Material Safety Data Sheet

Version: 02
Revision Date 15-7-2025

Section 1. Product Information and Company Identification			
Product name	Potassium Dichromate		
Mol. formula	K2Cr2O7	**CAS No.**	7778-50-9
Mol.wt	294,18 g/mol		
manufacturer name	Pioneers for laboratory chemicals		
Brand name	Piochem		
Address	Area 540, Industrial Zone 6th October city Giza, Egypt.		
Website	www.piochem.com		
E-mail	info@piochem.com		
Phone number	0 12 05700001		

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

		R46
T+	Very toxic	R26
T	Toxic	R25, R48/23
C	Corrosive	R34
T+	Very toxic	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	:	$Cr_2K_2O_7$
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
Potassium dichromate 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 Tox. 2; Acute Tox. 1; Skin 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	<= 100 %
EC-No.	231-906-6		
Index-No.	024-002-00-6		

Hazardous ingredients according to Directive 1999/45/EC

Component		Classification	Concentration
Potassium dichromate 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, Repr.Cat.2, Mut.Cat.2, R45 - R46 - R48/23 - R50/53 - R60 - R61 - R 8 - R25 - R26 - R34 - R42/43 - R27	<= 100 %
EC-No.	231-906-6		
Index-No.	024-002-00-6		

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/cm3
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

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