



## Safety Data Sheet

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

Product identifier:

Product name: Glycolic acid aqueous solution

SDS No. : 3472E-2

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 4

Acute toxicity (Inhalation): Category 4

Skin corrosion/irritation: Category 1

Serious eye damage/eye irritation: Category 1

Reproductive toxicity: Category 1B

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

Specific target organ toxicity – repeated exposure: Category 2 (thymus, liver)

#### ENVIRONMENT HAZARDS

Hazardous to the aquatic environment, short-term (acute): Category 3

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

Label elements



Signal word: Danger

#### HAZARD STATEMENT

H302 Harmful if swallowed

H332 Harmful if inhaled

H314 Causes severe skin burns and eye damage

H360 May damage fertility or the unborn child

H370 Causes damage to organs (respiratory system)

H373 May cause damage to organs through prolonged or repeated exposure (thymus, liver)

H402 Harmful to aquatic life

#### 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 or face protection.  
P280 Wear eye protection/face protection.  
P280 Use personal protective equipment as required.  
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.  
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing.  
Rinse skin with water or shower.  
P363 Wash contaminated clothing 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.  
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:

Mixture

Ingredient name	Content (%)	CAS No.	Chemicals No, Japan	Chemical formula
Glycolic acid	72	79-14-1	2-1346	CH <sub>2</sub> (OH)COOH
Methoxyacetic acid	<1.0	625-45-6	2-3484	C <sub>3</sub> H <sub>6</sub> O <sub>3</sub>
Water	27	7732-18-5	-	H <sub>2</sub> O

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.  
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.

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.

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

Absorb spill with inert material (dry sand, earth, et al), then place in a chemical waste container.

## 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**

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.

Wash contaminated clothing 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**

Adopted value in ACGIH is not available.

**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.

**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: Liquid

Color: Pale yellow

Odor: Characteristic odor

Melting point/Freezing point: 10°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:  $\geq 100^{\circ}\text{C}$

Auto-ignition temperature data is not available.

Decomposition temperature data is not available.

pH: 0.1

Kinematic viscosity data is not available.

Solubility:

Solubility in water: Soluble

Solubility in solvent data is not available.

n-Octanol/water partition coefficient data is not available.

Vapor pressure data is not available.

Density and/or relative density: 1.27g/cm<sup>3</sup>

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

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

(Glycolic acid)

Reacts with strong oxidants, cyanides and sulfides. Reacts violently with aluminium, zinc and tin. This generates fire and explosion hazard. The solution in water is a medium strong acid. (ICSC 1537)

Conditions to avoid

Contact with incompatible materials.

Contact with fire source.

Incompatible materials

Strong oxidizing agents, Cyanides, Sulfides, Aluminium, Zinc, Tin

Hazardous decomposition products

Carbon oxides

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**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]

[GHS Cat. Japan, base data]

(Glycolic acid)

rat LD50=1357mg/kg (NICNAS, 2000)

(Methoxyacetic acid)

rat LD50=1000–1500mg/kg (ECETOC TR95 vol.2, 2005)

## Acute toxicity (Inhalation)

## [Product]

Category 4, Harmful if inhaled

## [Data for components of the product]

[GHS Cat. Japan, base data]

(Glycolic acid)

mist: male rat LC50=2.52mg/L/4hr (NICNAS, 2000)

## Irritant properties

## Skin corrosion/irritation

## [Product]

Category 1, Causes severe skin burns and eye damage

## [Product data]

[GHS Cat. based on pH]

pH ≤ 2, accordingly Skin corrosion/irritation: Category 1

## [Data for components of the product]

[GHS Cat. Japan, base data]

(Glycolic acid)

rabbit corrosive (NICNAS, 2000)

(Methoxyacetic acid)

rabbit corrosive (ECETOC TR95, 1995)

## Serious eye damage/irritation

## [Product]

Category 1, Causes serious eye damage

## [Product data]

[GHS Cat. based on pH]

pH ≤ 2, accordingly Serious eye damage/eye irritation: Category 1

## [Data for components of the product]

[GHS Cat. Japan, base data]

(Glycolic acid)

rabbit irreversible damage et al (NICNAS, 2000)

(Methoxyacetic acid)

rabbit corrosive (ECETOC TR95, 1995)

Allergenic and sensitizing effects data is not available.

Mutagenic effects data is not available.

Carcinogenic effects data is not available.

## Reproductive toxicity

## [Product]



Category 1B, May damage fertility or the unborn child

[Data for components of the product]

[GHS Cat. Japan, base data]

(Glycolic acid)

cat. 2; NICNAS, 2000

(Methoxyacetic acid)

cat. 1B; ECETOC TR95, 2005

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]

(Glycolic acid)

respiratory system (USEPA/HPV, 2001)

[cat.2]

[GHS Cat. Japan, base data]

(Methoxyacetic acid)

central nervous system (ECETOC TR95 vol.2, 2005)

STOT-repeated exposure

[Product]

Category 2, May cause damage to organs through prolonged or repeated exposure

[Data for components of the product]

[cat.2]

[GHS Cat. Japan, base data]

(Glycolic acid)

thymus, liver (USEPA/HPV, 2001)

Aspiration hazard data is not available.

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## Section 12. Ecological Information

Toxicity

Aquatic toxicity

[Product]

Category 3, Harmful to aquatic life

[Data for components of the product]

Hazardous to the aquatic environment, short-term (acute)

[GHS Cat. Japan, base data]

(Glycolic acid)

Crustacea (Daphnia magna) EC50=44mg/L/48hr (MOE Japan, 1998)

Water solubility

(Glycolic acid)

very good (ICSC, 2004)

Persistence and degradability

[Data for components of the product]

(Glycolic acid)

Rapidly degradable (BOD\_Degradation : 86% (METI existing chemical safety inspections 1993))

Bioaccumulative potential

[Data for components of the product]



(Glycolic acid)

Log Kow = -1.11 (PHYSPROP DB, 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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### 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 : 3265

UN Proper Shipping Name :

CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.

Class or division (Transport hazard class) : 8

Packing group : II

ERG GUIDE No.: 153

Special provisions No.: 274

IMDG Code (International Maritime Dangerous Goods Regulations)

UN Number or ID Number : 3265

UN Proper Shipping Name :

CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.

Class or division (Transport hazard class) : 8

Packing group : II

Special provisions No.: 274

IATA (Dangerous Goods Regulations)

UN Number or ID Number : 3265

UN Proper Shipping Name :

CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.

Class or division (Transport hazard class) : 8

Hazard labels : Corrosive

Packing group : II

Special provisions No.: A3; A803

Environmental hazards

Marine pollutants (yes/no) : no

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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

Glycolic acid; Methoxyacetic acid; Water

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).