
MATERIAL SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifiers**

Product name: Potassium dichromate 0.1N aqueous solution
CAS number: 7778-50-9
Product Code: NSI-008276, TS41-W
EINECS number: 231-906-6
Brand: Solmedia Ltd

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

Identified uses – PC21: Laboratory chemicals.

1.3 Details of the supplier of the safety data sheet

- Name of Supplier: Solmedia Ltd.
- Address of Supplier: Unit 2, Vernon Drive
Battlefield Enterprise Park
Shrewsbury
SY1 3TF
UK
- Telephone: 0844 80 80 900
- Email: labsupplies@solmedialtd.com

1.4 Emergency telephone number

Emergency Phone # +44 (0)844 80 80 900

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture**

Classification under CLP: Regulation (EC) No. 1272/2008 [CLP]

Hazard Class	Hazard Category	Hazard Statement
Acute inhalation toxicity – Dust/mist/vapor/	Category 4	H332
Respiratory sensitization	Category 1	H334
Skin sensitization	Category 1	H317
Germ cell mutagenicity	Category 1B	H340
Carcinogenicity	Category 1B	H350
Reproductive toxicity	Category 1B	H360FD
Chronic aquatic toxicity	Category 3	H412

Most important adverse effects: Harmful in contact with skin or if inhaled. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. Causes damage to organs [thyroid] through prolonged or repeated exposure [oral]. Very toxic to aquatic life.

2.2 Label elements

Label elements under CLP:

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
H412: Harmful to aquatic life with long lasting effects

Signal words: Danger

Hazard pictograms: GHS08: Health hazard



Precautionary statements:

Prevention:

P261: Avoid breathing dust/fumes/gas/mist/vapours/spray.
P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P314: Get medical advice/attention if you feel unwell.

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.

PBT: This product is not identified as a PBT/vPvB substance.

SECTION 3: Composition/information on ingredients

3.1. Substances

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

[CLP]

			Classification (Regulation (EC) No 1272/2008 [CLP])	
Hazardous Components		Amount [%]	Hazard class/ Hazard category	Hazard Statements
Name:	Potassium dichromate	0.25-0.5	OX. SOL CAT. 2; ACUTE TOX. CAT. 3, 2, 4; SKIN CORR. CAT. 1B; EYE DAM. CAT. 1; RESP. SENS. CAT. 1; MUTA. CAT. 1B; CARC. CAT. 1B; REPR. CAT. 1B; STOT RE. CAT. 1; AQUA ACUTE CAT. 1; AQUA CHRONIC CAT. 1.	H272
CAS NO.	7778-50-9			H301, H330,
EC-NO.	231-906-6			H312
				H314
				H318
				H334
				H317
				H340
				H350
				H360FD
				H372
				H400
				H410

SECTION 4: First aid measures

4.1 Description of first aid measures

- Skin contact:** Wash immediately with plenty of soap and water. Take immediately to hospital. Consult a doctor.
- Eye contact:** Bathe the eye with running water for 15 minutes. Consult a doctor.
- Ingestion:** Never give anything by mouth to an unconscious person. Wash out mouth with water. Consult a doctor.
- Inhalation:** Move to fresh air in case of accidental inhalation of vapours. If unconscious, check for breathing and apply artificial respiration if necessary. Consult a doctor.

4.2 Most important symptoms and effects, both acute and delayed

- Skin contact:** There may be mild irritation at the site of contact.
- Eye contact:** There may be irritation and redness.
- Ingestion:** No data available
- Inhalation:** No data available
- Delayed / immediate effects:** No data available.

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Extinguishing media: Water spray. Alcohol resistant foam. Dry chemical powder. Carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Not applicable

5.3 Advice for firefighters

Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Avoid breathing dust. For personal protection see section 8.

6.2 Environmental precautions

Do not discharge into drains or rivers.

6.3 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.

6.4 Reference to other sections

Refer to section 13 of SDS.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Handling requirements: Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions: Store in cool, well ventilated area. Keep container tightly closed. Handle and store under inert gas. Hygroscopic.

Suitable packaging: Not applicable.

7.3 Specific end use(s)

No special requirement

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

UK - EH40/2005 Workplace exposure limits:

State	8-hour TWA	15 min. STEL
EU/UK	0.01 mg/m ³ 0.025 mg/m ³	0.03 mg/m ³ 0.065 mg/m ³

DNEL – Derived no effect level/DNEL – Derived minimum effect level

Component	Acute effects systemic (Dermal)	Chronic effects systemic (Dermal)
Potassium dichromate	DMEL = 0.01mg/m ³	DMEL = 0.01mg/m ³

PNEC – Predicted no effect concentration

Component	Fresh water	Fresh water sediment	Water intermittent	Microorganisms in sewage treatment	Soil (Agriculture)
Potassium dichromate	PNEC = 0.00047mg/L	PNEC = 0.15mg/kg sediment dw	PNEC = 0.00047mg/L	PNEC = 0.21 mg/L	PNEC = 0.035mg/kg soil dw

Component	Marine water sediment	Fresh water sediment
Potassium dichromate	PNEC = 0.15mg/kg sediment dw	PNEC = 17000g/kg food

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment. If handled uncovered, arrangements with local exhaust ventilation have to be used.

