

An ISO 9001: 2015 & GMP Certified Company

101, Aarkay Ruby Industrial Estate (1B), Opp Shree Narayan Industrial Estate, Chinchpada, Vasai East, Waliv, Maharashtra 401208. Tel: + 91 98200 41841

Email: info@ottokemi.com Web: www.ottokemi.com

### **MATERIAL SAFETY DATA SHEET (MSDS)**

**SECTION 1: Product identifiers** 

Product Name: Potassium dichromate, solution 0.25 N

Product Code: P 2204 CAS-No.: 7778-50-9

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

Use: Industrial. For professional use only.

1.3. Details of the supplier of the safety data sheet

Company identification OTTO CHEMIE PVT LTD

101, Aarkay Ruby Industrial Estate(1B), Opp Shree Narayan Industrial Estate,

Chinchpada, Vasai East, Waliv, Maharashtra 401208.

Email info@ottokemi.com

1.4. Emergency telephone number

Phone no.: + 91 22 2207 0099 (9:00am - 6:00 pm)

#### **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 4), H312

Skin corrosion (Sub-category 1B), H314

Serious eye damage (Category 1), H318 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

Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335 Specific target organ toxicity - repeated exposure, Inhalation (Category 1), Cardio-vascular

system, H372

Short-term (acute) aquatic hazard (Category 1), H400

Long-term (chronic) aquatic hazard (Category 1), H410

For the full text of the H-Statements 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)

May intensify fire; oxidizer. H272

H301 Toxic if swallowed.

H312 Harmful in contact with skin. H314

Causes severe skin burns and eye damage. May cause an allergic skin reaction. H317

H330 Fatal if inhaled.

May cause allergy or asthma symptoms or breathing difficulties if inhaled. H334

H335 May cause respiratory irritation. H340 May cause genetic defects.

H350 May cause cancer. May damage fertility. May damage the unborn child. H360FD

Causes damage to organs (Cardio-vascular system) through H372

prolonged or repeated exposure if inhaled.

#### DISCI AIMER

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# otto chemie pvt ltd

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H410 Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

Keep away from heat, hot surfaces, sparks, open flames and

other ignition sources. No smoking.

P260

P210

Do not breathe dust.

P280

Wear protective gloves/ protective clothing/ eye protection/ face protection.

IF ON SKIN (or hair): Take off immediately all contaminated

clothing. Rinse skin with water.

P304 + P340 + P310

P303 + P361 + P353

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

none

Danger

P305 + P351 + P338 Supplemental Hazard

Statements

Restricted to professional users. Reduced Labeling (<= 125 ml)

Pictogram

Signal Word Hazard statement(s)

H301

H330

Fatal if inhaled. H334

May cause allergy or asthma symptoms or breathing difficulties if inhaled. H317 May cause an allergic skin reaction.

Toxic if swallowed.

May cause genetic defects. H340

H350 May cause cancer.

Causes damage to organs through prolonged or repeated exposure if inhaled. H372

H314 Causes severe skin burns and eye damage.

May damage fertility. May damage the unborn child. H360FD

Precautionary statement(s)

P260

Wear protective gloves/ protective clothing/ eye protection/ face protection. P280

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated

clothing. Rinse skin with water.

P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.

Do not breathe dust.

Remove contact lenses, if present and easy to do. Continue rinsing.

Supplemental Hazard none

Statements 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: Cr2K2O7

Molecular weight: 294,18 g/mol

CAS-No.: 7778-50-9 EC-No.: 231-906-6

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 EC-No. 231-906-6	Ox. Sol. 2; Acute Tox. 3; Acute Tox. 2; Acute Tox. 4; Skin Corr. 1B; Eye Dam. 1; Resp. Sens. 1;	<= 100 %

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Skin Sens. 1; Muta. 1B; Carc. 1B; Repr. 1B; STOT SE 3; STOT RE 1; Aquatic Acute 1; Aquatic Chronic 1; H272, H301, H330, H312, H314, H318, H334, H317, H340, H350, H360FD, H335, H372, H400, H410 Concentration limits: >= 5 %: STOT SE 3, H335: M-Factor - Aquatic Acute: 10 - Aquatic Chronic: 1

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

#### **SECTION 4: First aid measures**

4.1 Description of first-aid measures

General advice

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

In case of eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

If swallowed

If swallowed: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible. Do not attempt to neutralise.

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 extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Potassium oxides

Chromium oxides

Not combustible.

Has a fire-promoting effect due to release of oxygen.

Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information

Prevent fire extinguishing water from contaminating surface water or the ground water system.

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

6.1 Personal precautions, protective equipment and emergency procedures Advice for non-emergency personnel: Avoid generation and inhalation of dusts in all circumstances. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully. Dispose of properly. Clean up affected area.

Avoid generation of dusts.

6.4 Reference to other sections

For disposal see section 13.

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

7.1 Precautions for safe handling

Advice on safe handling

Work under hood. Do not inhale substance/mixture.

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed. Keep locked up or in an area accessible only to qualified or authorized persons. Do not store near combustible materials.

Storage class

Storage class (TRGS 510): 5.1B: 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

Ingredients with workplace control parameters

8.2 Exposure controls

Personal protective equipment

Eye/face protection

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

Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested:KCL 741 Dermatril® L

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Splash contact

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Material: Nitrile rubber

Minimum layer thickness: 0,11 mm Break through time: 480 min

Material tested: KCL 741 Dermatril® L

**Body Protection** protective clothing Respiratory protection

required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to

the used respiratory protection system. Recommended Filter type: Filter type P3

The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

Control of environmental exposure Do not let product enter drains.

