

## Safety Data Sheet

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

Product identifier:

Product name: Potassium chromate

Reference number(SDS): 27535jis\_E-3

Product type:

Reagent

Details of the supplier of the safety data sheet

Manufacturer/Supplier: JUNSEI CHEMICAL CO., LTD.

Address: 1-6, Ohmano-cho, Koshigaya-shi, Saitama 343-0844, Japan

Division: Quality Assurance Department

Telephone number: +81-48-986-6161

FAX: +81-48-989-2787

e-mail address: shiyaku-t@junsei.co.jp

### 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 (Acute): Category 1

Hazardous to the aquatic environment (Long-term): Category 1

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

Label elements



Signal word: Danger

HAZARD STATEMENT

H301-Toxic if swallowed

H314-Causes severe skin burns and eye damage

H318-Causes serious eye damage

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

H317-May cause an allergic skin reaction

H340-May cause genetic defects

H350-May cause cancer

H360–May damage fertility or the unborn child

H370–Causes damage to organs

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

#### PRECAUTIONARY STATEMENT

##### Prevention

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

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.

Use personal protective equipment as required.

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.

Immediately call a POISON CENTER/doctor/physician.

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.

##### Storage

Store locked up.

##### Disposal

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

---

### Section 3. Composition/information on ingredients

#### Mixture/Substance selection:

##### Substance

Ingredient name: Potassium chromate

Content (%): 98.5 <

Chemical formula: CrK<sub>2</sub>O<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.

Components contributing to the hazard

Carcinogenic (Article 57a) in REACH SVHC candidate list

Potassium chromate

Mutagenic (Article 57b) in REACH SVHC candidate list

Potassium chromate

---

#### Section 4. First-aid measures

Descriptions of first-aid measures

General measures

Get medical advice/attention if you feel unwell.

Immediately call a POISON CENTER/doctor/physician.

Keep victim warm and quiet.

Call emergency medical service.

Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.

**IF INHALED**

Remove person to fresh air and keep comfortable for breathing.

Give artificial respiration if victim is not breathing.

Administer oxygen if breathing is difficult.

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.

Remove and isolate contaminated clothing and shoes.

For minor skin contact, avoid spreading material on unaffected skin.

**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.

If victim is conscious, give 1 – 2 glasses of water.

Immediately call a POISON CENTER/doctor/physician.

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

Most important symptoms and effects, both acute and delayed

(Symptoms when inhalation or ingestion)

Nausea. Abdominal pain. Diarrhoea. Cough. Dyspnea. Burning sensation. Sore throat. Wheezing.

Vomiting. Shock or collapse.

(Symptoms when skin and/or eye contact)

Conjunctival redness of the eyes. Redness of the skin. Pain. Blurred vision. Severe deep burns.

---

#### Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Use appropriate extinguishing media suitable for surrounding facilities.

Not combustible but enhances combustion of other substances.

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.
- Runoff from fire control or dilution water may cause pollution.

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.

---

Section 6. Accidental release measures

Personnel precautions, protective equipment and emergency procedures

- Keep unauthorized personnel away.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Ventilate area until material pick up is complete.
- Wear proper protective equipment.
- EVACUATION : Spill:** See the Table of Initial Isolation and Protective Action Distances for highlighted substances. For non-highlighted substances, increase, in the downwind direction, as necessary, the isolation distance shown under "PUBLIC SAFETY".

Environmental precautions

- Avoid release to headsprings, rivers, lakes, ocean and groundwater.

Methods and materials for containment and cleaning up

- Absorb spill with inert material (dry sand, earth, et al), then place in a chemical waste container.

Preventive measures for secondary accident

- Collect spillage.
- Stop leak if you can do it without risk.
- Prevent entry into waterways, sewers, basements or confined areas.
- Do not get water inside containers.
- Cover with plastic sheet to prevent spreading.
- Keep out of low areas.

---

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

- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Wear protective gloves/protective clothing/eye protection/face protection.
- Use personal protective equipment as required.

When using do not eat, drink or smoke.

Any incompatibilities

Strong acids, Strong oxidizing agents, Combustible substances should not be mixed with the chemicals.

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

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

Keep cool. Protect from sunlight.

Store in accordance with local/national regulation.

Store locked up.

Container and packaging materials for safe handling data is not available.

Specific end use(s)

See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

---

## Section 8. Exposure controls/personal protection

### Control parameters

#### Control value

Japan control value (1995)  $\leq 0.05\text{mg-Cr}/\text{m}^3$

#### Adopted value

JSOH(1989)  $0.05\text{mg-Cr(VI)}/\text{m}^3$

ACGIH(2018) TWA:  $0.0002\text{mg-Cr(VI)}/\text{m}^3(\text{I})$ ;

STEL:  $0.0005\text{mg-Cr(VI)}/\text{m}^3(\text{I})$  (Lung & sinonasal cancer; resp tract irr; asthma)

Notation...Skin; DSEN; RSEN

### 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.

Wear positive pressure self-contained breathing apparatus (SCBA).

