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# Safety Data Sheet

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

Product identifier:
Product name: Oxalic acid, 2-hydrate
SDS No. : 5795E-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
FAX: +81-6-6946-1607

## Section 2. Hazards identification

GHS classification and label elements of the product
Classification of the substance or mixture
HEALTH HAZARDS
Acute toxicity (Oral): Category 4
Skin corrosion/irritation: Category 2
Serious eye damage/eye irritation: Category 1
Reproductive toxicity: Category 2
Specific target organ toxicity - single exposure: Category 1 (Nerve/nervous system)
Specific target organ toxicity - single exposure: Category 3 (Respiratory tract irritation)
Specific target organ toxicity - repeated exposure: Category 1 (Urinary organs)
ENVIRONMENT HAZARDS
Hazardous to the aquatic environment, short-term (acute): Category 3
Hazardous to the aquatic environment, long-term (chronic): Category 3
(Note) GHS classification without description: Not classified/Classification not possible
Label elements

Signal word: Danger
HAZARD STATEMENT
H302 Harmful if swallowed
H315 Causes skin irritation
H318 Causes serious eye damage
H361 Suspected of damaging fertility or the unborn child
H370 Causes damage to organs (Nerve/nervous system)
H335 May cause respiratory irritation
H372 Causes damage to organs through prolonged or repeated exposure (Urinary organs)
H412 Harmful to aquatic life with long lasting effects
PRECAUTIONARY STATEMENT
Prevention

P202 Do not handle until all safety precautions have been read and understood.
P273 Avoid release to the environment.
P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P271 Use only outdoors or in a well-ventilated area.
P264 Wash contaminated parts thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P270 Do not eat, drink or smoke when using this product.

Response

P314 Get medical advice/attention if you feel unwell.
P308 + P313 IF exposed or concerned: Get medical advice/attention.
P310 Immediately call a POISON CENTER/doctor/physician.
P312 Call a POISON CENTER/doctor/physician if you feel unwell.
P308 + P311 IF exposed or concerned: 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.
P332 + P313 If skin irritation occurs: Get medical advice/attention.
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 + P312 IF SWALLOWED: Call a POISON CENTER/doctor/physician if you feel unwell.

Storage

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
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".

## Section 3. Composition/information on ingredients

Mixture/Substance selection:

Substance

| Ingredient name | Content (%) | CAS No. | ENCS | Chemical formula |
|---|---|---|---|---|
| Oxalic acid, 2-hydrate | ≧99 | 6153-56-6 | 2-844 | H2C2O4・2H2O |

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

## 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.
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.

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

## 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.

## 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.

## 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

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/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.

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.

## Section 8. Exposure controls/personal protection

Control parameters

Control value and concentration standard value are not available in ISHA.

Adopted value

(Other inorganic and organic dust (third class dust ))

JSOH Respirable dust 2mg/m3, Total dust 8mg/m3

ACGIH(2015) TWA: 1mg/m3;

STEL: 2mg/m3 (URT, eye & skin irr)

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.

## Section 9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state: Crystal or crystalline powder

Color: Colorless to white

Odor: Odorless

Melting point/Freezing point: 101～102℃

Boiling point or initial boiling point data is not available.

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 data is not available.

Kinematic viscosity data is not available.

Solubility:

Solubility in water: 13～14 g/100 ml (20℃)

Solubility in solvent data is not available.

n-Octanol/water partition coefficient: log Pow=0.81

Vapor pressure data is not available.

Density and/or relative density: 1.65 g/cm3

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

Particle characteristics data is not available.

Other information

Other information is not available.

## Section 10. Stability and Reactivity

Reactivity

Not available.

Chemical stability

Sublimates by heating.

Possibility of hazardous reactions

Decomposes on contact with hot surfaces or flames. This produces formic acid and carbon monoxide. The solution in water is a medium strong acid. Reacts violently with strong oxidants. This generates fire and explosion hazard. Reacts with some silver compounds. This produces explosive silver oxalate. Attacks some forms of plastic. (ICSC 0707)

Conditions to avoid

Contact with incompatible materials.

Contact with fire source.

Incompatible materials

Strong oxidizing agents, Silver compounds

Hazardous decomposition products

Carbon oxides, Formic acid, Silver oxalate

## Section 11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[Product]

Category 4, Harmful if swallowed

[Data for components of the product]

[Company proprietary data]

(As Oxalic acid, anhydrous)

rat LD50=475(male), 375(female)mg/kg (PATTY 6th, 2012)

Acute toxicity (Dermal)

[Data for components of the product]

[Company proprietary data]

(As Oxalic acid, anhydrous)

rabbit LD50=20000mg/kg (not lethal) (PATTY 6th, 2012)

Irritant properties

Skin corrosion/irritation

[Product]

Category 2, Causes skin irritation

[Data for components of the product]

[Company proprietary data]

(As Oxalic acid, anhydrous)

rabbit/human skin irritation (ACGIH, 2015; PATTY, 6th, 2012)

Serious eye damage/irritation

[Product]

Category 1, Causes serious eye damage

[Data for components of the product]

[Company proprietary data]

(As Oxalic acid, anhydrous)

human eyes corrosive (PATTY 6th, 2012)

Allergenic and sensitizing effects data is not available.

Mutagenic effects data is not available.

Carcinogenic effects data is not available.

Reproductive toxicity

[Product]

Category 2, Suspected of damaging fertility or the unborn child

[Data for components of the product]

[Company proprietary data]

(As Oxalic acid, anhydrous)

cat. 2; ACGIH 7th, 2015; PATTY 6th, 2012

Specific target organ toxicity (STOT)

STOT-single exposure

[Product]

Category 1, Causes damage to organs

Category 3, May cause respiratory irritation

[Data for components of the product]

[Company proprietary data]

Category 1 ((As Oxalic acid, anhydrous) Nerve/nervous system)(ACGIH 7th, 2015; PATTY 6th, 2012), Category 3 (Respiratory tract irritation)(HSDB, 2016)

STOT-repeated exposure
[Product]
Category 1, Causes damage to organs through prolonged or repeated exposure
[Data for components of the product]
[Company proprietary data]
Category 1 ((As Oxalic acid, anhydrous) Urinary organs)(ACGIH 7th, 2015; PATTY 6th, 2012)
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

## Section 12. Ecological Information

Toxicity
Aquatic toxicity
[Product]
Category 3, Harmful to aquatic life
Category 3, Harmful to aquatic life with long lasting effects
[Data for components of the product]
Hazardous to the aquatic environment, short-term (acute)
[Company proprietary data]
(As Oxalic acid, anhydrous)
Crustacea (Daphnia magna) EC50=15mg/L/48hr (MOE Japan, 1998)
Water solubility
13 - 14 g/100 mL (20℃) (source: ICSC, 2009)
Persistence and degradability
Persistence and degradability data is not available.
Bioaccumulative potential
[Data for components of the product]
log Pow: -0.81 (source: ICSC, 2009)
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 as industrial waste. Accordance with local/national regulation.

## Section 14. Transport Information

UN Number or ID Number : Not regulated
IMDG Code (International Maritime Dangerous Goods Regulations)
UN Number or ID Number : Not regulated

IATA (Dangerous Goods Regulations)
UN Number or ID Number : Not regulated
Environmental hazards
Marine pollutants (yes/no) : no

## 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.

## 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)
JIS Z 7252 : 2019
JIS Z 7253 : 2019
2023 Recommendation on TLVs (JSOH)
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 Data published in Japan (National Institute of Technology and Evaluation (NITE) Chemical Risk Information Platform (NITE-CHRIP), up to FY2023).