



## Safety Data Sheet

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

**Product identifier:**

Product name: Oxalic acid, 2-hydrate

SDS No. : 5795E-3

**Details of the supplier of the safety data sheet**

Manufacturer/Supplier: KISHIDA CHEMICAL CO., LTD.

Address: 3-1, Honmachibashi, Chuo-ku, Osaka, JAPAN

Division: Safety Management Dept. of Chemicals

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e-mail address: kagakuhinanzenkanri@kishida.co.jp

### 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 (Acute): Category 3

Hazardous to the aquatic environment (Long-term): Category 3

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

**Label elements**

Signal word: Danger

**HAZARD STATEMENT**

Harmful if swallowed

Causes skin irritation

Causes serious eye damage

Suspected of damaging fertility or the unborn child

Causes damage to organs after single exposure (Nerve/nervous system)

May cause respiratory irritation

Causes damage to organs through prolonged or repeated exposure (Urinary organs)

Harmful to aquatic life

Harmful to aquatic life with long lasting effects

**PRECAUTIONARY STATEMENT****Prevention**

Avoid release to the environment.

Do not breathe dust/fume/gas/mist/vapors/spray.

Use only outdoors or in a well-ventilated area.



Wash contaminated parts thoroughly after handling.  
Wear protective gloves.  
Wear eye protection/face protection.  
Do not eat, drink or smoke when using this product.

**Response**

Get medical advice/attention if you feel unwell.  
IF exposed or concerned: Get medical advice/attention.  
Call a POISON CENTER or doctor/physician if you feel unwell.  
IF exposed or concerned: 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 skin irritation occurs: Get medical advice/attention.  
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: Call a POISON CENTER or doctor/physician if you feel unwell.  
IF SWALLOWED: Rinse mouth.

**Storage**

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

**Disposal**

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

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**3. Composition/information on ingredients****Mixture/Substance selection:****Substance**

Ingredient name: Oxalic acid, 2-hydrate

Content (%): 99(min)

Chemical formula:  $\text{H}_2\text{C}_2\text{O}_4 \cdot 2\text{H}_2\text{O}$

Chemicals No, Japan: 2-844

CAS No.: 6153-56-6

MW: 126.07

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

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**4. First-aid measures****Descriptions of first-aid measures****General measures**

Get medical attention/advice 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.

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 or doctor/physician if you feel unwell.



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## 5. Fire-fighting measures

### Extinguishing media

#### Suitable extinguishing media

Use appropriate extinguishing media suitable for surrounding facilities.

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.

### 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.

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## 6. Accidental release measures

### Personnel precautions, protective equipment and emergency procedures

Ventilate area until material pick up is complete.

Wear proper protective equipment.

### Environmental precautions

Prevent spills from entering sewers, watercourses or low areas.

Avoid raising dust.

### 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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## 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/sparks/open flames/hot surfaces. – No smoking.

(Exhaust/ventilator)

Exhaust/ventilator should be available.

(Safety treatments)

Avoid contact with skin.

Avoid contact with eyes.

#### Safety Measures

Use only outdoors or in a well-ventilated area.

Wear protective gloves, protective clothing or face protection.

Wear eye protection/face protection.

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

Keep under lock and key.

Container and packaging materials for safe handling

Polyethylene

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#### 8. Exposure controls/personal protection

Control parameters

Adopted value

(Oxalic acid, 2-hydrate)

ACGIH(2014) TWA: 1mg/m<sup>3</sup>;

STEL: 2mg/m<sup>3</sup> (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

Respiratory protection

Wear respiratory protection.

Hand protection

Wear protective gloves.

Eye protection

Wear eye/face protection.

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#### 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°C

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°C)

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

Vapor pressure data is not available.

Density and/or relative density: 1.65g/cm<sup>3</sup>

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

No Particle characteristics data is not available.



