



## Safety Data Sheet

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### Section 1. Identification of the substance/mixture and of the company/undertaking

**Product identifier:**

Product name: Potassium chromate

SDS No. : 6344E-4

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

Research and Development

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

Manufacturer/Supplier: KISHIDA CHEMICAL CO., LTD.

Address: 3-1, Honmachibashi, Chuo-ku, Osaka, JAPAN

Division: Chemical Safety Management Department

Telephone number: +81-6-6946-8061

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e-mail address: kagakuhinanzenkanri@kishida.co.jp

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### Section 2. Hazards identification

**GHS classification and label elements of the product****Classification of the substance or mixture****HEALTH HAZARDS**

Acute toxicity (Oral): Category 3

Skin corrosion/irritation: Category 1

Serious eye damage/eye irritation: Category 1

Respiratory sensitization: Category 1

Skin sensitization: Category 1

Germ cell mutagenicity: Category 1B

Carcinogenicity: Category 1A

Reproductive toxicity: Category 1B

Specific target organ toxicity – single exposure: Category 1 (central nervous system; respiratory system; cardiovascular system; blood system; liver; kidney)

Specific target organ toxicity – repeated exposure: Category 1 (respiratory system)

**ENVIRONMENT HAZARDS**

Hazardous to the aquatic environment, short-term (acute): Category 1

Hazardous to the aquatic environment, long-term (chronic): Category 1

(Note) GHS classification without description: Not classified/Classification not possible

**Label elements**

Signal word: Danger

**HAZARD STATEMENT**

Toxic if swallowed

Causes severe skin burns and eye damage

May cause allergy or asthma symptoms or breathing difficulties if inhaled

May cause an allergic skin reaction

May cause genetic defects

May cause cancer

May damage fertility or the unborn child

Causes damage to organs (central nervous system; respiratory system; cardiovascular system;



blood system; liver; kidney)

Causes damage to organs through prolonged or repeated exposure (respiratory system)

Very toxic to aquatic life with long lasting effects

#### PRECAUTIONARY STATEMENT

##### Prevention

Avoid release to the environment.

Do not breathe dust/fume/gas/mist/vapors/spray.

In case of inadequate ventilation wear respiratory protection.

Wash contaminated parts thoroughly after handling.

Contaminated work clothing should not be allowed out of the workplace.

Wear protective gloves, protective clothing or face protection.

Wear eye protection/face protection.

Do not eat, drink or smoke when using this product.

##### Response

Collect spillage.

Get medical advice/attention if you feel unwell.

IF exposed or concerned: Get medical advice/attention.

IF exposed or concerned: Call a POISON CENTER/doctor/physician.

If experiencing respiratory symptoms: Call a POISON CENTER/doctor/physician.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF ON SKIN: Wash with plenty of soap and water.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

If skin irritation or rash occurs: Get medical advice/attention.

Wash contaminated clothing before reuse.

Take off contaminated clothing and wash it before reuse.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

##### Disposal

Dispose of contents/container in accordance with local/national regulation.

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### Section 3. Composition/information on ingredients

#### Mixture/Substance selection:

##### Substance

Ingredient name:Potassium chromate

Content (%):99(min)

Chemical formula:K<sub>2</sub>CrO<sub>4</sub>

Chemicals No, Japan:1-661

CAS No.:7789-00-6

MW:194.19

ECNO:232-140-5

Note : The figures shown above are not the specifications of the product.

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### Section 4. First-aid measures

#### Descriptions of first-aid measures

##### General measures

Get medical advice/attention if you feel unwell.

##### IF INHALED

Remove person to fresh air and keep comfortable for breathing.

If experiencing respiratory symptoms: Call a POISON CENTER/doctor/physician.



Call a POISON CENTER/doctor/physician if you feel unwell.

**IF ON SKIN (or hair)**

Take off immediately all contaminated clothing. Rinse skin with water or shower.

Wash with plenty of soap and water.

If skin irritation or rash occurs: Get medical advice/attention.

**IF IN EYES**

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

**IF SWALLOWED**

Rinse mouth. Do NOT induce vomiting.

Immediately call a POISON CENTER/doctor/physician.

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**Section 5. Fire-fighting measures**

**Extinguishing media**

**Suitable extinguishing media**

Use appropriate extinguishing media suitable for surrounding facilities.

**Unsuitable extinguishing media**

Unsuitable extinguishing media data is not available.

**Specific hazards arising from the substance or mixture**

Containers may explode when heated.

Fire may produce irritating, corrosive and/or toxic gases.

**Advice for firefighters**

**Specific fire-fighting measures**

Evacuate non-essential personnel to safe area.

**Special protective equipment and precautions for fire-fighters**

Wear fire resistant or flame retardant clothing.

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

Firefighters should wear self-contained breathing apparatus with full face piece operated positive pressure mode.

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**Section 6. Accidental release measures**

**Personnel precautions, protective equipment and emergency procedures**

Ventilate area until material pick up is complete.

