY

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

SECTION 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 data 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 data available

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

Mutagenic Effects Mutagenic

Reproductive Effects Possible risk of impaired fertility.

Developmental Effects No data available.

Teratogenicity Teratogenic effects have occurred in experimental animals.

STOT - single exposure Respiratory system

STOT - repeated exposure Liver Kidney Blood

Aspiration hazard No data 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 data available

Other Adverse Effects See actual entry in RTECS for complete information

SECTION 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 groundwater system.

Persistence and Degradability based on information available. May persist

Bioaccumulation/ Accumulation No data available.

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

SECTION 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.

SECTION 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

SECTION 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. 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 data 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

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). 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. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.