## **SECTION 9: Physical and chemical properties**

9.1 Information on basic physical and chemical properties

a) Physical state crystalline b) Color orange c) Odor odorless

d) Melting Melting point/range: 398 °C - lit.

point/freezing point e) Initial boiling point > 500 °C at 1.013 hPa - Decomposition

and boiling range f) Flammability (solid,

gas)

g) Úpper/lower flammability or explosive limits h) Flash point i) Autoignition temperature

j) Decomposition temperature

k) pH

I) Viscosity

m) Water solubility n) Partition coefficient:

n-octanol/water

o) Vapor pressure p) Density

Relative density g) Relative vapour

density r) Particle

characteristics s) Explosive properties

t) Oxidizing properties

9.2 Other safety information

No data available

No data available

No data available

Not applicable does not ignite

ca. 500 °C

3,5 - 5,0 at 29,4 g/l at 25 °C

Viscosity, kinematic: No data available Viscosity, dynamic: No data available

ca.29,4 g/l at 20 °C

Not applicable for inorganic substances

Not applicable

ca.2,680 g/cm3 at 20 °C - OECD Test Guideline 109

ca.2.7 at 20 °C - OECD Test Guideline 109

No data available

No data available

The substance or mixture is classified as oxidizing with the

category 2.

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#### **SECTION 10: Stability and reactivity**

10.1 Reactivity

No data available

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

10.3 Possibility of hazardous reactions

Risk of explosion with:

Iron

magnesium

hydrazine and derivatives

hydroxylamine

ammonium nitrate

Boron

Acetic anhydride

oxidisable substances

Reducing agents

sulfuric acid

silicon

Exothermic reaction with:

anhydrides

phosphides

Sulfides

nitrides

Fluorine

Risk of ignition or formation of inflammable gases or vapours with:

organic combustible substances

glycerol

Powdered metals

hydrides

alkali compounds

Acetone

with

sulfuric acid

Generates dangerous gases or fumes in contact with:

hydrochloric acid

10.4 Conditions to avoid

no information available

10.5 Incompatible materials

No data available

10.6 Hazardous decomposition products

In the event of fire: see section 5

## **SECTION 11: Toxicological information**

11.1 Information on toxicological effects

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Toxicity to Animals:

Oral LD50 Rat: 1500 mg/kg; Dermal LD50 Rabbit: 2000mg/kg

Inhalation LC50 Rat: > 50mg/L.

Chronic Effects on Humans: CARCINOGENIC EFFECTS: Classified None. by NTP, None. by OSHA, None. by NIOSH.

Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant), of inhalation (lung irritant).

Special Remarks on Toxicity

to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans: Not available.

# **SECTION 12: Ecological information**

12.1 Toxicity

Toxicity to fish LC50 - Danio rerio (zebra fish) - 58,5 mg/l - 96 h

Remarks: (ECHA) Toxicity to daphnia and other aquatic invertebrates

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EC50 - Daphnia magna (Water flea) - 0,035 mg/l - 48 h

Remarks: (ECHA)

Toxicity to algae static test ErC50 - Selenastrum capricornutum (green algae) - 0,233

mg/l - 72 h Remarks: (ECHA)

Toxicity to bacteria IC50 - activated sludge - 30 mg/l - 3 h

Remarks: (in analogy to similar products)

(ECHA) Toxicity to

fish(Chronic toxicity)

NOEC - Pimephales promelas (fathead minnow) - 1,1 mg/l - 7 d

Remarks: (ECHA)
Toxicity to daphnia
and other aquatic
invertebrates(Chronic

toxicity)

NOEC - Daphnia magna (Water flea) - 18 mg/l - 21 d

Remarks: (ECHA)

12.2 Persistence and degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

Bioaccumulation Oncorhynchus mykiss (rainbow trout) - 180 d

- 200 μg/l(potassium dichromate) 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 Endocrine disrupting properties

Product:

Assessment: The substance/mixture does not contain components

considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

No data available

# **SECTION 13: Disposal considerations**

13.1 Waste treatment methods

No data available

## **SECTION 14: Transport information**

14.1 UN number

ADR/RID: 3086 IMDG: 3086 IATA: 3086

14.2 UN proper shipping name

ADR/RID: (potassium dichromate)

IMDG: TOXIC SOLID, OXIDIZÍNG, N.O.S. (potassium dichromate)
IATA: Toxic solid, oxidizing, n.o.s. (potassium dichromate)

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: II IATA: II

14.5 Environmental hazards

ADR/RID: yes IMDG Marine pollutant: yes IATA: no

14.6 Special precautions for user Tunnel restriction code : (D/E) Further information : No data available

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### **SECTION 15: Regulatory information**

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

This material safety data sheet complies with the requirements of Regulation (EC) No.

1907/2006.

Authorisations and/or restrictions on use

REACH - Candidate List of Substances of Very

High Concern for Authorisation (Article 59).

: potassium dichromate

This product contains a substance listed on Annex XIV of the REACH Regulation (EC) Nr. 1907/2006.

Listed substance / Sunset Date : potassium dichromate /

21.09.2017

After the sunset date the use of this substance requires either an authorization or can only be used for exempted uses, e.g. use in scientific research and development which includes routine analytics or use as intermediate.

REACH - Restrictions on the manufacture,

placing on the market and use of certain

dangerous substances, mixtures and articles

(Annex XVII)

: potassium dichromate

National legislation

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

: ACUTE TOXIC

: OXIDISING LIQUIDS AND SOLIDS

: ENVIRONMENTAL HAZARDS

: ACUTE TOXIC

: OXIDISING LIQUIDS AND SOLIDS

: ENVIRONMENTAL HAZARDS

Other regulations

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Take note of Dir 94/33/EC on the protection of young people at work.

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

#### **Section 16: Other Information**

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.