



Safety Data Sheet

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

Product identifier:

Product name: Oxalic acid, anhydrous

SDS No. : 5796E-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: Chemical Safety Management Department

Telephone number: +81-6-6946-8061

FAX: +81-6-6946-1607

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 (nervous system)

Specific target organ toxicity – single exposure: Category 3 (Respiratory tract irritation)

Specific target organ toxicity – repeated exposure: Category 1 (urinary system)

ENVIRONMENT HAZARDS

Hazardous to the aquatic environment (Acute): Category 3

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

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 (nervous system)

May cause respiratory irritation

Causes damage to organs through prolonged or repeated exposure (urinary system)

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.
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/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.

3. Composition/information on ingredients

Mixture/Substance selection:

Substance

Ingredient name:Oxalic acid, anhydrous

Content (%):98(min)

Chemical formula:C₂H₂O₄

Chemicals No, Japan:2-844

CAS No.:144-62-7

MW:90.04

ECNO:205-634-3

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

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 (or hair)

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.



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

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 resistant or flame 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 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.

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

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

Glass
Polyethylene

8. Exposure controls/personal protection**Control parameters****Adopted value**

(Oxalic acid, anhydrous)
ACGIH(2015) TWA: 1mg/m³;
STEL: 2mg/m³ (URT, eye & skin irr)

OSHA-PEL

(Oxalic acid, anhydrous)
TWA: 1mg/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.

Eye protection

Wear eye/face protection.

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

Physical state: Crystals or powder

Color: Colorless to white

Odor data is not available.

Melting point/Freezing point: (decomposes) 189.5°C

Boiling point or initial boiling point: (Oxalic acid, anhydrous)(Sublimation point) 157°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 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: Soluble (9-10g/100 ml, 20°C)

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



Vapor pressure data is not available.
Density and/or relative density: 1.9g/cm³
Relative vapor density (Air=1) data is not available.
Particle characteristics data is not available.

10. Stability and Reactivity

Reactivity

Not available.

Chemical stability

Stable under normal storage/handling conditions.

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 0529)

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

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[GHS Cat. Japan, base data]
(Oxalic acid, anhydrous)
rat LD₅₀=475(male), 375(female)mg/kg (PATTY 6th, 2012)

Acute toxicity (Dermal)

[GHS Cat. Japan, base data]
(Oxalic acid, anhydrous)
rabbit LD₅₀=20000mg/kg (not lethal) (PATTY 6th, 2012)

Irritant properties

Skin corrosion/irritation

[GHS Cat. Japan, base data]
(Oxalic acid, anhydrous)
rabbit/human skin irritation (ACGIH, 2015; PATTY, 6th, 2012)

Serious eye damage/irritation

[GHS Cat. Japan, base data]
(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

[GHS Cat. Japan, base data]
(Oxalic acid, anhydrous)
cat. 2; ACGIH 7th, 2015; PATTY 6th, 2012

STOT

STOT-single exposure



[cat.1]

[GHS Cat. Japan, base data]

(Oxalic acid, anhydrous)

nervous system (ACGIH 7th, 2015; PATTY 6th, 2012)

[cat.3 (resp. irrit.)]

[GHS Cat. Japan, base data]

(Oxalic acid, anhydrous)

respiratory tract irritation (HSDB, 2016)

STOT-repeated exposure

[cat.1]

[GHS Cat. Japan, base data]

(Oxalic acid, anhydrous)

urinary system (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

12. Ecological Information

Ecotoxicity

Aquatic toxicity

Harmful to aquatic life with long lasting effects

Hazardous to the aquatic environment (Acute)

[GHS Cat. Japan, base data]

(Oxalic acid, anhydrous)

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

Water solubility

(Oxalic acid, anhydrous)

moderate (9 - 10 g/100 ml, 20°C (ICSC, 2009))

Persistence and degradability

(Oxalic acid, anhydrous)

BOD_Degradation : 37% (METI existing chemical safety inspections, 1993)

Bioaccumulative potential

(Oxalic acid, anhydrous)

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.

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 in accordance with local/national regulation.



14. Transport Information

UN No. or ID No.: Not applicable

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, anhydrous

15. Regulatory Information

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

Chemicals listed in TSCA Inventory

Oxalic acid, anhydrous

Other regulatory information

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

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

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, UN

Recommendations on the TRANSPORT OF DANGEROUS GOODS 21th edit., 2019 UN

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

IATA Dangerous Goods Regulations (62nd Edition) 2021

2020 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2021 TLVs and BEIs. (ACGIH)

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 2020).