

Chemical Safety Data Sheet MSDS / SDS

Lead chromate

Revision Date:2024-03-16 Revision Number:1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product identifier

Product name : Lead chromate
CBnumber : CB0347028
CAS : 7758-97-6
EINECS Number : 231-846-0
Synonyms : Lead chromate,chrome yellow

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.
Uses advised against : none

Company Identification

Company : Chemicalbook
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing
Telephone : 400-158-6606

SECTION 2: Hazards identification

Classification of the substance or mixture

Carcinogenicity, Category 1B
Specific target organ toxicity – repeated exposure, Category 2
Hazardous to the aquatic environment, short-term (Acute) - Category Acute 1
Hazardous to the aquatic environment, long-term (Chronic) - Category Chronic 1
Reproductive toxicity, Category 1A

Label elements

Pictogram(s)

☐

Signal word : Danger

Hazard statement(s)

H350 May cause cancer
H360 May damage fertility or the unborn child
H373 May cause damage to organs through prolonged or repeated exposure
H400 Very toxic to aquatic life

H410 Very toxic to aquatic life with long lasting effects

Precautionary statement(s)

P201 Obtain special instructions before use.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P405 Store locked up.

Prevention

P203 Obtain, read and follow all safety instructions before use.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P273 Avoid release to the environment.

Response

P318 IF exposed or concerned, get medical advice.

P319 Get medical help if you feel unwell.

P391 Collect spillage.

Storage

P405 Store locked up.

Disposal

P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Other hazards

no data available

SECTION 3: Composition/information on ingredients

Substance

Product name	: Lead chromate
Synonyms	: Lead chromate,chrome yellow
CAS	: 7758-97-6
EC number	: 231-846-0
MF	: CrO4Pb
MW	: 323.19

SECTION 4: First aid measures

Description of first aid measures

If inhaled

Fresh air, rest.

Following skin contact

Rinse and then wash skin with water and soap.

Following eye contact

Rinse with plenty of water (remove contact lenses if easily possible).

Following ingestion

Rinse mouth. Give one or two glasses of water to drink.

Most important symptoms and effects, both acute and delayed

ACUTE/CHRONIC HAZARDS: This compound is toxic by ingestion and inhalation. (NTP, 1992)

Indication of any immediate medical attention and special treatment needed

Immediate first aid: Ensure that adequate decontamination has been carried out. If patient is not breathing, start artificial respiration, preferably with a demand valve resuscitator, bag-valve-mask device, or pocket mask, as trained. Perform CPR if necessary. Immediately flush contaminated eyes with gently flowing water. Do not induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Keep patient quiet and maintain normal body temperature. Obtain medical attention. Poisons A and B

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

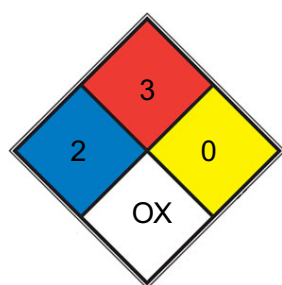
Specific Hazards Arising from the Chemical

Flammability and Flash point data are unavailable; this compound is probably non-flammable. (NTP, 1992)

Advice for firefighters

In case of fire in the surroundings, use appropriate extinguishing media.

NFPA 704



■	HEALTH	2	Intense or continued but not chronic exposure could cause temporary incapacitation or possible residual injury (e.g. diethyl ether , ammonium phosphate, iodine)
■	FIRE	3	Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions. Liquids having a flash point below 22.8 °C (73 °F) and having a boiling point at or above 37.8 °C (100 °F) or having a flash point between 22.8 and 37.8 °C (73 and 100 °F). (e.g. gasoline, acetone)
■	REACT	0	Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium, N2)
□	SPEC. HAZ.	OX	

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment. Vacuum spilled material with specialist equipment. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Then store and dispose of according to local regulations.

Environmental precautions

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment. Vacuum spilled material with specialist equipment. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Then store and dispose of according to local regulations.

Methods and materials for containment and cleaning up

ACCIDENTAL RELEASE MEASURES: Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust; Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided; Methods and materials for containment and cleaning up: Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

SECTION 7: Handling and storage

Precautions for safe handling

NO contact with incompatible materials: See Chemical Dangers Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

Conditions for safe storage, including any incompatibilities

Separated from food and feedstuffs and incompatible materials. See Chemical Dangers. Store in an area without drain or sewer access. Provision to contain effluent from fire extinguishing. Keep container tightly closed in a dry and well-ventilated place. Keep in a dry place. Storage class (TRGS 510): Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

SECTION 8: Exposure controls/personal protection

Control parameters

Occupational Exposure limit values

TLV: (as Cr(VI), inhalable fraction): 0.0002 mg/m³, as TWA; 0.0005 mg/m³ as STEL; (skin); (DSEN); (RSEN); BEI issued; A1 (confirmed human carcinogen). TLV: (as Pb): 0.05 mg/m³, as TWA. EU-OEL: (as Cr): 0.01 mg/m³ as TWA. EU-OEL: (as Pb): 0.15 mg/m³ as TWA; (binding): BLV issued. MAK: carcinogen category: 1; germ cell mutagen group: 2; skin absorption (H); sensitization of skin (SH)

Biological limit values

no data available

Exposure controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

Individual protection measures

Eye/face protection

Wear safety goggles or eye protection in combination with breathing protection if powder.

