



Safety Data Sheet

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

Product identifier:

Product name: Ammonium peroxodisulfate

SDS No. : 0404E-4

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

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Section 2. Hazards identification

GHS classification and label elements of the product

Classification of the substance or mixture

PHYSICAL AND CHEMICAL HAZARDS

Oxidizing solids: Category 3

HEALTH HAZARDS

Acute toxicity (Oral): Category 4

Skin corrosion/irritation: Category 2

Serious eye damage/eye irritation: Category 2B

Respiratory sensitization: Category 1

Skin sensitization: Category 1

Specific target organ toxicity – single exposure: Category 2 (central nervous system)

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

Specific target organ toxicity – repeated exposure: Category 2 (respiratory system)

ENVIRONMENT HAZARDS

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

Hazardous to the aquatic environment, long-term (chronic): Category 3

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

Label elements



Signal word: Danger

HAZARD STATEMENT

H272 May intensify fire; oxidizer

H302 Harmful if swallowed

H315 Causes skin irritation

H320 Causes eye irritation

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled

H317 May cause an allergic skin reaction

H371 May cause damage to organs (central nervous system)



H335 May cause respiratory irritation

H373 May cause damage to organs through prolonged or repeated exposure (respiratory system)

H412 Harmful to aquatic life with long lasting effects

PRECAUTIONARY STATEMENT

Prevention

P273 Avoid release to the environment.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P220 Keep away from clothing and other combustible materials.

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P284 In case of inadequate ventilation wear respiratory protection.

P271 Use only outdoors or in a well-ventilated area.

P264 Wash contaminated parts thoroughly after handling.

P272 Contaminated work clothing should not be allowed out of the workplace.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P270 Do not eat, drink or smoke when using this product.

Response

P370 + P378 In case of fire: Use appropriate media to extinguish.

P314 Get medical advice/attention if you feel unwell.

P312 Call a POISON CENTER/doctor/physician if you feel unwell.

P308 + P311 IF exposed or concerned: Call a POISON CENTER/doctor/physician.

P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor/physician.

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

P362 + P364 Take off contaminated clothing and wash it 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.

P337 + P313 If eye irritation persists: Get medical advice/attention.

P330 IF SWALLOWED: Rinse mouth.

P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor/physician if you feel unwell.

Storage

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

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".

Section 3. Composition/information on ingredients

Mixture/Substance selection:

Substance

Ingredient name	Content (%)	CAS RN	ENCS	Chemical formula
Ammonium peroxodisulfate	≥ 98	7727-54-0	1-406	(NH ₄) ₂ S ₂ O ₈

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



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.

If experiencing respiratory symptoms: Call a POISON CENTER/doctor/physician.

IF INHALED: 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.

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.

IF SWALLOWED: 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

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.

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**

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

Solid: Sweep up, place in a bag and hold for waste disposal.

Preventive measures for secondary accident

Collect spillage.

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.

Keep away from clothing and other combustible materials.

(Exhaust/ventilator)

Exhaust/ventilator should be available.

(Precautions)

Avoid contact with skin.

Avoid contact with eyes.

Safety Measures

Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing/eye protection/face protection.

Wash hands and contaminated parts 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.

Contaminated work clothing should not be allowed out of the workplace.

Take off contaminated clothing and wash it 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.

Section 8. Exposure controls/personal protection**Control parameters**

Administrative Control Levels and Concentration standard value

Not established

Occupational Exposure Limit

The Japan Society for Occupational Health



(Other inorganic and organic dust (third class dust))

JSOH Respirable dust 2mg/m³, Total dust 8mg/m³

ACGIH

TWA: 0.1mg/m³ (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

Recommend to use protective equipment in conformity with the standards.

Use appropriate protective equipment in accordance with local/national regulation.

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.

Section 9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state: Crystals to powder

Color: Colorless to pale yellow

Odor: Slightly pungent odor

Melting point/Freezing point: (decomposes) 120°C

Boiling point or initial boiling point data is not available.

Boiling range data is not available.

Flammability 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: 58.2g/100ml (20°C)

Solubility in solvent data is not available.

Partition coefficient n-octanol/water data is not available.

Vapor pressure data is not available.

Density and/or relative density: 1.9 g/cm³

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

Particle characteristics data is not available.

Other information

Other information is not available.

Section 10. Stability and Reactivity

Reactivity

Not available.

Chemical stability

Stable under normal storage/handling conditions.

Possibility of hazardous reactions

The substance is a strong oxidant. It reacts with combustible and reducing materials.

