



**Potassium Dichromate**  
**CAS No 7778-50-9**

**MATERIAL SAFETY DATA SHEET**  
**SDS/MSDS**

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

**1.1 Product identifiers**

Product name : Potassium Dichromate

CAS-No. : 7778-50-9

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

Identified uses : Laboratory chemicals, Industrial & for professional use only.

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

Company : Central Drug House (P) Ltd  
7/28 Vardaan House  
New Delhi-10002  
INDIA

Telephone : +91 11 49404040

Email : [care@cdhfinechemical.com](mailto:care@cdhfinechemical.com)

**1.4 Emergency telephone number**

Emergency Phone # : +91 11 49404040 (9:00am - 6:00 pm) [Office hours]

**SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

**Classification according to Regulation (EC) No 1272/2008**

Oxidizing solids (Category 2), H272  
Acute toxicity, Oral (Category 3), H301  
Acute toxicity, Inhalation (Category 2), H330  
Acute toxicity, Dermal (Category 1), H310  
Skin corrosion (Category 1B), H314  
Respiratory sensitisation (Category 1), H334  
Skin sensitisation (Category 1), H317  
Germ cell mutagenicity (Category 1B), H340  
Carcinogenicity (Category 1B), H350  
Reproductive toxicity (Category 1B), H360FD  
Specific target organ toxicity - repeated exposure (Category 1), H372  
Acute aquatic toxicity (Category 1), H400  
Chronic aquatic toxicity (Category 1), H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

**Classification according to EU Directives 67/548/EEC or 1999/45/EC**

O Oxidising R 8  
R45  
R60, R61

T+	Very toxic	R46
T	Toxic	R26
C	Corrosive	R25, R48/23
T+	Very toxic	R34
		R27
		R42/43
N	Dangerous for the environment	R50/53

For the full text of the R-phrases mentioned in this Section, see Section 16.

## 2.2 Label elements

### Labelling according Regulation (EC) No 1272/2008

#### Pictogram



Signal word

Danger

#### Hazard statement(s)

H272	May intensify fire; oxidiser.
H301	Toxic if swallowed.
H310 + H330	Fatal in contact with skin or if inhaled
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.
H340	May cause genetic defects.
H350	May cause cancer.
H360FD	May damage fertility. May damage the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H410	Very toxic to aquatic life with long lasting effects.

#### Precautionary statement(s)

P201	Obtain special instructions before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260	Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P284	Wear respiratory protection.
P301 + P310 + P330	IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician. Rinse mouth.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.
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 advice/ attention.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.

Supplemental Hazard Statements

none

Restricted to professional users.

## 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Synonyms : Potassium bichromate

Formula : Cr<sub>2</sub>K<sub>2</sub>O<sub>7</sub>  
 Molecular weight : 294,18 g/mol  
 CAS-No. : 7778-50-9  
 EC-No. : 231-906-6  
 Index-No. : 024-002-00-6

**Hazardous ingredients according to Regulation (EC) No 1272/2008**

Component	Classification	Concentration
<b>Potassium dichromate</b>	Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)	
CAS-No.	7778-50-9	Ox. Sol. 2; Acute Tox. 3; Acute
EC-No.	231-906-6	Tox. 2; Acute Tox. 1; Skin
Index-No.	024-002-00-6	Corr. 1B; Resp. Sens. 1; Skin
		Sens. 1; Muta. 1B; Carc. 1B;
		Repr. 1B; STOT RE 1; Aquatic
		Acute 1; Aquatic Chronic 1;
		H272, H301, H314, H317,
		H334, H340, H350, H360FD,
		H372, H410, H310 + H330

**Hazardous ingredients according to Directive 1999/45/EC**

Component	Classification	Concentration
<b>Potassium dichromate</b>	Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)	
CAS-No.	7778-50-9	O, T+, N, Carc.Cat.2,
EC-No.	231-906-6	Repr.Cat.2, Mut.Cat.2, R45 -
Index-No.	024-002-00-6	R46 - R48/23 - R50/53 - R60 -
		R61 - R 8 - R25 - R26 - R34 -
		R42/43 - R27

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

**SECTION 4: First aid measures**

**4.1 Description of 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. Take victim immediately to hospital. 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.

**4.2 Most important symptoms and effects, both acute and delayed**

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

**4.3 Indication of any immediate medical attention and special treatment needed**

No data available

## **SECTION 5: Firefighting measures**

### **5.1 Extinguishing media**

#### **Suitable extinguishing media**

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

### **5.2 Special hazards arising from the substance or mixture**

Potassium oxides, Chromium oxides

### **5.3 Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

### **5.4 Further information**

Use water spray to cool unopened containers.

## **SECTION 6: Accidental release measures**

### **6.1 Personal precautions, protective equipment and emergency procedures**

Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

For personal protection see section 8.

### **6.2 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.

### **6.3 Methods and materials for containment and cleaning up**

Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

### **6.4 Reference to other sections**

For disposal see section 13.

## **SECTION 7: Handling and storage**

### **7.1 Precautions for safe handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Avoid exposure - obtain special instructions before use.

Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition -

No smoking. Keep away from heat and sources of ignition.

For precautions see section 2.2.