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## 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

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## 11. Toxicological Information

### Information on toxicological effects

#### Acute toxicity

##### Acute toxicity (Oral)

[Company proprietary data]

(Oxalic acid, 2-hydrate)

(As Oxalic acid, anhydrous)

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

##### Acute toxicity (Dermal)

[Company proprietary data]

(Oxalic acid, 2-hydrate)

(As Oxalic acid, anhydrous)

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

#### Irritant properties

##### Skin corrosion/irritation

[Company proprietary data]

(Oxalic acid, 2-hydrate)

(As Oxalic acid, anhydrous)

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

##### Serious eye damage/irritation

[Company proprietary data]

(Oxalic acid, 2-hydrate)

(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

[Company proprietary data]

(Oxalic acid, 2-hydrate)

(As Oxalic acid, anhydrous)

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

#### STOT

STOT-single exposure



## [cat.1]

[Company proprietary data]

(Oxalic acid, 2-hydrate)

(As Oxalic acid, anhydrous) Nerve/nervous system (ACGIH 7th, 2015; PATTY 6th, 2012)

## [cat.3 (resp. irrit.)]

[Company proprietary data]

(Oxalic acid, 2-hydrate)

Respiratory tract irritation (HSDB, 2016)

## STOT-repeated exposure

## [cat.1]

[Company proprietary data]

(Oxalic acid, 2-hydrate)

(As Oxalic acid, anhydrous) Urinary organs (ACGIH 7th, 2015; PATTY 6th, 2012)

Aspiration hazard data is not available.

## Additional data

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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**12. Ecological Information**

## Ecotoxicity

## Aquatic toxicity

Harmful to aquatic life

Harmful to aquatic life with long lasting effects

## Hazardous to the aquatic environment (Acute)

[Company proprietary data]

(Oxalic acid, 2-hydrate)

(As Oxalic acid, anhydrous)

Crustacea (Daphnia magna) EC50=15mg/L/48hr (MOE Japan, 1998)

## Water solubility

(Oxalic acid, 2-hydrate)

13 - 14 g/100 ml (20°C) (ICSC, 2009)

## Persistence and degradability

Persistence and degradability data is not available.

## Bioaccumulative potential

(Oxalic acid, 2-hydrate)

log Pow=-0.81 (ICSC, 2009)

## Mobility in soil

Mobility in soil data is not available.

## Other adverse effects

Ozone depleting chemical data is not available.

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**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 (- if this is not the intended use).

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



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**14. Transport Information**

Not applicable to UN No., UN CLASS

Not applicable to IMDG Code

Not applicable to IATA Dangerous Goods Regulations

Environmental hazards

MARPOL Annex III – Prevention of pollution by harmful substances

Marine pollutants (yes/no) : no

MARPOL Annex V – Prevention of pollution by garbage discharge

Specific target organ toxicity – repeated exposure: cat.1

Oxalic acid, 2-hydrate

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**15. Regulatory Information**

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

US Federal Regulations

Chemicals listed in TSCA Inventory

Oxalic acid, 2-hydrate

Other regulatory information

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

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**16. Other information**

GHS classification and labelling

Acute Tox. 4: H302 Harmful if swallowed

Skin Irrit. 2: H315 Causes skin irritation

Eye Dam. 1: H318 Causes serious eye damage

Repr. 2: H361 Suspected of damaging fertility or the unborn child

STOT SE 1: H370 Causes damage to organs after single exposure

STOT SE 3: H335 May cause respiratory irritation

STOT RE 1: H372 Causes damage to organs through prolonged or repeated exposure

Aquatic Acute 3: H402 Harmful to aquatic life

Aquatic Chronic 3: H412 Harmful to aquatic life with long lasting effects

Reference Book

Globally Harmonized System of classification and labelling of chemicals, (6th ed., 2015), UN

Recommendations on the TRANSPORT OF DANGEROUS GOODS 20th edit., 2017 UN

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

IATA Dangerous Goods Regulations (61th Edition) 2020

Classification, labelling and packaging of substances and mixtures (Table 3 ECNO6182012)

2016 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2020 TLVs and BEIs. (ACGIH)

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

Supplier's data/information

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 2018).