
Safety Data Sheet

1. Chemical product and company identification**Product name** : Ammonium sulfate (First Grade)**SDS code** : A3-05a**Company/undertaking identification** :

HAYASHI PURE CHEMICAL IND.,LTD.

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URL : <https://www.hpc-j.co.jp/>**Emergency number** : 06-6910-7305**Recommended use** : For research and experimental use only.**Restrictions on use** : Do not use on a human body or for animal medicines, foods, household products, cosmetics, etc.**2. Hazards identification****GHS classification**

Physical hazards	Explosives	classification not possible
	Flammable gases	No classification
	Aerosol	classification not possible
	Oxidizing gases	No classification
	Gases under pressure	No classification
	Flammable liquids	No classification
	Flammable solids	classification not possible
	Self-reactive substances and mixtures	classification not possible
	Pyrophoric liquids	No classification
	Pyrophoric solids	classification not possible
	Self-heating substances and mixtures	classification not possible
	Substances and mixtures which in contact with water emit flammable gases	classification not possible
	Oxidizing liquids	No classification
	Oxidizing solids	classification not possible
	Organic peroxides	classification not possible
	Corrosive to metals	classification not possible
	Desensitized explosives	classification not possible
Health hazards	Acute toxicity (oral)	classification not possible
	Acute toxicity (dermal)	classification not possible
	Acute toxicity (inhalation:gas)	classification not possible
	Acute toxicity (inhalation:vapors)	classification not possible
	Acute toxicity (inhalation:dust/mist)	classification not possible
	Skin corrosion/irritation	classification not possible
	Serious eye damage/eye irritation	classification not possible
	Respiratory sensitization	classification not possible
	Skin sensitization	classification not possible
	Germ cell mutagenicity	classification not possible
	Carcinogenicity	classification not possible
	Reproductive toxicity	classification not possible
	Specific target organ toxicity (single exposure)	classification not possible

Environmental hazards	Specific target organ toxicity (repeated exposure)	classification not possible
	Aspiration hazard	classification not possible
	Hazardous to the aquatic environment, short-term (acute)	classification not possible
	Hazardous to the aquatic environment, long-term (chronic)	classification not possible
	Hazardous to the ozone layer	classification not possible

3. Composition/information on ingredients

Distinction of substance or mixture : Substance

Name	Concentration or Concentration range	Formula	Kanpo number		CAS RN
			CSCL no	ISHL no	
Ammonium sulfate	≥99.0%、≤99.95%	(NH ₄) ₂ SO ₄	(1)-400	Existing Chemical Substance	7783-20-2
Ammonium nitrate (Impurity)	≤0.05%	NH ₄ NO ₃	(1)-395	Existing Chemical Substance	6484-52-2

The above concentration or concentration range are not product specification.

All percentages listed in the above concentration or concentration range are wt%, unless otherwise specified.

4. First aid measures

First aid measures

First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Get immediate medical advice/attention.
First-aid measures after skin contact	: Remove/Take off immediately all contaminated clothing. Gently wash with plenty of soap and water. Get immediate medical advice/attention.
First-aid measures after eye contact	: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.
First-aid measures after ingestion	: Rinse mouth. Get immediate medical advice/attention.

5. Fire fighting measures

Suitable extinguishing media	: Use proper extinguishing media depending on peripheral fire.
Unsuitable extinguishing media	: Do not use a heavy water stream.
Fire hazard	: This product is unburnable.
Hazardous decomposition products in case of fire	: In case of fire, product may produce irritative or toxic fumes/gases.
Firefighting instructions	: If ignited, for the initial fire-fighting, cut off combustion sources, extinguish fire at a stroke using appropriate fire-extinguishers. In the case of peripheral fire, quickly remove movable containers to safe places. If unable to be moved containers, sprinkle water to containers and surrounding equipment, etc. to cool.
Protection during firefighting	: Wear appropriate fire-resistant clothing including self contained-compressed air breathing apparatus.