### **7.2 Conditions for safe storage, including any incompatibilities**

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

Storage class (TRGS 510): Oxidizing hazardous materials

### **7.3 Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## **SECTION 8: Exposure controls/personal protection**

### **8.1 Control parameters**

#### **Components with workplace control parameters**

### **8.2 Exposure controls**

#### **Appropriate engineering controls**

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

## Personal protective equipment

### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

### Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

### 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. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

### Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

a) Appearance	Form: crystalline
b) Odour	No data available
c) Odour Threshold	No data available
d) pH	3,5 - 5,0 at 29,4 g/l at 25 °C
e) Melting point/freezing point	Melting point/range: 398 °C - lit.
f) Initial boiling point and boiling range	No data available
g) Flash point	Not applicable
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapour pressure	No data available
l) Vapour density	No data available
m) Relative density	2,680 g/cm <sup>3</sup>
n) Water solubility	ca.29,4 g/l at 20 °C
o) Partition coefficient: n-octanol/water	log Pow: 5
p) Auto-ignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	No data available

- s) Explosive properties      No data available  
t) Oxidizing properties      The substance or mixture is classified as oxidizing with the category 2.

## 9.2 Other safety information

No data available

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

No data available

### 10.5 Incompatible materials

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

### 10.6 Hazardous decomposition products

Other decomposition products - No data available

In the event of fire: see section 5

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - male - 168 mg/kg

LD50 Oral - Rat - female - 90,5 mg/kg

LC50 Inhalation - Rat - female - 4 h - 0,088 mg/l

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.

#### Skin corrosion/irritation

No data available

#### Serious eye damage/eye irritation

No data available

#### Respiratory or skin sensitisation

##### Germ cell mutagenicity

May alter genetic material.

In vivo tests showed mutagenic effects

#### Carcinogenicity

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

Possible human carcinogen

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

#### Reproductive toxicity

Presumed human reproductive toxicant

#### Specific target organ toxicity - single exposure

No data available

#### Specific target organ toxicity - repeated exposure

Inhalation - Causes damage to organs through prolonged or repeated exposure.

**Aspiration hazard**

No data available

**Additional Information**

RTECS: HX7680000

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

**SECTION 12: Ecological information****12.1 Toxicity**

Toxicity to fish	LC50 - Lepomis macrochirus - 0,131 mg/l - 96,0 h mortality NOEC - Pimephales promelas (fathead minnow) - 6 mg/l - 7,0 d
Toxicity to daphnia and other aquatic invertebrates	mortality NOEC - Daphnia (water flea) - 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

**12.2 Persistence and degradability****12.3 Bioaccumulative potential**

Bioaccumulation	Oncorhynchus mykiss (rainbow trout) - 180 d - 200 µg/l  Bioconcentration factor (BCF): 17,4
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**12.4 Mobility in soil**

No data available

**12.5 Results of PBT and vPvB assessment**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

**12.6 Other adverse effects**

Very toxic to aquatic life with long lasting effects.

**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Product**

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

**Contaminated packaging**

Dispose of as unused product.

**SECTION 14: Transport information****14.1 UN number**

ADR/RID: 3086

IMDG: 3086

IATA: 3086

**14.2 UN proper shipping name**

ADR/RID: TOXIC SOLID, OXIDIZING, N.O.S. (Potassium dichromate)

IMDG: TOXIC SOLID, OXIDIZING, N.O.S. (Potassium dichromate)

IATA: Toxic solid, oxidizing, n.o.s. (Potassium dichromate)

Passenger Aircraft: Not permitted for transport

**14.3 Transport hazard class(es)**

ADR/RID: 6.1 (5.1)

IMDG: 6.1 (5.1)

IATA: 6.1 (5.1)

**14.4 Packaging group**

ADR/RID: I

IMDG: I

IATA: I

**14.5 Environmental hazards**

ADR/RID: yes

IMDG Marine pollutant: yes

IATA: no

**14.6 Special precautions for user**

No data available

**SECTION 15: Regulatory information**

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****Authorisations and/or restrictions on use**

Potassium dichromate CAS-No.: 7778-50-9  
 REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).  
 Carcinogenic (article 57a)  
 ED/30/2010

Potassium dichromate CAS-No.: 7778-50-9  
 REACH - List of substances subject to authorisation (Annex XIV)  
 Carcinogenic (category 1B)  
 Sunset Date: 21.09.2017

Potassium dichromate CAS-No.: 7778-50-9  
 REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)  
 Carcinogens: category 1B  
 Restricted to professional users.  
 See Annex XVII to Regulation (EC) no 1907/2006 for Conditions of restriction

**15.2 Chemical Safety Assessment**

For this product a chemical safety assessment was not carried out

**SECTION 16: Other information****Full text of H-Statements referred to under sections 2 and 3.**

Acute Tox.	Acute toxicity
Aquatic Acute	Acute aquatic toxicity
Aquatic Chronic	Chronic aquatic toxicity
Carc.	Carcinogenicity
H272	May intensify fire; oxidiser.
H301	Toxic if swallowed.
H310	Fatal in contact with skin.
H310 + H330	Fatal in contact with skin or if inhaled
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H330	Fatal if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H340	May cause genetic defects.
H350	May cause cancer.
H360FD	May damage fertility. May damage the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

**Full text of R-phrases referred to under sections 2 and 3**



N	Dangerous for the environment
O	Oxidising
T+	Very toxic
R 8	Contact with combustible material may cause fire.
R25	Toxic if swallowed.
R26	Very toxic by inhalation.
R27	Very toxic in contact with skin.
R34	Causes burns.
R42/43	May cause sensitisation by inhalation and skin contact.
R45	May cause cancer.
R46	May cause heritable genetic damage.
R48/23	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.
R60	May impair fertility.
R61	May cause harm to the unborn child.
Repr.Cat.2	Toxic to Reproduction Category 2

#### **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. Central Drug House (P) Ltd and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.cdhfinechemical.com](http://www.cdhfinechemical.com) for additional terms and conditions of sale.