

Safety Data Sheet

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

Product identifier:

Product name: Chromium, standard solution 1000mg/L

Product code(SDS NO): 27532jis_J_E2-1

Details of the supplier of the safety data sheet

Manufacturer/Supplier: JUNSEI CHEMICAL CO., LTD.

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

Division: Quality Assurance Department

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2. Hazards identification

GHS classification and label elements of the product

Classification of the substance or mixture

HEALTH HAZARDS

Acute toxicity Oral: Category 4

Acute toxicity Inhalation: Category 4

Germ cell mutagenicity: Category 1B

Carcinogenicity: Category 1A

ENVIRONMENT HAZARDS

Hazardous to the aquatic environment – acute hazard: Category 2

Hazardous to the aquatic environment – long-term hazard: Category 2

(Note) GHS classification without description: Not applicable/Out of classification/Not classifiable

Label elements



Signal word: Danger

HAZARD STATEMENT

Harmful if swallowed

Harmful if inhaled

May cause genetic defects

May cause cancer

Toxic to aquatic life

Toxic to aquatic life with long lasting effects

PRECAUTIONARY STATEMENT

Prevention

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

Avoid release to the environment.

Avoid breathing dust/mist.

Use only outdoors or in a well-ventilated area.

Wash contaminated parts thoroughly after handling.

Use personal protective equipment as required.

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

Response

Collect spillage.

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IF exposed or concerned: Get medical advice/attention.

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

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

IF SWALLOWED: Rinse mouth.Call a POISON CENTER or doctor/physician if you feel unwell.

Storage

Store locked up.

Disposal

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

3. Composition/information on ingredients

Mixture/Substance selection:

Mixture

Ingredient name:Potassium dichromate

Content(%):ca. 0.3

Chemical formula:Cr₂K₂O₇

Chemicals No, Japan:1-278

CAS No.:7778-50-9

MW:294.18

ECNO:231-906-6

Ingredient name:Hydrogen chloride

Content(%):ca. 0.1

Chemical formula:ClH

Chemicals No, Japan:1-215

CAS No.:7647-01-0

MW:36.46

ECNO:231-595-7

Ingredient name:Water

Content(%):Residual quantity of the ingredient mentioned above.

Chemical formula:H₂O

CAS No.:7732-18-5

MW:18.02

ECNO:231-791-2

4. First-aid measures

Descriptions of first-aid measures

General measures

IF exposed or concerned: Get medical attention/advice.

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

IF INHALED

Remove person to fresh air and keep comfortable for breathing.

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

IF ON SKIN (or hair)

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

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.

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

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Use appropriate extinguishing media suitable for surrounding facilities.

The product is non-flammable.

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/flame resistant/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.

6. Accidental release measures

Personnel precautions, protective equipment and emergency procedures

Ventilate area after material pick up is complete.

Wear proper protective equipment.

Environmental precautions

Avoid release to the 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.

7. Handling and storage

Precautions for safe handling

Preventive measures

(Exposure Control for handling personnel)

Avoid breathing dust/mist.

(Protective measures against fire and explosion)

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

Exhaust/ventilator

Exhaust/ventilator should be available.

Safety treatments

Avoid contact with skin.

Avoid contact with eyes.

Avoid breathing dust or mist.

Safety Measures/Incompatibility

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

Use only outdoors or in a well-ventilated area.

Wear protective gloves, protective clothing or face protection.

Use personal protective equipment as required.

When using do not eat, drink or smoke.

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Conditions for safe storage, including any incompatibilities

Recommendation for storage

Store in a well-ventilated place. Keep container tightly closed.
Keep cool. Protect from sunlight.
Store locked up.

8. Exposure controls/personal protection

Control parameters

Control value

(Potassium dichromate)
Japan control value (1995) $\leq 0.05\text{mg-Cr(6)}/\text{m}^3$

Adopted value

(Hydrogen chloride)
JSOH(2014) (ceiling limit) 2ppm; 3.0mg/m³
ACGIH(2000) STEL: C 2ppm (URT irr)
(Potassium dichromate)
JSOH(1989) 0.05mg-Cr(VI)/m³
ACGIH(1991) TWA: 0.05mg-Water-soluble inorganic Cr(VI)/m³ (URT irr; cancer);
TWA: 0.01mg-Water-insoluble inorganic Cr(VI)/m³ (Lung cancer)

OSHA-PEL

(Hydrogen chloride)
C 5ppm, 7mg/m³

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.
Consult with your glove and/or personnel equipment manufacturer for selection of appropriate compatible materials.

Eye protection

Wear eye/face protection.

Safety and Health measures

Wash ... thoroughly after handling.
Do not eat, drink or smoke when using this product.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical properties

Appearance: Liquid
Color: Pale yellow-clear
Odor data N.A.
pH: Acidic

Phase change temperature

Initial Boiling Point/Boiling point data N.A.
Melting point/Freezing point data N.A.
Decomposition temperature data N.A.
Flash point data N.A.

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Auto-ignition temperature data N.A.
Explosive properties data N.A.
Vapor pressure data N.A.
Vapor density data N.A.
Specific gravity/Density data N.A.
Solubility
 Solubility in water: Miscible
n-Octanol /water partition coefficient data N.A.

10. Stability and Reactivity

Chemical stability

Stable under normal storage/handling conditions.

Conditions to avoid

Contact with incompatible materials.
Heat.

