

SAFETY DATA SHEET

According to JIS Z 7253:2019
Revision date 15-Apr-2022
 Revision Number 3.06

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name	Sulfuric Acid, Fuming
Product Code	194-04715

Manufacturer FUJIFILM Wako Pure Chemical Corporation
 1-2 Doshomachi 3-Chome
 Chuo-ku, Osaka 540-8605, Japan
 Phone: +81-6-6203-3741
 Fax: +81-6-6203-5964

Supplier FUJIFILM Wako Pure Chemical Corporation
 1-2 Doshomachi 3-Chome, Chuo-ku, Osaka 540-8605, Japan
 Phone: +81-6-6203-3741
 Fax: +81-6-6203-2029

Emergency telephone number +81-6-6203-3741 / +81-3-3270-8571

Recommended uses and restrictions on use For research use only

Section 2: HAZARDS IDENTIFICATION

GHS classification

Classification of the substance or mixture

Acute toxicity - Inhalation (Dusts/Mists)	Category 3
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1A
Specific target organ toxicity (single exposure)	Category 2
Category 2 respiratory system, digestive system	
Specific target organ toxicity (repeated exposure)	Category 2
Category 2 lung, teeth	

Pictograms



Signal word

Danger

Hazard statements

- H314 - Causes severe skin burns and eye damage
- H318 - Causes serious eye damage
- H331 - Toxic if inhaled
- H350 - May cause cancer
- H371 - May cause damage to the following organs: respiratory system, digestive system
- H373 - May cause damage to the following organs through prolonged or repeated exposure: lung, teeth

Precautionary statements-(Prevention)

- Obtain special instructions before use
- Do not handle until all safety precautions have been read and understood
- Use personal protective equipment as required

- Use only outdoors or in a well-ventilated area
- Do not breathe dust/fume/gas/mist/vapors/spray
- Wash face, hands and any exposed skin thoroughly after handling
- Do not eat, drink or smoke when using this product

Precautionary statements-(Response)

- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- Immediately call a POISON CENTER or doctor/physician
- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
- Wash contaminated clothing before reuse
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
- IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

Precautionary statements-(Storage)

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

Precautionary statements-(Disposal)

- Dispose of contents/container to an approved waste disposal plant

Others

Other hazards Not available

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Single Substance or Mixture Substance

Formula H₂SO₄·xSO₃

Chemical Name	Weight-%	Molecular weight	ENCS	ISHL No.	CAS RN
Sulfuric Acid, Fuming	60.0 - 65.0 (as free sulfate)	98.08	(1)-430,(1)-537	*	8014-95-7

Note on ISHL No.: * in the table means announced chemical substances.

Impurities and/or Additives: Not applicable

Section 4: FIRST AID MEASURES

Inhalation

Remove to fresh air. If symptoms persist, call a physician.

Skin contact

Wash off immediately with soap and plenty of water. If symptoms persist, call a physician.

Eye contact

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediate medical attention is required.

Ingestion

Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately. Do not induce vomiting without medical advice.

Protection of first-aiders

Use personal protective equipment as required.

Section 5: FIRE FIGHTING MEASURES

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

Unsuitable extinguishing media

No information available

Specific hazards arising from the chemical product

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

Special extinguishing method

No information available

Special protective actions for fire-fighters

Use personal protective equipment as required. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For indoor, provide adequate ventilation process until the end of working. Deny unnecessary entry other than the people involved by, for example, using a rope. While working, wear appropriate protective equipments to avoid adhering it on skin, or inhaling the gas. Work from windward, and retract the people downwind.

Environmental precautions

To be careful not discharged to the environment without being properly handled waste water contaminated.

Methods and materials for contaminant and methods and materials for cleaning up

Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers

Recovery, neutralization

No information available

Secondary disaster prevention measures

Clean contaminated objects and areas thoroughly observing environmental regulations.

Section 7: HANDLING AND STORAGE

Handling

Technical measures

Avoid contact with alkaline substances. Avoid contact with organic substance Avoid contact with reducing agents and combustible materials. Use with local exhaust ventilation.