Decomposes on heating. This produces toxic and corrosive fumes including ammonia, nitrogen oxides and sulfur oxides. If in solution, reacts violently with iron, powdered aluminium and silver salts. The solution in water is a medium strong acid. (ICSC 0632)

Conditions to avoid

Contact with incompatible materials.

Contact with fire source.

Incompatible materials

Reducing agents, Combustible materials

Hazardous decomposition products

Nitrogen oxides, Sulfur oxides, Ammonia

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]

[NITE-CHRIP]

female rat LD50: 495 mg/kg (OECD TG 401, GLP) (source: NITE)

Acute toxicity (Dermal)

[Data for components of the product]

[NITE-CHRIP]

rat LD50: > 2000 mg/kg (OECD TG 402, GLP) (source: NITE)

Irritant properties

Skin corrosion/irritation

[Product]

Category 2, Causes skin irritation

[Data for components of the product]

[NITE-CHRIP]

Category 2 (source: NITE)

Serious eye damage/irritation

[Product]

Category 2B, Causes eye irritation

[Data for components of the product]

[NITE-CHRIP]

Category 2B (source: NITE)

Sensitization

Respiratory sensitization

[Product]

Category 1, May cause allergy or asthma symptoms or breathing difficulties if inhaled



[Data for components of the product]

[NITE-CHRIP]

Category 1 (source: NITE)

Skin sensitization

[Product]

Category 1, May cause an allergic skin reaction

[Data for components of the product]

[NITE-CHRIP]

Category 1 (source: NITE)

Mutagenic effects data is not available.

Carcinogenic effects data is not available.

Reproductive toxicity data is not available.

Specific target organ toxicity (STOT)

STOT-single exposure

[Product]

Category 2, May cause damage to organs

Category 3, May cause respiratory irritation

[Data for components of the product]

[NITE-CHRIP]

Category 2 (central nervous system), Category 3 (Respiratory tract irritation) (source: NITE)

STOT-repeated exposure

[Product]

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

[Data for components of the product]

[NITE-CHRIP]

Category 2 (respiratory system) (source: NITE)

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

Section 12. Ecological Information

Toxicity

Aquatic toxicity

[Product]

Category 3, Harmful to aquatic life

Category 3, Harmful to aquatic life with long lasting effects

[Data for components of the product]

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

[NITE-CHRIP]

Fish (*Oncorhynchus mykiss*) 96-hour LC50: 76.3 mg/L (source: NITE)

Hazardous to the aquatic environment, long-term (chronic)

[NITE-CHRIP]

Algae (*Pseudokirchneriella subcapitata*) 72-hour NOEC: 39.2 mg/L (source: NITE)

Water solubility

58.2 g/100 mL (20°C) (source: ICSC, 2001)

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 as industrial waste. Accordance with local/national regulation.

Section 14. Transport Information

- UN Number or ID Number : 1444
- UN Proper Shipping Name : AMMONIUM PERSULPHATE
- Class or division (Transport hazard class) : 5.1
- Packing group : III
- ERG GUIDE No.: 140
- IMDG Code (International Maritime Dangerous Goods Regulations)
 - UN Number or ID Number : 1444
 - UN Proper Shipping Name : AMMONIUM PERSULPHATE
 - Class or division (Transport hazard class) : 5.1
 - Packing group : III
- IATA (Dangerous Goods Regulations)
 - UN Number or ID Number : 1444
 - UN Proper Shipping Name : AMMONIUM PERSULPHATE
 - Class or division (Transport hazard class) : 5.1
 - Hazard labels : Oxidizer
 - Packing group : III
- Environmental hazards
 - Marine pollutants (yes/no) : no

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
 - Applicable
- Other regulatory information
 - Ensure this material in compliance with federal requirements and ensure conformity to local regulations.



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 23rd edit., 2023 UN
IMDG Code, 2024 Edition (Incorporating Amendment 42-24)
IATA Dangerous Goods Regulations (67th Edition) 2026
2024 EMERGENCY RESPONSE GUIDEBOOK (US DOT)
2025 TLVs and BEIs. (ACGIH)
JIS Z 7252 : 2019
JIS Z 7253 : 2019
Recommendation of occupational exposure limits (2024-2025) (JSOH)
Supplier's data/information

General Disclaimer

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Unauthorized translation or modification is prohibited.

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 Data published in Japan (National Institute of Technology and Evaluation (NITE) Chemical Risk Information Platform (NITE-CHRIIP), up to FY2024).