Wear proper protective equipment.

**Environmental precautions**

Prevent spills from entering sewers, watercourses or low areas.

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

Sweep up, place in a bag and hold for waste disposal.

**Preventive measures for secondary accident**

Collect spillage.

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**Section 7. Handling and storage**

**Precautions for safe handling**

**Preventive measures**

(Exposure Control for handling personnel)

Do not breathe dust/fume/gas/mist/vapors/spray.

(Protective measures against fire and explosion)

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

(Exhaust/ventilator)



Exhaust/ventilator should be available.

(Safety treatments)

Avoid contact with skin.

Avoid contact with eyes.

Safety Measures

Wear protective gloves, protective clothing or face protection.

Wear eye protection/face protection.

When using do not eat, drink or smoke.

Any incompatibilities

See "10.Stability and Reactivity"

Advice on general occupational hygiene

Wash contaminated parts thoroughly after handling.

Do not eat, drink or smoke when using this product.

Contaminated work clothing should not be allowed out of the workplace.

Take off contaminated clothing and wash it before reuse.

Storage

Conditions for safe storage

Keep container tightly closed.

Store in a cool, dry place. Do not store in direct sunlight.

Keep under lock and key.

Container and packaging materials for safe handling

Glass

Polyethylene

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## Section 8. Exposure controls/personal protection

Control parameters

Adopted value

(Potassium chromate)

ACGIH(2018) TWA: 0.0002mg-Cr(VI)/m<sup>3</sup>(I);

STEL: 0.0005mg-Cr(VI)/m<sup>3</sup>(I) (Lung & sinonasal cancer; resp tract irr; asthma)

Notation

(Potassium chromate)

DSEN;

OSHA-PEL

(Potassium chromate)

TWA: 1mg-Cr/m<sup>3</sup> (insoluble salts)

Exposure controls

Appropriate engineering controls

Do not use in areas without adequate ventilation.

Eye wash station should be available.

Washing facilities should be available.

Individual protection measures

Respiratory protection

Wear respiratory protection.

Hand protection

Wear protective gloves.

Eye protection

Wear eye/face protection.



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**Section 9. Physical and Chemical Properties**

## Information on basic physical and chemical properties

Physical state: Crystals

Color: Yellow

Odor: Odorless

Melting point/Freezing point: 968°C

Boiling point or initial boiling point: (Potassium chromate)1000°C

Boiling range data is not available.

Flammability (gases, liquids and solids) data is not available.

Lower and upper explosion limit/flammability limit data is not available.

Flash point data is not available.

Auto-ignition temperature data is not available.

Decomposition temperature data is not available.

pH: 8.5~9.8 (50g/L, 25°C)

Kinematic viscosity data is not available.

Solubility:

Solubility in water: Good (62.9 g/100 ml, 20°C)

n-Octanol/water partition coefficient data is not available.

Vapor pressure: negligible (20°C)

Density and/or relative density: 2.73 g/cm<sup>3</sup>

Relative vapor density (Air=1) data is not available.

Particle characteristics data is not available.

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**Section 10. Stability and Reactivity**

## Reactivity

Not available.

## Chemical stability

Stable under normal storage/handling conditions.

## Possibility of hazardous reactions

The solution in water is a weak base. The substance is a strong oxidant. It reacts with combustible and reducing materials. (ICSC 1770)

## Conditions to avoid

Contact with incompatible materials.

Contact with fire source.

## Incompatible materials

Reducing agents, Combustible materials

## Hazardous decomposition products

Chromic compounds

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**Section 11. Toxicological Information**

## Information on toxicological effects

## Acute toxicity

## Acute toxicity (Oral)

[Data for components of the product]

[GHS Cat. Japan, base data]

(Potassium chromate)

mouse LD50=180mg/kg (HSDB, 2014)

## Irritant properties

## Skin corrosion/irritation

[Data for components of the product]

[GHS Cat. Japan, base data]



(Potassium chromate)  
human skin fall off, necrosis (ATSDR, 2012)  
Serious eye damage/irritation  
[Data for components of the product]  
[GHS Cat. Japan, base data]  
(Potassium chromate)  
Skin Corr./Irrit. cat 1

Sensitization  
Respiratory sensitization  
[Data for components of the product]  
[GHS Cat. Japan, base data]  
(Potassium chromate)  
cat. 1; ATSDR, 2012

Skin sensitization  
[Data for components of the product]  
[GHS Cat. Japan, base data]  
(Potassium chromate)  
cat. 1; ATSDR, 2012

Germ cell mutagenicity  
[Data for components of the product]  
[GHS Cat. Japan, base data]  
(Potassium chromate)  
cat. 1B; ATSDR, 2012