Incompatible materials

Strong bases, Strong reducing agents

Hazardous decomposition products

Metal oxides,
Chlorides

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[GHS Cat. Japan, base data]
(Hydrogen chloride) rat LD50 =238 mg/kg (SIDS, 2009)
(Potassium dichromate) female rat LD50=17 mg/kg (EU-RAR, 2005)

Acute toxicity (Dermal)

[GHS Cat. Japan, base data]
(Potassium dichromate) male rabbit LD50=403 mg/kg (ATSDR, 2012)

Acute toxicity (Inhalation)

[GHS Cat. Japan, base data]
(Hydrogen chloride) mist : rat LC50=0.42 mg/L/4hr (SIDS, 2009)
(Potassium dichromate) mist : female rat LC50=0.029 mg/L/4hr (ATSDR, 2012)

Labor standard law, Japan; Toxic

Hydrogen chloride; Potassium dichromate

Irritant properties

Skin corrosion/irritation

[GHS Cat. Japan, base data]
(Hydrogen chloride) rabbit/mouse/rat/human : corrosive (SIDS, 2009)
(Potassium dichromate) hexavalent chromium compounds: corrosive (EU-RAR, 2005)

Serious eye damage /irritation

[GHS Cat. Japan, base data]
(Hydrogen chloride) rabbit : corrosive (SIDS, 2002)
(Potassium dichromate) human : blistering, recovery uncertainty (ATSDR, 2012)

Sensitization

Respiratory sensitization

[GHS Cat. Japan, base data]
(Potassium dichromate) cat.1; ATSDR, 2012

Skin sensitization

[GHS Cat. Japan, base data]

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(Potassium dichromate) cat.1; JSOH, 2014

Germ cell mutagenicity

[GHS Cat. Japan, base data]

(Potassium dichromate) cat.1B; ATSDR, 2012

Carcinogenicity

[GHS Cat. Japan, base data]

(Potassium dichromate)

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

IARC-Gr.1 : Carcinogenic to humans

ACGIH-A1(1991) : Confirmed Human Carcinogen (Inorganic Cr VI)

JSOH-1: Classifiable as to Human Carcinogenicity

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

(Hydrogen chloride)

IARC-Gr.3 : Not Classifiable as a Human Carcinogen

ACGIH-A4(2000) : Not Classifiable as a Human Carcinogen

Labor standard law, Japan : Carcinogen

Potassium dichromate

Reproductive toxicity

[GHS Cat. Japan, base data]

(Potassium dichromate) cat.1B; CICAD 78, 2013

No STOT-single/repeated exposure data available

No Aspiration hazard data available

Additional data

There are no data available on the preparation itself.

12. Ecological Information

Ecotoxicity

Aquatic toxicity

Toxic to aquatic life

Toxic to aquatic life with long lasting effects

Aquatic acute toxicity component(s) data

[GHS Cat. Japan, base data]

(Hydrogen chloride) Crustacea (Daphnia magna) EC50=0.492mg/L/48hr (SIDS, 2005)

(Potassium dichromate) Crustacea (Daphnia) EC50 = 0.061 mg/L/48hr (EU-RAR, 2005)

Aquatic chronic toxicity component(s) data

[GHS Cat. Japan, base data]

(Potassium dichromate) Algae (Chlorella pyrenoidosa) NOEC (biomass) =0.1 mg/L/96hr (EU-RAR, 2005)

Water solubility

(Hydrogen chloride) 67 g/100 ml (30°C) (ICSC, 2000)

(Potassium dichromate) 12 g/100 ml (20°C) (ICSC, 2013)

No Persistence and degradability data available

Bioaccumulative potential

(Hydrogen chloride) log Pow=0.25 (ICSC, 2000)

Additional information

There are no data available on the preparation itself.

13. Disposal considerations

Waste treatment methods

Avoid release to the environment (- if this is not the intended use).

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

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14. Transport Information

UN No, UN CLASS

Not applicable to UN NO.

15. Regulatory Information

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

Transport in bulk according to Annex II of MARPOL73/78 and IBC Code

Noxious Liquid ; Cat. Z

Hydrogen chloride

Non Noxious Liquid ; Cat. OS

Water

US major regulations

TSCA

Hydrogen chloride; Water; Potassium dichromate

Other regulatory information

We are not able to check up the regulatory information in 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.

16. Other information

GHS classification and labelling

Acute Tox. 4: H302 Harmful if swallowed

Acute Tox. 4: H332 Harmful if inhaled

Muta. 1B: H340 May cause genetic defects

Carc. 1A: H350 May cause cancer

Aquatic Acute 2: H401 Toxic to aquatic life

Aquatic Chronic 2: H411 Toxic to aquatic life with long lasting effects

Reference Book

Globally Harmonized System of classification and labelling of chemicals, (5th ed., 2013), UN

Recommendations on the TRANSPORT OF DANGEROUS GOODS 19th edit., 2015 UN

Classification, labelling and packaging of substances and mixtures (table3-1 ECNO6182012)

2016 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2017 TLVs and BEIs. (ACGIH)

<http://monographs.iarc.fr/ENG/Classification/index.php>

Supplier's data/information

NITE Chemical Risk Information Platform (NITE-CHRIP) <http://www.safe.nite.go.jp/japan/db.html>

GHS Classification Guidance for Enterprises 2013 Revised Edition (August, 2013, METI)

General Disclaimer

This information contained in this data sheet represents the best information currently available to us. However, no warranty is made with respect to its completeness and we assume no liability resulting from its use. It are advised to make their own tests to determinate the safety and suitability of each such product or combination for their own purposes.

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 2016).