Date of issue: 2019/07/26
Date of revision: 2022/10/21

Safety Data Sheet

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

Product identifier:
Product name: 0.05mol/L(N/10)-Sulfuric acid
SDS No. : A0141E-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
e-mail address: kagakuhinanzenkanri@kishida.co.jp

Section 2. Hazards identification

GHS classification and label elements of the product
Classification of the substance or mixture
ENVIRONMENT HAZARDS
Hazardous to the aquatic environment (Long-term): Category 3
Label elements
No GHS label element
No Signal word
HAZARD STATEMENT
Harmful to aquatic life with long lasting effects
PRECAUTIONARY STATEMENT
Prevention
Avoid release to the environment.
Disposal
Dispose of contents/container in accordance with local/national regulation.

Section 3. Composition/information on ingredients

Mixture/Substance selection:
Mixture
Ingredient name:Sulfuric acid
Content (%):0.49
Chemical formula:H2O4S
Chemicals No, Japan:1-430
CAS No.:7664-93-9
MW:98.1
ECNO:231-639-5

Ingredient name:Water
Content (%):99
Chemical formula:H2O
CAS No.:7732-18-5
MW:18.02

ECNO:231-791-2
Note : The figures shown above are not the specifications of the product.

Section 4. First-aid measures

Descriptions of first-aid measures

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.
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

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 peace operated positive pressure mode.

Section 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.

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.

Section 7. Handling and storage

Precautions for safe handling

Preventive measures

(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 or face protection.

When using do not eat, drink or smoke.

Any incompatibilities

See "10.Stability and Reactivity"

Storage

Conditions for safe storage

Keep container tightly closed.

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

Container and packaging materials for safe handling

Glass

Polyethylene

Section 8. Exposure controls/personal protection

Control parameters

Adopted value

(Sulfuric acid)

ACGIH(2004) TWA: 0.2mg/m3(T) (Pulm func)

OSHA-PEL

(Sulfuric acid)

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.

Section 9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state: Liquid

Color: Colorless, Clear

Odor: None

Melting point/Freezing point data is not available.

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: Soluble
n-Octanol/water partition coefficient data is not available.
Vapor pressure data is not available.
Density and/or relative density: 1.0
Relative vapor density (Air=1) data is not available.
Particle characteristics data is not available.

Section 10. Stability and Reactivity

Reactivity
Not available.
Chemical stability
Stable under normal storage/handling conditions.
Possibility of hazardous reactions
(Sulfuric acid)
Decomposes on heating. This produces toxic and corrosive gases including sulfur oxides. The substance is a strong oxidant. It reacts with combustible and reducing materials and organic materials. This generates fire and explosion hazard. The substance is a strong acid. It reacts violently with bases and is corrosive to most common metals forming a flammable/explosive gas (hydrogen). Reacts violently with water. This generates heat and fire or explosion hazard. Attacks many plastics. (ICSC 0362)
Conditions to avoid
Contact with incompatible materials.
Contact with fire source.
Incompatible materials
Bases, Reducing agents, Combustible materials, Organic materials, Metals
Hazardous decomposition products
Sulfur oxides, Hydrogen

Section 11. Toxicological Information

Information on toxicological effects
Acute toxicity
Acute toxicity (Oral)
[Data for components of the product]
[GHS Cat. Japan, base data]
(Sulfuric acid)
rat LD50=2140mg/kg (SIDS, 2001)
Acute toxicity (Inhalation)
[Data for components of the product]
[GHS Cat. Japan, base data]
(Sulfuric acid)
mist: rat LC50=0.347mg/L/4hr (SIDS, 2001)
Irritant properties

Skin corrosion/irritation
[Data for components of the product]
[GHS Cat. Japan, base data]
(Sulfuric acid)
corrosive substance
Serious eye damage/irritation
[Data for components of the product]
[GHS Cat. Japan, base data]
(Sulfuric acid)
human severe damage (ATSDR, 1998)
Allergenic and sensitizing effects data is not available.
Mutagenic effects data is not available.
Carcinogenicity
[IARC]
(Sulfuric acid)
Group 1 : Carcinogenic to humans
[ACGIH]
(Sulfuric acid)
A2(2004) : Suspected Human Carcinogen
Reproductive toxicity data is not available.
Specific target organ toxicity (STOT)
STOT-single exposure data is not available.
STOT-repeated exposure data is not available.
Aspiration hazard data is not available.

Section 12. Ecological Information
Toxicity
Aquatic toxicity
[Data for components of the product]
Hazardous to the aquatic environment (Acute)
[GHS Cat. Japan, base data]
(Sulfuric acid)
Fish (bluegill) LC50(pH3.25-3.5)=16-28mg/L/96hr (OECD SIDS, 2001)
Hazardous to the aquatic environment (Long-term)
[GHS Cat. Japan, base data]
(Sulfuric acid)
Fish (Gambusia affinis) NOEC(pH6.0)=0.025mg/L/45days (OECD SIDS, 2001)
Water solubility
(Sulfuric acid)
miscible (ICSC, 2000)
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.

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 in accordance with local/national regulation.

Section 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

Maritime transport in bulk according to IMO instruments

Noxious Liquid ; Cat. Y

Sulfuric acid

Non Noxious Liquid ; Cat. OS

Water

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

Sulfuric acid; Water

Other regulatory information

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

Section 16. Other information

GHS classification and labelling

Hazardous to the aquatic environment, long-term (chronic), Category 3: H412 Harmful to aquatic life with long lasting effects

References and sources for data

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)

2022 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 2021).