Personal protective equipment

Wear suitable protective clothing. When handling with chemical substances, protective clothing with CE-labels including the four control digits must be worn. For the protection against direct skin contact, body protective clothing is essential (in addition to the usual working clothes).

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.

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

No exact breakthrough time available.

Wash and dry hands.

Body Protection

Impervious clothing, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Respiratory protection required if workplace exposure limits cannot be controlled/if ventilation or exhaust is not adequate. For nuisance exposures use type OV/AG (US) or type ABEK

(EU EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Eye protection:



Goggles recommended during refilling: Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU)

Additional Information

Wash hands before breaks and after work. Avoid contact with skin and eyes. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

Control of environmental exposure

Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration. If the product contaminates rivers and lakes or drains inform respective authorities. If material reaches soil inform authorities responsible for such cases.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

State: Liquid

Colour: Orange
Odour: odorless
Boiling point/range: Approx. 100 degrees C
Relative density: 1
pH: Approx. 3.4 at 100g/L aq. Sol.

9.2 Other safety information

Not applicable

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

No data available

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

Materials to avoid Strong oxidizing agents

10.6 Hazardous decomposition products

In combustion emits toxic fumes.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Potassium dichromate	130 mg/kg (Rat)	1150 mg/kg (Rabbit)	0.09 mg/L/4h (Rat)

Symptoms / routes of exposure

Skin contact: There may be mild irritation at the site of contact.
Eye contact: There may be irritation and redness
Ingestion: No data available
Inhalation: No data available

Delayed / immediate effects: No data available.

Other information: May impair fertility and may cause harm to the unborn child.

SECTION 12: Ecological information

12.1 Toxicity

Ecotoxicity values:

Component	Freshwater fish	Water flea
Potassium dichromate	LC50: 14 - 20.9 mg/L, 96h static (Pimephales promelas) LC50: 24.81 - 34.55 mg/L, 96h semi-static (Poecilia reticulata) LC50: 23 - 41.2 mg/L, 96h static (Poecilia reticulata) LC50: 15.41 - 30.36 mg/L, 96h flow-through (Pimephales promelas) LC50: > 139 mg/L, 96h static (Cyprinus carpio) LC50: 113.6 - 155.7 mg/L, 96h flow-through (Lepomis macrochirus) LC50: = 320 mg/L, 96h (Lepomis macrochirus) LC50: 65.6 - 137.6 mg/L, 96h static (Lepomis macrochirus) LC50: = 12.3 mg/L, 96h semi-static (Oncorhynchus mykiss) LC50: 21.209 - 30.046 mg/L, 96h semi-static (Oryzias latipes)	EC50: 1.4mg/L 24h

12.2 Persistence and degradability

Product contains heavy metals. Discharge into the environment must be avoided and special pre-treatment is necessary. Component may persist. Substances known to be hazardous to the environment or not degradable in waste treatment plants.

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

Product is water soluble and may spread to water systems.

12.5 Results of PBT and vPvB assessment

This product is not identified as a PBT/vPvB substance.

12.6 Other adverse effects

Very toxic to aquatic organisms.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Disposal operations: Waste is classified as hazardous. Dispose of in accordance with the EU directives on waste and hazardous waste. Dispose of in accordance with local regulations.

Recovery operations: Not applicable.

SECTION 14: Transport information

14.1. UN number

No data available.

14.2. UN proper shipping name

No data available.

14.3. Transport hazard class(es)

No data available.

14.4. Packing group

No data available.

14.5. Environmental hazards

No data available.

14.6. Special precautions for user

No special precautions.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Component	REACH (1907/2006) Annex XIV - Substances Subject to Authorization	REACH (1907/2006) Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 Candidate List of Substances of Very High Concern (SVHC)
Potassium dichromate	carcinogenic Category 1B, Mutagenic Category 1B, Toxic for reproduction Category 1B Article 57 Application date: March 21, 2016 Sunset date: September 21, 2017 Exemption - None	Use restricted. See entry 72. (see link for restriction details) Use restricted. See entry 28. (see link for restriction details) Use restricted. See entry 29. (see link for restriction details) Use restricted. See entry 30. (see link for restriction details) Use restricted. See entry 75. (see link for	SVHC Candidate list 231-906-6 - Carcinogenic, Article 57a; Mutagenic, Article 57b; Toxic for reproduction, Article 57c

		restriction details) Use restricted. See entry 47. (see link for restriction details)	
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15.2 Chemical safety assessment

A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

SECTION 16: Other information

Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 453/2010.

* indicates text in the SDS which has changed since the last revision.

Phrases used in s.2 and 3:

H272: May intensify fire; oxidizer
H301: Toxic if swallowed
H312: Harmful in contact with skin
H314: Causes severe skin burns and eye damage
H317: May cause an allergic skin reaction
H318: Causes serious 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
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

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. Solmedia Ltd shall not be held liable for any damage resulting from handling or from contact with the above product.