Safety Data Sheet

Date of Issue: 19.05.2020 Date of Expiry: 19.05.2025

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Company Name:	ECP Limited
Address:	PO Box 34125, Birkenhead, Auckland 0746
Telephone:	+64 9 480 4386
Facsimile:	+64 9 480 4385
Emergency phone number:	0800 243 622 (24 hours)

Product	Potassium Dichromate			**Code**	41901	
CAS#	**HSNO#**	**UN #**	**DG Class/es**	**Packing group #**	**Tracking**	**Handlers Certificate**
7778-50-9	HSR001437	3086	6.1 (5.1)	I	6.1B	6.1B

Recommended use: Laboratory Investigations

2: Hazards identification

2.1 GHS Classification

Oxidizing liquids or solids (Category B)
Acute toxicity, Oral (Category B)
Acute toxicity, Inhalation (Category A)
Acute toxicity, Dermal (Category A)
Skin corrosion (Category B)
Serious eye damage (Category A)
Respiratory sensitisation (Category A)
Germ cell mutagenicity (Category A)
Carcinogenicity (Category A)
Toxic to Reproduction (Category A)
Specific Target Organ Toxicity, Inhalation (Category A)
Aquatic toxicity (Acute or Chronic) (Category A)

2.2 GHS Label elements, including precautionary statements

Hazard Pictogram

Signal word : **Danger**

Hazard statement(s)

H272	May intensify fire; oxidiser.
H300	Fatal if swallowed.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
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.
H360	May damage fertility or the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure if inhaled.
H400	Very toxic to aquatic life.

Precautionary statement(s)

Prevention

P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat.
P220	Keep/store away from clothing/combustible materials.
P221	Take any precaution to avoid mixing with combustibles.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P262	Do not get in eyes, on skin, or on clothing.
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	Wear respiratory protection.

Response

P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/physician.
P363	Wash contaminated clothing before reuse.
P370 + P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
P391	Collect spillage.

Storage

P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.

Disposal

P501	Dispose of contents/container to an approved waste disposal plant. Restricted to professional users.

3: Composition/information on ingredients

3.1 Substances

Synonyms : Potassium bichromate
Formula : $Cr_2K_2O_7$
Molecular weight : 294.18 g/mol

Component		Concentration
Potassium dichromate		
Cas No.	7778-50-9	<= 100%

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

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

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.

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.

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

7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Avoid exposure. 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.

7.2 Conditions for safe storage, including any incompatibilities

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

8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits Table

Component	CAS No.	Value	Control parameters	Basis
Potassium dichromate	7778-50-9	WES-TWA	0.05 mg/m^3	New Zealand. Workplace Exposure Standards for Atmospheric Contaminants
	Remarks	Exposure can also be estimated by biological monitoring. Sensitizer.		

Biological occupational exposure limits

Component	CAS No.	Parameters	Value	Biological specimen	Basis
Potassium dichromate	7778-50-9	Chromium	0.6micro mol per litre	Urine	New Zealand. Biological Exposure Indices
			30.0000 µg/l	Urine	New Zealand. Biological Exposure Indices

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards.

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.

Full contact

Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min

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 or 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.

9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance	Form: crystalline
b) pH	3.5 - 5.0 at 29.4 g/l at 25 °C
c) Melting point/freezing point	
Melting point/range:	398 °C - lit.
d) Relative density	2.680 g/cm^3
e) Water solubility	ca.29.4 g/l at 20 °C
f) Partition coefficient: n-octanol/water	log Pow: 5

10: Stability and reactivity

10.1 Incompatible materials
Organic materials, powdered metals, hydrazine. Do not store near acids.

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 oedema. Diarrhoea prolonged skin contact may cause skin irritation and/or dermatitis.
Respiratory or skin sensitisation
May cause allergic respiratory reaction.

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.
Possible human carcinogen
IARC: 1 - Group 1: Carcinogenic to humans

Reproductive toxicity
Presumed human reproductive toxicant
Specific target organ toxicity - repeated exposure
Inhalation - Causes damage to organs through prolonged or repeated exposure.

Potential health effects
Inhalation
May be fatal if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

Ingestion
Toxic if swallowed. Causes burns.

Skin
May be fatal if absorbed through skin. Causes skin burns.

Eyes
Causes eye burns.

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

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 Bioaccumulative potential
Bioaccumulation Oncorhynchus mykiss (rainbow trout) - 180 d -200 µg/l
Bioconcentration factor (BCF): 17.4

12.3 Other adverse effects
Very toxic to aquatic life with long lasting effects.

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.

14: Transport Information Table

		ADR/RID – European packaging certification	IMDG International Maritime Dangerous Goods Code	IATA – DGR International Air Travel Association – Dangerous Goods Regulations
14.1	**UN Number**	3086	3086	3086
14.2	**UN Proper Shipping name**	TOXIC SOLID, OXIDIZING, N.O.S. (Potassium dichromate)	TOXIC SOLID, OXIDIZING, N.O.S. (Potassium dichromate)	Toxic solid, oxidizing, n.o.s. (potassium dichromate)
14.3	**Transport Hazard Class**	6.1 (5.1)	6.1 (5.1)	6.1 (5.1)
14.4	**Packaging group**	I	I	I
14.5	**Environmental Hazards**	Yes	Yes	No
14.6	**Special precautions for user**	None		

15: Regulatory information

15.1 Safety, health, and environmental regulations/legislation specific for the substance or mixture
National regulatory information
HSNO Approval Code: HSR001437
HSNO Group Standard Approval: HSR002596 - Laboratory Chemicals and Reagent Kits Group Standard 2006
Tracking Required: 6.1B
Approved Handler Cert.: 6.1B

16: Disclaimer

The information above is believed to be accurate and represents the best information currently available to us. However, the information is not a guarantee expressed or implied, with respect to such information, and we assume no liability resulting from its use. Anyone using the chemical described here should ensure that he or she has the appropriate training and has the expertise and any equipment required for safe handling. If clarification or further information is required, please contact ECP Ltd or refer to the official handler of dangerous goods within your own company. The user should also make their own investigations to determine the suitability of the product for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

****END*******END*******END*******END*******END****