# Section 1: PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Aluminium Sulfate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Code</td>
<td>018-09745</td>
</tr>
</tbody>
</table>

**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**
- **Serious eye damage/eye irritation**  
  Category 2A
- **Specific target organ toxicity (single exposure)**  
  Category 3
- **Respiratory irritation**  
  Category 3
- **Acute aquatic toxicity**  
  Category 2

**Pictograms**

![Warning Pictogram](image)

**Signal word**  
Warning

**Hazard statements**  
- H319 - Causes serious eye irritation  
- H335 - May cause respiratory irritation  
- H401 - Toxic to aquatic life

**Precautionary statements-(Prevention)**
- Wash face, hands and any exposed skin thoroughly after handling  
- Wear protective gloves/protective clothing/eye protection/face protection  
- Avoid breathing dust/fume/gas/mist/vapors/spray  
- Use only outdoors or in a well-ventilated area  
- Avoid release to the environment

**Precautionary statements-(Response)**
- 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 INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
• Call a POISON CENTER or doctor/physician if you feel unwell

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 AI2(SO4)3

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Weight-%</th>
<th>Molecular weight</th>
<th>ENCS</th>
<th>ISHL No.</th>
<th>CAS RN</th>
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</thead>
<tbody>
<tr>
<td>Aluminum Sulfate</td>
<td>85.0</td>
<td>342.15</td>
<td>(1)-25</td>
<td>*</td>
<td>10043-01-3</td>
</tr>
</tbody>
</table>

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
Sweep up and gather scattered particles, and collect it in an empty airtight container.

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

Storage

Safe storage conditions
Store away from sunlight in well-ventilated place at room temperature (preferably cool). Keep container tightly closed.

Incompatible packaging material
Polypropylene

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
Dust mask
Hand protection
Protection 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 - nearly white
Appearance
powder
Odor
no data available
Melting point/freezing point
770 °C (dec.)
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: acidic (aq.)
Viscosity (coefficient of viscosity): no data available
Dynamic viscosity: no data available
n-Octanol/water partition coefficient (log Pow): no data available
Vapour pressure: no data available
Specific Gravity / Relative density: 2.71
Vapour density: no data available
Particle characteristics: no data available

Section 10: STABILITY AND REACTIVITY

Stability
Reactivity: no data available
Chemical stability: Stable under recommended storage conditions.

Hazardous reactions
None under normal processing

Conditions to avoid
Extremes of temperature and direct sunlight, Moisture

Incompatible materials
No information available

Hazardous decomposition products
Sulfur oxides (SOx), Metal oxides

Section 11: TOXICOLOGICAL INFORMATION

Acute toxicity

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum Sulfate</td>
<td>1930 mg/kg (Rat)</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Skin irritation/corrosion: no data available
Serious eye damage/irritation: no data available
Respiratory or skin sensitization: no data available
Reproductive cell mutagenicity: no data available
Carcinogenicity: no data available

Reproductive toxicity: no data available
STOT-single exposure: no data available
STOT-repeated exposure: no data available
Aspiration hazard: no data available

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum Sulfate</td>
<td>N/A</td>
<td>LC50: Carassius auratus 100 mg/L 96 h</td>
<td>EC50: Daphnia magna 136 mg/L 15 min</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LC50: Gambusia affinis</td>
<td></td>
</tr>
</tbody>
</table>
Other data

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
Not regulated
UN number -
Proper shipping name:
UN classification
Subsidiary hazard class
Packing group
Marine pollutant Not applicable

IMDG
Not regulated
UN number -
Proper shipping name:
UN classification
Subsidiary hazard class
Packing group
Marine pollutant (Sea) Not applicable
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No information available

IATA
Not regulated
UN number -
Proper shipping name:
UN classification
Subsidiary hazard class
Packing group
Environmentally Hazardous Substance Not applicable

Section 15: REGULATORY INFORMATION

International Inventories
EINECS/ELINCS Listed
TSCA Listed

Japanese regulations
Fire Service Act Not applicable
Poisonous and Deleterious Substances Control Law Not applicable
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 Oder Art.18-2 Attached Table No.9)No.37
Regulations for the carriage Not applicable
and storage of dangerous goods in ship
Civil Aeronautics Law Not applicable
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
Pollutant Release and Transfer Register Law (2023/4/1~) Not applicable
Water Pollution Control Act Specified substances(Law Art.2 Para.4, Enforcement Order Art.3-3)
Export Trade Control Order Not applicable

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)
--- | --- | --- | ---
Aluminum Sulfate | - | Applicable | -
10043-01-3 (85.0) |

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 Oraganic 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