



## Safety Data Sheet

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

Product identifier:

Product name: o-Phthalaldehyde

SDS No. : 6207E-1

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

FAX: +81-6-6946-1607

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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 1A

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

Specific target organ toxicity – repeated exposure: Category 1 (male genitalia, 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

H301 Toxic if swallowed

H314 Causes severe skin burns and eye damage

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

H317 May cause an allergic skin reaction

H370 Causes damage to organs (respiratory system)

H372 Causes damage to organs through prolonged or repeated exposure (male genitalia, respiratory system)

H410 Very toxic to aquatic life with long lasting effects

#### PRECAUTIONARY STATEMENT

**Prevention**

- P273 Avoid release to the environment.
- P260 Do not breathe dust/fume/gas/mist/vapors/spray.
- P284 In case of inadequate ventilation wear respiratory protection.
- P264 Wash contaminated parts thoroughly after handling.
- P280 Wear protective gloves.
- P272 Contaminated work clothing should not be allowed out of the workplace.
- P280 Wear protective gloves, protective clothing or face protection.
- P280 Wear eye protection/face protection.
- P270 Do not eat, drink or smoke when using this product.

**Response**

- P391 Collect spillage.
- P314 Get medical advice/attention if you feel unwell.
- P310 Immediately call a POISON CENTER/doctor/physician.
- P308 + P311 IF exposed or concerned: Call a POISON CENTER/doctor/physician.
- P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor/physician.
- P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
- P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
- P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
- P363 Wash contaminated clothing before reuse.
- P362 + P364 Take off contaminated clothing and wash it before reuse.
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P330 IF SWALLOWED: Rinse mouth.
- P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician.
- P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

**Storage**

- P405 Store locked up.

**Disposal**

- P501 Dispose of contents/container in accordance with local/national regulation.

**Specific adverse human health effects**

See "11. Toxicological Information".

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**Section 3. Composition/information on ingredients**

Mixture/Substance selection:

Substance

Ingredient name	Content (%)	CAS No.	Chemicals No, Japan	Chemical formula
o-Phthalaldehyde	99(min)	643-79-8	3-1145	C <sub>6</sub> H <sub>4</sub> (CHO) <sub>2</sub>

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**

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.

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

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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**

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

Runoff from fire control or dilution water may cause pollution.

See "10. Stability and Reactivity".

**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 a full facepiece operated in the positive pressure mode.

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**Section 6. Accidental release measures****Personnel precautions, protective equipment and emergency procedures**

Keep unauthorized personnel away.

Ventilate area until material pick up is complete.

Wear proper protective equipment.

**Environmental precautions**

Prevent spills from entering sewers, watercourses, low areas or rivers. To be careful not discharged to the environment without being properly handled waste water contaminated.

**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/eye protection/face protection.

Wash hands et al thoroughly after handling.

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 locked up. (P405)

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

Storage in accordance with local/national regulation.

Container and packaging materials for safe handling

Use closed unbreakable containers.

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## Section 8. Exposure controls/personal protection

Control parameters

Adopted value

ACGIH(2019) TWA: SL 25  $\mu$ g/100cm<sup>2</sup>;

STEL: C 0.1ppb(V)(Eye, skin & resp tract irr; resp sens; anaphylaxis)

[ACGIH] 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**

Recommend to use protective equipment in conformity with the standards.

Use appropriate protective equipment in accordance with local/national regulation.

**Respiratory protection**

Wear respiratory protection (dust-proof mask/gas mask). Select chemical cartridge corresponding to type of gases when using a gas mask.

**Hand protection**

Wear impervious protective glove.

**Eye protection**

Wear eye/face protection. Wear safety goggles in cases gas is generated.

**Skin and body protection**

Wear protective clothing.

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

Physical state: Crystals to crystalline powder

Color: Pale yellow to yellow

Odor: Characteristic odor

Melting point/Freezing point: 55.8°C

Boiling point or initial boiling point: (o-Phthalaldehyde)(0.1 kPa) 83°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: (o-Phthalaldehyde)(C.C.) 132°C

Auto-ignition temperature data is not available.

Decomposition temperature data is not available.

pH data is not available.

Kinematic viscosity data is not available.

**Solubility:**

Solubility in water: Good (3.8 g/100 ml, 20°C)

Solubility in solvent data is not available.

n-Octanol/water partition coefficient: log Pow 0.99 (30°C)

Vapor pressure: 0.6 Pa (25°C)

Density and/or relative density: 1.13 g/cm<sup>3</sup> (20°C)

Relative vapor density (Air=1): 4.6

Particle characteristics data is not available.

**Other information**

Other information 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**

Reacts with oxidants, amines and strong bases. This generates fire and explosion hazard.  
(ICSC 1784)

**Conditions to avoid**



Contact with incompatible materials.

Contact with fire source.

Incompatible materials

Strong bases, Oxidizing agents, Amines

Hazardous decomposition products

Carbon oxides

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## 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]

rat LD50=121 mg/kg (ACGIH 7th, 2019)

Acute toxicity (Dermal)

[Data for components of the product]

[GHS Cat. Japan, base data]

rat LD50 >2000mg/kg (REACH Registration dossier, Access on Aug. 2019)

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]

rabbit erythema score 1.8, edema score 2.9, eschar and scars were observed after 14 days (OECD TG404) (REACH Registration dossier, Access on July 2019)

Serious eye damage/irritation

[Product]

Category 1, Causes serious eye damage

[Data for components of the product]

[GHS Cat. Japan, base data]

rabbit skin corrosive Cat.1 (REACH Registration dossier, Access on July 2019)

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; NTP TOX84, 2018

Skin sensitization

[Product]

Category 1A, May cause an allergic skin reaction

[Data for components of the product]

[GHS Cat. Japan, base data]

cat. 1A; ACGIH 7th, 2019 et al.

Mutagenic effects data is not available.

Carcinogenic effects data is not available.

Reproductive toxicity data is not available.

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]

respiratory system (NTP TOX84, 2018; HSDB, Access on June 2019)

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]

male genitalia, respiratory system (NTP TOX84, 2018)

Aspiration hazard data is not available.

Information on other hazards

May cause lung disorders by massive inhalation of powdered substance.

-e.g. fibrosis of lung tissue, cough, sputum, breath shortness, dyspnea, decline of lung function, interstitial lung disease, pneumothorax

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## 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, short-term (acute)

[GHS Cat. Japan, base data]

Algae (selenastrum) EC50=0.184mg/L/96hr (U.S.EPA: OPP Pesticide Ecotoxicity Database, 2019)

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 as industrial waste. 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; A5; 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

Applicable

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**

References and sources for data

Globally Harmonized System of classification and labelling of chemicals, UN

Recommendations on the TRANSPORT OF DANGEROUS GOODS 22nd edit., 2021 UN

IMDG Code, 2022 Edition (Incorporating Amendment 41-22)

IATA Dangerous Goods Regulations (65th Edition) 2024

2020 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2024 TLVs and BEIs. (ACGIH)

Supplier's data/information



**General Disclaimer**

Please provide SDS to customers for selling or transferring.

All chemicals have unknown hazard. Handle the product with care.

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 2022).