##### Hand protection

Wear protective gloves.

Inspect before use and replace worn or damaged gloves.

Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions.

##### Eye protection

Wear safety glasses with side-shields.

Wear eye/face protection.

##### Skin and body protection

Wear impervious clothing and boots in case of repeated or prolonged treatment.

---

## Section 9. Physical and Chemical Properties

### Information on basic physical and chemical properties

Physical state: Crystals

Color: Yellow

Odor: None

Odor threshold data is not available.

Melting point/Freezing point: 968°C

Boiling point or initial boiling point: 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.

Self-Accelerating Decomposition Temperature/SADT data is not available.

pH: 8.5~9.8 (50g/L, 25°C)

Dynamic viscosity data is not available.

Kinematic viscosity data is not available.

Solubility:

Solubility in water: 629g/liter(20°C)

Solubility in solvent: Slightly soluble in ethanol (99.5).

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

Vapor pressure data is not available.

Vapor density data is not available.

Density and/or relative density: 2.73 g/cm<sup>3</sup> (18°C)

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

Relative density of the Vapor/air - mixture at 20°C (Air = 1) data is not available.

Particle characteristics data is not available.

Other information

Critical temperature data is not available.

Evaporation rate data is not available.

VOC data is not available.

---

## Section 10. Stability and Reactivity

Reactivity

Reactivity data is not available.

Chemical stability

Stable under normal storage/handling conditions.

Possibility of hazardous reactions

The solution in water is a weak base.

The substance reacts with combustible and reducing materials.

Conditions to avoid

Contact with incompatible materials.

Heating.

Incompatible materials

Strong acids, Reducing agents, Combustible substances

Hazardous decomposition products

Metal oxides.

---

## Section 11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[Product]

Category 3, Toxic if swallowed

[Data for components of the product]

[GHS Cat. Japan, base data]

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

Acute toxicity (Dermal)

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Acute toxicity (Inhalation)

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Labor standard law, Japan; Toxic

Potassium chromate

Irritant properties

Skin corrosion/irritation

[Product]

Category 1, Causes severe skin burns and eye damage

[Data for components of the product]

[GHS Cat. Japan, base data]

human : skin fall off, necrosis (ATSDR, 2012)

Serious eye damage/irritation

[Product]

Category 1, Causes serious eye damage

[Data for components of the product]

[GHS Cat. Japan, base data]

Skin Corr./Irrit. : cat 1

Sensitization

Respiratory sensitization

[Product]

Category 1, May cause allergy or asthma symptoms or breathing difficulties if inhaled

[Data for components of the product]

[GHS Cat. Japan, base data]

cat. 1; ATSDR, 2012

Skin sensitization

[Product]

Category 1, May cause an allergic skin reaction

[Data for components of the product]

[GHS Cat. Japan, base data]

cat. 1; ATSDR, 2012

Germ cell mutagenicity

[Product]

Category 1B, May cause genetic defects

[Data for components of the product]

[GHS Cat. Japan, base data]

cat. 1B; ATSDR, 2012

Reverse-mutation assay in bacteria (Ames test) :Positive(ATSDR, 2012; IARC 49, 1990)

Chromosome aberration test :Positive(ATSDR, 2012; IARC 49, 1990)

Carcinogenicity

[Product]

Category 1A, May cause cancer

[Data for components of the product]

[GHS Cat. Japan, base data]

cat.1A; IARC Gr. 1 (IARC, 1990 (Cr(VI) compounds) et al.)

[IARC]

Group 1 : Carcinogenic to humans

[ACGIH]

A1(as Cr(VI))(2018) : Confirmed Human Carcinogen

[JSOH]

Group 1: The agents which are carcinogenic to humans

[NTP]

Known : Known to be Human Carcinogens

[EU]

Category 1B; Substances presumed to have carcinogenic potential for humans

Labor standard law, Japan : Carcinogen

Potassium chromate

Reproductive toxicity

[Product]

Category 1B, May damage fertility or the unborn child

[Data for components of the product]

[GHS Cat. Japan, base data]

cat. 1B; ATSDR, 2012

Specific target organ toxicity (STOT)

STOT-single exposure

[Product]

Category 1, Causes damage to organs

[Data for components of the product]

[cat.1]

[GHS Cat. Japan, base data]

blood system, cardiovascular system, liver, central nervous system, respiratory system, kidneys

(ATSDR, 2012)

STOT-repeated exposure

[Product]

Category 1, Causes damage to organs through prolonged or repeated exposure

[Data for components of the product]

[cat.1]

[GHS Cat. Japan, base data]

respiratory system (CICAD 78, 2013)

Aspiration hazard

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

---

## Section 12. Ecological Information

Toxicity

Aquatic toxicity

[Product]

Category 1, Very toxic to aquatic life

Category 1, Very toxic to aquatic life with long lasting effects

[Data for components of the product]

Hazardous to the aquatic environment (Acute)

[GHS Cat. Japan, base data]

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

## Water solubility

[Data for components of the product]

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.

