

Safety Data Sheet

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

Product identifier:

Product name: Sodium dichromate dihydrate

Product code (SDS NO): 53082jis_E-2

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

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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 3

Acute toxicity (Dermal): Category 3

Acute toxicity (Inhalation): Category 1

Skin corrosion/irritation: Category 1

Serious eye damage/eye irritation: Category 1

Respiratory sensitization: Category 1B

Skin sensitization: Category 1A

Germ cell mutagenicity: Category 1B

Carcinogenicity: Category 1A

Reproductive toxicity: Category 1B

Specific target organ toxicity – single exposure: Category 1 (respiratory organs, cardiovascular system, liver, kidney)

Specific target organ toxicity – repeated exposure: Category 1 (respiratory organs, haemal system, liver)

Specific target organ toxicity – repeated exposure: Category 2 (kidney)

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 applicable/Out of classification/Not classifiable

Label elements



Signal word: Danger

HAZARD STATEMENT

Toxic if swallowed

Toxic in contact with skin

Fatal if inhaled

Causes severe skin burns and eye damage

Causes serious 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 (respiratory organs, cardiovascular system, liver, kidney) after single exposure

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

May cause damage to organs (kidney) through prolonged or repeated exposure

Very toxic to aquatic life

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/mist.

Wear respiratory protection.(as specified by the manufacturer/supplier or the competent authority.)

Use only outdoors or in a well-ventilated area.

Wash contaminated parts thoroughly after handling.

Wear protective gloves.

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.

Immediately call a POISON CENTER or doctor/physician.

If experiencing respiratory symptoms: Call a POISON CENTER or 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/shower.

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

Take off immediately all 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 or doctor/physician.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Storage

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

Store locked up.

Disposal

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

3. Composition/information on ingredients

Mixture/Substance selection:

Substance

Common name, synonyms: Sodium bichromate dihydrate

Ingredient name:Sodium dichromate dihydrate

Content (%):99.0 <

Chemical formula:Cr₂Na₂O₇•2H₂O

Chemicals No, Japan:1-283

CAS No.:7789-12-0 [10588-01-9(anh)]

MW:298.00

4. First-aid measures

Descriptions of first-aid measures

General measures

Get medical attention/advice if you feel unwell.

Immediately call a POISON CENTER or doctor/physician.

IF INHALED

Remove person to fresh air and keep comfortable for breathing.

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

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.

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 or doctor/physician.

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.

Not combustible but enhances combustion of other substances.

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

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.

Environmental precautions

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

Methods and materials for containment and cleaning up

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

If appropriate, moisten first to prevent dusting.

Do NOT absorb in saw-dust or other combustible absorbents.

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.

7. Handling and storage**Precautions for safe handling****Preventive measures**

(Exposure Control for handling personnel)

Do not breathe 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

Obtain special instructions before use.

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.

Wear protective gloves.

Wear eye protection/face protection.

Use personal protective equipment as required.

When using do not eat, drink or smoke.

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**

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(2017) 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)

OSHA-PEL

TWA: $1\text{mg-Cr}/\text{m}^3$ (soluble 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.

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

Hand protection

Wear protective gloves. Recommended material(s): neoprene, nitrile, butyl rubber, viton, PVC, impermeable or chemical resistant rubber

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

Eye protection

Wear chemical safety goggle.

Wear eye/face protection.

Safety and Health measures

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 immediately all contaminated clothing and wash it before reuse.

9. Physical and Chemical Properties**Information on basic physical and chemical properties****Physical properties**

Appearance: Crystals

Color: Red~Orange

Odor: None

pH: 3.5 (10% aqueous solution)

Phase change temperature

Initial Boiling Point/Boiling point: 400°C

Melting point/Freezing point: 356.7°C

Decomposition temperature: 400°C

Flash point data N.A.

Auto-ignition temperature data N.A.

Explosive properties data N.A.

Vapor pressure data N.A.

Vapor density data N.A.

Specific gravity/Density: 2.35g/cm³

Solubility

Solubility in water: 186 g/100 ml (cold water)

Solubility in solvent: Insoluble in alcohol.

n-Octanol/water partition coefficient data N.A.

10. Stability and Reactivity**Reactivity**

Runaway polymerization will not occur.

Chemical stability

Stable under normal storage/handling conditions.

Deliquescent.

Possibility of hazardous reactions

The substance is a strong oxidant. It reacts with combustible and reducing materials.

Conditions to avoid

Contact with incompatible materials.

Heat.

Incompatible materials

Reducing agents, Combustible substances

Hazardous decomposition products

Oxygen gas, Metal oxides.