Precautions

Do not rough handling containers, such as upsetting, falling, giving a shock, and dragging Prevent leakage, overflow, and scattering. Not to generate steam and dust in vain. Seal the container after use. After handling, wash hands and face, and then gargle In places other than those specified, should not be smoking or eating and drinking Should not be brought contaminated protective equipment and gloves to rest stops Deny unnecessary entry of non-emergency personnel to the handling area

Safety handling precautions

Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.

Storage

Safe storage conditions

Storage conditions

Keep container protect from light, store in well-ventilated place at room temperature (preferably cool). Keep container tightly closed. Store locked up.

Safe packaging material

Polyethylene

Incompatible substances

Organic substance, Combustible materials, Bases, Reducing agent

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls

In case of indoor workplace, seal the source or use a local exhaust system. Provide the safety shower facility, and hand- and eye-wash facility. And display their position clearly.

Exposure limits

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Personal protective equipment

Respiratory protection

Gas mask for acidic gas

Hand protection

Impermeable protective gloves

Eye protection

protective eyeglasses or chemical safety goggles

Skin and body protection

Long-sleeved work clothes

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Form	
Color	White - slightly brown , upon melting Colorless - slightly brown
Appearance	oily liquid or crystals
Odor	Pungent odor
Melting point/freezing point	3 °C
Boiling point, initial boiling point and boiling range	no data available
Flammability	no data available
Evaporation rate:	no data available
Flammability (solid, gas):	no data available
Upper/lower flammability or explosive limits	
Upper:	no data available
Lower:	no data available
Flash point	no data available
Auto-ignition temperature:	no data available
Decomposition temperature:	no data available
pH	no data available
Viscosity (coefficient of viscosity)	no data available
Dynamic viscosity	no data available
Solubilities	sulfuric acid : at the rate of any miscible . water : decomposes.
n-Octanol/water partition coefficient:(log Pow)	no data available
Vapour pressure	no data available
Specific Gravity / Relative density	1.925
Vapour density	no data available
Particle characteristics	no data available

Section 10: STABILITY AND REACTIVITY

Stability

Reactivity	no data available
Chemical stability	May be altered by light.
Hazardous reactions	None under normal processing
Conditions to avoid	Extremes of temperature and direct sunlight
Incompatible materials	Organic substance, Combustible materials, Bases, Reducing agent
Hazardous decomposition products	Sulfur oxides (SOx)

Section 11: TOXICOLOGICAL INFORMATION

Acute toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric Acid, Fuming	2140 mg/kg (Rat)	N/A	347 ppm (Rat) 1 h

Chemical Name	Acute toxicity -oral- source information	Acute toxicity -dermal- source information	Acute toxicity -inhalation gas-source information
Sulfuric Acid, Fuming	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

Chemical Name	Acute toxicity -inhalation vapor- source information	Acute toxicity -inhalation dust-source information	Acute toxicity -inhalation mist-source information
Sulfuric Acid, Fuming	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

Skin irritation/corrosion

Chemical Name	Skin corrosion/irritation source information
Sulfuric Acid, Fuming	Based on the NITE GHS classification results.

Serious eye damage/ irritation

Chemical Name	Serious eye damage/irritation source information
Sulfuric Acid, Fuming	Based on the NITE GHS classification results.

Respiratory or skin sensitization

Chemical Name	Respiratory or Skin sensitization source information
Sulfuric Acid, Fuming	Based on the NITE GHS classification results.

Reproductive cell mutagenicity

Chemical Name	germ cell mutagenicity source information
Sulfuric Acid, Fuming	Based on the NITE GHS classification results.

Carcinogenicity

Chemical Name	Carcinogenicity source information
Sulfuric Acid, Fuming	Based on the NITE GHS classification results.

Chemical Name	NTP	IARC	ACGIH	JSOH (Japan)
Sulfuric Acid, Fuming 8014-95-7		Group 1		

Reproductive toxicity

Chemical Name	Reproductive toxicity source information
Sulfuric Acid, Fuming	Based on the NITE GHS classification results.

STOT-single exposure

Chemical Name	STOT -single exposure- source information
Sulfuric Acid, Fuming	Based on the NITE GHS classification results.

STOT-repeated exposure

Chemical Name	STOT -repeated exposure- source information
Sulfuric Acid, Fuming	Based on the NITE GHS classification results.