---

**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.

---

**Section 14. Transport Information**

## UN No., UN CLASS

UN No. or ID No.: 3288

UN Proper Shipping Name : TOXIC SOLID, INORGANIC, N.O.S.

Class or division (Transport hazard class) : 6.1

Packing group : III

ERG GUIDE No.: 151

## IMDG Code (International Maritime Dangerous Goods Regulations)

UN No.: 3288

Proper Shipping Name : TOXIC SOLID, INORGANIC, N.O.S.

Class or division : 6.1

Packing group : III

## IATA Dangerous Goods Regulations

UN No.: 3288

Proper Shipping Name : TOXIC SOLID, INORGANIC, N.O.S.

Class or division : 6.1

Hazard labels : Toxic

Packing group : III

## Environmental hazards

## MARPOL Annex III – Prevention of pollution by harmful substances

Marine pollutants (yes/no) : yes

## MARPOL Annex V – Prevention of pollution by garbage discharge

Germ cell mutagenicity: cat.1, 1A, 1B

Potassium chromate

Carcinogenicity: cat.1, 1A, 1B

Potassium chromate

Reproductive toxicity: cat.1, 1A, 1B

Potassium chromate

Specific target organ toxicity – repeated exposure: cat.1

Potassium chromate

Hazardous to the aquatic environment – acute hazard: cat.1

Potassium chromate

Hazardous to the aquatic environment – long-term hazard: cat.1, 2

Potassium chromate

Maritime transport in bulk according to IMO instruments

Not applicable to Maritime transport in bulk according to IMO instruments

---

#### Section 15. Regulatory Information

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

List of substances subject to authorisation (REACH, Annex XIV)/SVHC – candidate list

Carcinogenic (Article 57a)

Potassium chromate

Mutagenic (Article 57b)

Potassium chromate

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

Chemicals listed in TSCA Inventory

7789-00-6

All components are listed or exempted.

Superfund Amendments and Reauthorizations Act (SARA), Title III

SARA 313 (TRI)

Potassium chromate

Other regulatory information

We are not able to check up the regulatory information with regard to the substances in your country or region, therefore, we request this matter would be filled by your responsibility.

Regulatory information with regard to this substance in your country or in your region should be examined by your own responsibility.

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

Regulatory information in this section are limited to intentional ingredient(s), but does not contain information on non-intentional ingredients or impurities which are not informed by supplier(s).

Chemical safety assessment

Advice on safe handling for this product can be found in sections 7 and 8 of this SDS.

---

#### Section 16. Other information

GHS classification and labelling

H301–Acute toxicity, Category 3: H301 Toxic if swallowed

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

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

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

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

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

H350–Carcinogenicity, Category 1A: H350 May cause cancer

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

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

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

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

H410–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, 2018 Edition (Incorporating Amendment 39-18)

IATA Dangerous Goods Regulations (62nd Edition) 2021

2020 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2022 TLVs and BEIs. (ACGIH)

JIS Z 7252 : 2019

JIS Z 7253 : 2019

2021 Recommendation on TLVs (JSOH)

Supplier's data/information

Chemicals safety data management system "GHS Assistant" Version 4.19 (<https://www.asahi-ghs.com/>)

NITE Chemical Risk Information Platform "NITE-CHRIP"

([https://www.nite.go.jp/en/chem/chrip/chrip\\_search/systemTop](https://www.nite.go.jp/en/chem/chrip/chrip_search/systemTop))

GHS Classification Guidance for Enterprises 2019 Revised Edition (Ver. 2.0) (Mar. 2020, METI)

#### Abbreviations and acronyms

SDS (Safety Data Sheet)

LD50 (Lethal Dose, 50%)

LC50 (Lethal Concentration, 50%)

IARC (International Agency for Research on Cancer)

ACGIH (American Conference of Governmental Industrial Hygienists)

EPA (US Environmental Protection Agency)

NTP (US National Toxicology Program)

JSOH (Japan Society for Occupational Health)

EU (European Union)

EC50 (Effective Concentration, 50%)

NOEC (No Observed Effect Concentration)

BOD (Biochemical Oxygen Demand)

COD (Chemical Oxygen Demand)

BCF (Bioconcentration Factor)

anh (anhydride)

#### 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.

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