

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

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GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product name : Potassium dichromate

Product Number : 309176

Brand : Sigma-Aldrich

Company : Sigma-Aldrich
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2. HAZARDS IDENTIFICATION

Risk advice to man and the environment

May cause cancer. May cause heritable genetic damage. May impair fertility. May cause harm to the unborn child. Contact with combustible material may cause fire. Also harmful in contact with skin. Also toxic if swallowed. Also very toxic by inhalation. Causes burns. May cause sensitization by inhalation and skin contact. Also toxic: danger of serious damage to health by prolonged exposure through inhalation. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : $K_2Cr_2O_7$

Molecular Weight : 294,19 g/mol

CAS-No.	EC-No.	Index-No.	Classification	Concentration
Potassium dichromate				
7778-50-9	231-906-6	024-002-00-6	O, T+, N, Carc.Cat.2, Mut.Cat.2, Repr.Cat.2, R45 - R46 - R60 - R61 - R 8 - R21 - R25 - R26 - R34 - R42/43 - R48/23 - R50/53	-

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration Consult a physician.

In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES**Suitable extinguishing media**

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

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

Further information

Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions**

Wear respiratory protection. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas.

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 for cleaning up

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE**Handling**

Avoid exposure - obtain special instructions before use. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking. Keep away from combustible material.

Storage

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Personal protective equipment****Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N99 (US) or type P2 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Handle with gloves.

Eye protection

Safety glasses

Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form crystalline

Safety data

pH 3,5 - 5,0 at 29,4 g/l at 25 °C

Melting point 390 °C

Boiling point no data available

Flash point not applicable

Ignition temperature no data available

Lower explosion limit no data available

Upper explosion limit no data available

Density 2,680 g/cm³

Water solubility ca.29,4 g/l at 20 °C

10. STABILITY AND REACTIVITY

Storage stability

Stable under recommended storage conditions.

Materials to avoid

Organic materials, Do not store near acids., Powdered metals, Hydrazine

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Potassium oxides, Chromium oxides

11. TOXICOLOGICAL INFORMATION

Acute toxicity

LD50 Oral - rat - 25 mg/kg

Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Other. Behavioral:Somnolence (general depressed activity). Behavioral:Ataxia.

LC50 Inhalation - rat - female - 4 h - 29 mg/m³

LD50 Dermal - rabbit - 14 mg/kg

Remarks: Lungs, Thorax, or Respiration:Acute pulmonary edema. Diarrhoea Prolonged skin contact may cause skin irritation and/or dermatitis.

Irritation and corrosion

no data available

Sensitisation

May cause allergic respiratory reaction.

Chronic exposure

This is or contains a component that has been reported to be carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.

IARC: Group 1 - Carcinogenic to humans (Potassium dichromate)

May alter genetic material.

Signs and Symptoms of Exposure

Ulceration, Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

Potential Health Effects

Inhalation	May be fatal if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Skin	Harmful if absorbed through skin. Causes skin burns.
Eyes	Causes eye burns.
Ingestion	Toxic if swallowed. Causes burns.
Target Organs	Lungs, Kidney, Blood,

Additional Information

RTECS: HX7680000

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

Bioaccumulation	Oncorhynchus mykiss (rainbow trout) - 180 d Bioconcentration factor (BCF): 17,4
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Ecotoxicity effects

Toxicity to fish	LC50 - Lepomis macrochirus - 0,131 mg/l - 96 h mortality NOEC - Pimephales promelas (fathead minnow) - 6 mg/l - 7 d
Toxicity to daphnia and other aquatic invertebrates.	mortality NOEC - Daphnia - 0,016 - 0,064 mg/l - 7 d EC50 - Daphnia magna (Water flea) - 0,035 mg/l - 48 h
Toxicity to algae	EC50 - Pseudokirchneriella subcapitata - 0,31 mg/l - 72 h

Further information on ecology

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

13. DISPOSAL CONSIDERATIONS

Product

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

ADR/RID

UN-Number: 3086 Class: 6.1 (5.1) Packing group: I
Proper shipping name: TOXIC SOLID, OXIDIZING, N.O.S. (Potassium dichromate)

IMDG

UN-Number: 3086 Class: 6.1 (5.1) Packing group: I EMS-No: F-A, S-Q
Proper shipping name: TOXIC SOLID, OXIDIZING, N.O.S. (Potassium dichromate)
Marine pollutant: No

IATA

UN-Number: 3086 Class: 6.1 (5.1) Packing group: I
Proper shipping name: Toxic solid, oxidizing n.o.s. (Potassium dichromate)
IATA Passenger: Not permitted for transport

15. REGULATORY INFORMATION**Labelling according to EC Directives**

EC Label

Hazard symbols

O	Oxidising
T+	Very toxic
N	Dangerous for the environment

R-phrases(s)

R45	May cause cancer.
R46	May cause heritable genetic damage.
R60	May impair fertility.
R61	May cause harm to the unborn child.
R 8	Contact with combustible material may cause fire.
R21	Also harmful in contact with skin.
R25	Also toxic if swallowed.
R26	Also very toxic by inhalation.
R34	Causes burns.
R42/43	May cause sensitization by inhalation and skin contact.
R48/23	Also toxic: danger of serious damage to health by prolonged exposure through inhalation.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrases(s)

S53	Avoid exposure - obtain special instructions before use.
S45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S60	This material and its container must be disposed of as hazardous waste.
S61	Avoid release to the environment. Refer to special instructions/ Safety data sheets.

Restricted to professional users.

16. OTHER INFORMATION**Further information**

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