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[GHS Cat. Japan, base data]

rat LD50=252.4mg/kg (male), 181.0mg/kg (female) (JECDB, Access on Sep. 2016)

Acute toxicity (Dermal)

[GHS Cat. Japan, base data]

rabbit LD50=336mg/kg (male), 361mg/kg (female) (ATSDR, 2012; CICAD 78, 2013)

Acute toxicity (Inhalation)

[GHS Cat. Japan, base data]

dust: rat LC50=70mg/m³ (male), 31mg/m³ (female) (ATSDR, 2012; CICAD 78, 2013)

Labor standard law, Japan; Toxic

Sodium dichromate dihydrate

Irritant properties

Skin corrosion/irritation

[GHS Cat. Japan, base data]

rabbit : erythema, edema, necrosis (ATSDR, 2012)

Serious eye damage /irritation

[GHS Cat. Japan, base data]

severe damage (EU-RAR, 2005)

Sensitization

Respiratory sensitization

[GHS Cat. Japan, base data]

cat. 1B; Cr compounds, JSOH 58, 2016

Skin sensitization

[GHS Cat. Japan, base data]

cat. 1A; Cr compounds, JSOH 58, 2016

Germ cell mutagenicity

[GHS Cat. Japan, base data]

cat. 1B; Cr(VI) soluble compounds, EU-RAR (2005)

Carcinogenicity

[GHS Cat. Japan, base data]

cat.1A; IARC Gr. 1 (IARC, 2010 (Cr(VI) compounds) et al.)

IARC-Gr.1 : Carcinogenic to humans

ACGIH-A1(2017) : Confirmed Human Carcinogen

JSOH-1: Classifiable as to Human Carcinogenicity

Labor standard law, Japan : Carcinogen

Sodium dichromate dihydrate

Reproductive toxicity

[GHS Cat. Japan, base data]

cat. 1B; human_Cr(VI) compounds: CICAD 78, 2013; Potassium dichromate; CICAD 76, 2013; ATSDR; 2012

Delayed and immediate effects and also chronic effects from short- and long-term exposure

STOT

STOT-single exposure

[cat.1]

[GHS Cat. Japan, base data]

respiratory apparatus; CVS; liver; kidney (EU-RAR, 2005; ATSDR, 2012; JECDB, Access on Oct. 2016)

STOT-repeated exposure

[cat.1]

[GHS Cat. Japan, base data]

respiratory apparatus; blood/blood system; liver (Cr(VI) compounds; C100 78, 2013; EU-RAR, 2005; NTP TOX72)

[cat.2]

[GHS Cat. Japan, base data]

kidney (Cr(VI) compounds; JECDB, Access on Oct. 2016)

No Aspiration hazard data available

12. Ecological Information

Ecotoxicity

Aquatic toxicity

Very toxic to aquatic life

Very toxic to aquatic life with long lasting effects

Aquatic acute toxicity component(s) data

[GHS Cat. Japan, base data]

Crustacea (Daphnia magna) EC50=0.48mg/L/48hr

(Results of Aquatic Toxicity Tests of Chemicals conducted by MOE in Japan, 2001)

Aquatic chronic toxicity component(s) data

[GHS Cat. Japan, base data]

Crustacea (Daphnia magna) NOEC=0.0025mg/L/14days (C100 78, 2013)

Water solubility

186 g/100 ml (cold water) (HSDB)

No Persistence and degradability data available

No Bioaccumulative potential data available

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.

14. Transport Information

UN No, UN CLASS

UN No.: 3288

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

Class or division : 6.1

Packing group : II

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 : II

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 : II

Environmental hazards

MARPOL Annex III – Prevention of pollution by harmful substances

Marine pollutants (yes/no) : yes

15. Regulatory Information

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

Environmental hazards

US major regulations

TSCA

Sodium dichromate (anh)

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.

Regulatory information in this section are limited to intentional ingredient(s) and/or impurities informed by supplier(s).

16. Other information

GHS classification and labelling

Acute Tox. 3: H301 Toxic if swallowed

Acute Tox. 3: H311 Toxic in contact with skin

Acute Tox. 1: H330 Fatal if inhaled

Skin Corr. 1: H314 Causes severe skin burns and eye damage

Eye Dam. 1: H318 Causes serious eye damage

Resp. Sens. 1B: H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled

Skin Sens. 1A: H317 May cause an allergic skin reaction

Muta. 1B: H340 May cause genetic defects

Carc. 1A: H350 May cause cancer

Repr. 1B: H360 May damage fertility or the unborn child

STOT SE 1: H370 Causes damage to organs (respiratory organs, cardiovascular system, liver, kidney) after single exposure

STOT RE 1: H372 Causes damage to organs (respiratory organs, haemal system, liver) through prolonged or repeated exposure

STOT RE 2: H373 May cause damage to organs (kidney) through prolonged or repeated exposure

Aquatic Acute 1: H400 Very toxic to aquatic life

Aquatic Chronic 1: H410 Very 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 20th edit., 2017 UN

IMDG Code, 2018 Edition (Incorporating Amendment 39-18)

IATA Dangerous Goods Regulations (60th Edition) 2019

Classification, labelling and packaging of substances and mixtures (table 3-1 ECNO 6182012)

2016 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2018 TLVs and BEIs. (ACGIH)

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

Supplier's data/information

NITE Chemical Risk Information Platform (NITE-CHRIIP)

https://www.nite.go.jp/en/chem/chrip/chrip_search/systemTop

GHS Classification Guidance for Enterprises 2013 Revised Edition (Aug. 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 is advised to make their own tests to determine 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 2017).