Skin protection

Protective gloves. Protective clothing.

Respiratory protection

Use local exhaust or breathing protection.

Thermal hazards

no data available

SECTION 9: Physical and chemical properties

Information on basic physicochemical properties

Physical state	sintered
Colour	Yellow
Odour	Odorless
Melting point/freezing point	844°C
Boiling point or initial boiling point and boiling range	Decomposes (NTP, 1992)
Flammability	Not combustible. Gives off irritating or toxic fumes (or gases) in a fire.
Lower and upper explosion limit/flammability limit	no data available
Flash point	no data available
Auto-ignition temperature	no data available
Decomposition temperature	no data available
pH	Bivalent chromium compounds are basic
Kinematic viscosity	no data available
Solubility	less than 1 mg/mL at 66° F (NTP, 1992)
Partition coefficient n-octanol/water	no data available
Vapour pressure	Approximately 0 mm Hg
Density and/or relative density	6.3 g/cm ³
Relative vapour density	no data available
Particle characteristics	no data available

SECTION 10: Stability and reactivity

Reactivity

100 mg/cu m Lead (as Pb)

250 mg/cu m (as Cr(II)). Chromium(II) compounds (as Cr)

25 mg/cu m (as Cr(III)). Chromium(III) compounds (as Cr)

15 mg/cu m (as Cr(VI)). Chromic acid and chromates

NIOSH considers chromic acid and chromates to be potential occupational carcinogens. Chromic acid and chromates

Decomposes on heating. This produces toxic fumes including lead oxides. Reacts violently with many substances such as combustible substances, amines, bases and metals. This generates fire and explosion hazard.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

LEAD CHROMATE reacts violently with ferric ferrocyanide (NTP, 1992). The mixture of sulfur and the chromate is pyrophoric, as is the case of tantalum and the chromate. Under certain conditions, combinations of dry mixtures of lead chromate pigment and azo-dyes (nitrobenzeneazo derivatives) may lead to explosions. When these materials are intimately mixed, violent reactions may result [Loss Prev. Bull., 1978, (022), 117].

Conditions to avoid

no data available

Incompatible materials

Incompatible materials: Organic materials, powdered metals

Hazardous decomposition products

When heated to decomposition it emits toxic fumes of inorganic lead

SECTION 11: Toxicological information

Acute toxicity

- Oral: LD50 Mouse oral >12 g/kg
- Inhalation: no data available
- Dermal: no data available

Skin corrosion/irritation

no data available

Serious eye damage/irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

A2; Suspected human carcinogen. Lead chromate, as Cr

Reproductive toxicity

no data available

STOT-single exposure

The substance is irritating to the respiratory tract.

STOT-repeated exposure

The substance may have effects on the blood, bone marrow, central nervous system, peripheral nervous system, kidneys and lungs. This may result in anaemia, peripheral nerve disease, abdominal cramps and kidney impairment. This substance is carcinogenic to humans. May cause toxicity to human reproduction or development.

Aspiration hazard

Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly on spraying or when dispersed, especially if powdered.

SECTION 12: Ecological information

Toxicity

Toxicity to fish: no data available

Toxicity to daphnia and other aquatic invertebrates: no data available

Toxicity to algae: no data available

Toxicity to microorganisms: no data available

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

Other adverse effects

no data available

SECTION 13: Disposal considerations

Disposal methods

Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do

not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

SECTION 14: Transport information

UN Number

ADR/RID: UN3077 (For reference only, please check.)

IMDG: UN3077 (For reference only, please check.)

IATA: UN3077 (For reference only, please check.)

UN Proper Shipping Name

ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (For reference only, please check.)

IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (For reference only, please check.)

IATA: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (For reference only, please check.)

Transport hazard class(es)

ADR/RID: 9 (For reference only, please check.)

IMDG: 9 (For reference only, please check.)

IATA: 9 (For reference only, please check.)

Packing group, if applicable

ADR/RID: III (For reference only, please check.)

IMDG: III (For reference only, please check.)

IATA: III (For reference only, please check.)

Environmental hazards

ADR/RID: Yes

IMDG: Yes

IATA: Yes

Special precautions for user

no data available

Transport in bulk according to IMO instruments

no data available

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question

European Inventory of Existing Commercial Chemical Substances (EINECS)

Listed.

EC Inventory

Listed.

United States Toxic Substances Control Act (TSCA) Inventory

Listed.

China Catalog of Hazardous chemicals 2015

Listed.

New Zealand Inventory of Chemicals (NZIoC)

Listed.

PICCS

Listed.

Vietnam National Chemical Inventory

Listed.

IECSC

Listed.

Korea Existing Chemicals List (KECL)

Listed.

SECTION 16: Other information

Abbreviations and acronyms

CAS: Chemical Abstracts Service

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

References

IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>

HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>

eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en

CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>

ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>

Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>

ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

Other Information

Chromates are classified as human carcinogens, but evidence for this substance is limited. Lead chromate pigments may contain appreciable quantities of water-soluble lead compounds. Toxic fumes (lead and chromium compounds) are also liberated during welding, cutting and heating of material treated with lead chromate. Depending on the degree of exposure, periodic medical examination is suggested. Do NOT take working clothes home. Lead chromate occurs in nature as the minerals crocoite, phoenicochroite. NEVER use a domestic-type vacuum cleaner to vacuum the substance, only use specialist equipment.

Disclaimer:

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.