Carcinogenicity  
[Data for components of the product]  
[GHS Cat. Japan, base data]  
(Potassium chromate)  
cat.1A; IARC Gr. 1 (IARC, 1990 (Cr(VI) compounds) et al.)  
[IARC]  
(Potassium chromate)  
Group 1 : Carcinogenic to humans  
[ACGIH]  
(Potassium chromate)  
A1(as Cr(VI))(2018) : Confirmed Human Carcinogen  
[EU]  
(Potassium chromate)  
Category 1B; Substances presumed to have carcinogenic potential for humans

Reproductive toxicity  
[Data for components of the product]  
[GHS Cat. Japan, base data]  
(Potassium chromate)  
cat. 1B; ATSDR, 2012

Specific target organ toxicity (STOT)  
STOT-single exposure  
[Data for components of the product]  
[cat.1]  
[GHS Cat. Japan, base data]  
(Potassium chromate)  
blood system, cardiovascular system, liver, central nervous system, respiratory system,  
kidneys (ATSDR, 2012)

STOT-repeated exposure  
[Data for components of the product]  
[cat.1]  
[GHS Cat. Japan, base data]



(Potassium chromate)  
respiratory system (CICAD 78, 2013)  
Aspiration hazard data is not available.

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**Section 12. Ecological Information****Toxicity****Aquatic toxicity**

[Data for components of the product]

Hazardous to the aquatic environment, short-term (acute)

[GHS Cat. Japan, base data]

(Potassium chromate)

Crustacea (Daphnia) EC50=0.18mg/L/48hr (EU-RAR, 2005)

**Water solubility**

(Potassium chromate)

good (62.9 g/100 ml, 20°C) (ICSC, 2013)

**Persistence and degradability**

Persistence and degradability data is not available.

**Bioaccumulative potential**

Bioaccumulative potential data is not available.

**Mobility in soil**

Mobility in soil data is not available.

**Other adverse effects**

Ozone depleting chemical data is not available.

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**Section 13. Disposal considerations**

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging

**Waste treatment methods**

Avoid release to the environment.

Dispose of contents/container in accordance with local/national regulation.

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**Section 14. Transport Information**

UN Number or ID Number : 2923

UN Proper Shipping Name :

CORROSIVE SOLID, TOXIC, N.O.S.

Class or division (Transport hazard class) : 8

Subsidiary hazard(s) : 6.1

Packing group : I

ERG GUIDE No.: 154

Special provisions No.: 274

**IMDG Code (International Maritime Dangerous Goods Regulations)**

UN Number or ID Number : 2923

UN Proper Shipping Name :

CORROSIVE SOLID, TOXIC, N.O.S.

Class or division (Transport hazard class) : 8

Subsidiary hazard(s) : 6.1

Packing group : I

Special provisions No.: 274

**IATA (Dangerous Goods Regulations)**

UN Number or ID Number : 2923

UN Proper Shipping Name :



CORROSIVE SOLID, TOXIC, N.O.S.

Class or division (Transport hazard class) : 8

Subsidiary hazard(s) : 6.1

Hazard labels : Corrosive & Toxic

Packing group : I

Special provisions No.: A3; A803

Environmental hazards

Marine pollutants (yes/no) : yes

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#### Section 15. Regulatory Information

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

U.S. Toxic Substances Control Act (TSCA) Inventory

Chemicals listed in TSCA Inventory

Potassium chromate

Other regulatory information

Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

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#### Section 16. Other information

GHS classification and labelling

Acute toxicity, Category 3: H301 Toxic if swallowed

Skin corrosion/irritation, Category 1: H314 Causes severe skin burns and eye damage

Serious eye damage/eye irritation, Category 1: H318 Causes serious eye damage

Respiratory sensitization, Category 1: H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled

Skin sensitization, Category 1: H317 May cause an allergic skin reaction

Germ cell mutagenicity, Category 1B: H340 May cause genetic defects

Carcinogenicity, Category 1A: H350 May cause cancer

Reproductive toxicity, Category 1B H360 May damage fertility or the unborn child

STOT – single exposure, Category 1: H370 Causes damage to organs

STOT – Repeated exposure, Category 1: H372 Causes damage to organs through prolonged or repeated exposure

Hazardous to the aquatic environment, short-term (acute), Category 1: H400 Very toxic to aquatic life

Hazardous to the aquatic environment, long-term (chronic), Category 1: H410 Very toxic to aquatic life with long lasting effects

References and sources for data

Globally Harmonized System of classification and labelling of chemicals, UN

Recommendations on the TRANSPORT OF DANGEROUS GOODS 21th edit., 2019 UN

IMDG Code, 2020 Edition (Incorporating Amendment 40-20)

IATA Dangerous Goods Regulations (62nd Edition) 2021

2020 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2022 TLVs and BEIs. (ACGIH)

Supplier's data/information

General Disclaimer

This data sheet was created based on the information we currently have and may be revised according to new information. In addition, the precautions apply only to normal handling, and in the case of special handling, please make adequate countermeasure to maintain your safety.

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.





**KISHIDA**

Potassium chromate,6344E-4,2023/01/13

The GHS classification data given here is based on current Japan official data (NITE published in 2021).