Aspiration hazard

Chemical Name	Aspiration Hazard source information
Sulfuric Acid, Fuming	Based on the NITE GHS classification results.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity No information available

Other data

Chemical Name	Short-term (acute) hazardous to the aquatic environment source information	Long-term (chronic) hazardous to the aquatic environment source information
Sulfuric Acid, Fuming	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

Persistence and degradability No information available

Bioaccumulative potential No information available

Mobility in soil No information available

Hazard to the ozone layer No information available

Section 13: DISPOSAL CONSIDERATIONS

Waste from residues

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated container and contaminated packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 14: TRANSPORT INFORMATION

ADR/RID
 UN number UN1831
 Proper shipping name: SULPHURIC ACID, FUMING
 UN classification 8
 Subsidiary hazard class 6.1
 Packing group I
 Marine pollutant Not applicable

IMDG
 UN number UN1831
 Proper shipping name: SULPHURIC ACID, FUMING
 UN classification 8
 Subsidiary hazard class 6.1
 Packing group I
 Marine pollutant (Sea) Not applicable
 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No information available

IATA
 UN number UN1831
 Proper shipping name: SULPHURIC ACID, FUMING
 UN classification 8
 Subsidiary hazard class 6.1
 Packing group I
 Environmentally Hazardous Substance Not applicable

Section 15: REGULATORY INFORMATION

International Inventories

EINECS/ELINCS -
 TSCA -

Japanese regulations

Fire Service Act Firefighting Inhibitor
Poisonous and Deleterious Substances Control Law Deleterious Substances 1st. Grade
Industrial Safety and Health Act Harmful Substances Whose Names Are to be Indicated on the Label (Law Art.57, Para.1, Enforcement Order Art.18)
 Notifiable Substances (Law Art.57-2, Enforcement Order Art.18-2 Attached Table No.9)No.613
 Group 3 Specified Chemical Substance, (Ordinance on Prevention of Hazards Due to Specified Chemical Substances Art.2 Para.1, Item 6)
Industrial Safety and Health Act (2024~) 【2024.4.1~】 Harmful Substances Whose Names Are to be Indicated on the Label (Law Art.57,Para.1, Enforcement Order Art.18)
【2024.4.1~】 Notifiable Substances (Law Art.57-2, Enforcement Order Art.18-2 Attached TableNo.9)
Regulations for the carriage and storage of dangerous goods in ship Corrosive Substances (Ordinance Art.3, Ministry of Transportation Ordinance Regarding Transport by Ship and Storage, Attached Table 1)
Civil Aeronautics Law Forbidden (Ordinance Art.194)
Marine Pollution Prevention Law Enforcement ordinance Appendix No. 1 Noxious liquid substance Category Y
Pollutant Release and Transfer Register Law (~2023.3.31) Not applicable
Water Pollution Control Act Specified substances(Law Art.2 Para.4, Enforcement Order Art.3-3)
Export Trade Control Order Appendix 2 Export Approval Item
Narcotics and Psychotropics Control Law
Air Pollution Control Law Specified Substances

Chemical Name	Poisonous and Deleterious Substances Control Law	Industrial Safety and Health Act Substances (Law Art.57-2) (~2024.3.31)	Pollutant Release and Transfer Register Law (~2023.3.31)
Sulfuric Acid, Fuming 8014-95-7 (60.0 - 65.0 (as free sulfate))	Applicable	Applicable	-

Section 16: OTHER INFORMATION

Key literature references and sources for data etc.

NITE: National Institute of Technology and Evaluation (JAPAN)
<http://www.safe.nite.go.jp/japan/db.html>
 IATA dangerous Goods Regulations
 RTECS:Registry of Toxic Effects of Chemical Substances
 Japan Industrial Safety and Health Association GHS Model SDS
 Dictionary of Synthetic Organic Chemistry , SSOCJ, Koudansha Scientific Co.Ltd.
 Chemical Dictionary, Kyouritsu Publishing Co., Ltd.
 etc

Disclaimer

This SDS is according to JIS Z 7253: 2019. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

GHS Classification is according to JIS Z7252(2019). *JIS: Japanese Industrial Standards

End of Safety Data Sheet