6. Accidental release measures

Personal Precautions, Protective Equipment and Emergency Procedures

General measures	: Wear appropriate personal protective devices to prevent inhalation and contact with eye, skin, and clothing, and never attempt to work on the lee.
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Environmental precautions

Environmental precautions : Avoid release to the environment.
Prevent entry to sewers and public waters.

Methods and Equipment for Containment and Cleaning up

Methods for cleaning up : Take care not to generate dust, sweep it up as much as possible, collect it in an empty container that can be sealed, and move it to a safe place.
Wash out the spilled area with large amounts of water.

7. Handling and storage**Handling**

Technical measures : Work with appropriate personal protective equipment to prevent inhalation or contact to eyes, skin, and clothing.
Handle with care to prevent leakage, overflowing, or scattering, minimize generation of mist or vapor, and thoroughly ventilate.

Precautions for safe handling : Do not eat, drink or smoke when using this product.
Thoroughly wash your hands and gargle after handling.
Ensure good ventilation of the work station.
Do not contact, breathe or swallow.

Prevents handling of incompatible substances or mixtures : Avoid prolonged or repeated exposure.

Storage

Storage conditions : Store in a well-ventilated place, away from direct sunlight. Keep container tightly closed and keep away from fire and heat sources.

Material used in packaging/containers : Airtight container.

Technical measures : Comply with applicable regulations.

Storage temperature : Cool and dark place

8. Exposure controls / Personal protection equipment

Appropriate engineering controls : Cover up tightly the generation source at the handling place or install local exhaust equipment or overall ventilation equipment. Install safety showers and eye-fountains near a handling place. Clearly indicate the location.

Protective equipment

Respiratory protection : Dustproof mask

Hand protection : Impervious protective gloves

Eye protection : Protective glasses (general glasses, glasses with side-shields, goggles)

Skin and body protection : Impervious aprons, Impervious work clothing, Impervious long boots

9. Physical and chemical properties

Physical state : Solid

Appearance : Crystals ~ Mass

Color : colorless ~ white

Odor : Odorless

pH : 4.5 – 6 (50g/L, 25°C)

Melting point : 513 °C (under pressure)

Freezing point : No data available

Boiling point : No data available

Flash point : No data available

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Flammability : No data available

Vapor pressure : No data available

Relative density : No data available

Density : 1.76 g/cm³

Relative gas density : No data available

Solubility	: Soluble in water. Insoluble in ethanol. Insoluble in acetone.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Explosive limits (vol %)	: No data available
Viscosity, kinematic	: No data available
Particle characteristics	: No data available

10. Stability and reactivity

Reactivity	: No data available
Chemical stability	: Stable under normal handling conditions.
Possibility of hazardous reactions	: Reacts with strong acids and strong oxidizing agents.
Conditions to avoid	: Sunlight, heat. Contact with strong acids and strong oxidizing agents.
Incompatible materials	: Strong acids, Strong oxidizing agents
Hazardous decomposition products	: Ammonia, Nitrogen oxides, Sulfur oxides

11. Toxicological information

The information in this section is based on the "GHS Classification Results" by NITE.

Ammonium sulfate	
Acute toxicity (oral)	classification not possible
Acute toxicity (dermal)	classification not possible
Acute toxicity (gas)	classification not possible
Acute toxicity (vapour)	No classification
Acute toxicity (inhalation:dust/mist)	classification not possible
Skin corrosion/irritation	classification not possible
Serious eye damage/irritation	classification not possible
Respiratory sensitization	classification not possible
Skin sensitization	classification not possible
Germ cell mutagenicity	classification not possible
Carcinogenicity	classification not possible
Reproductive toxicity	classification not possible
STOT-single exposure	classification not possible
STOT-repeated exposure	classification not possible
Aspiration hazard	classification not possible
Ammonium nitrate	
Acute toxicity (oral)	No classification
Acute toxicity (dermal)	No classification
Acute toxicity (gas)	No classification
Acute toxicity (vapour)	No classification
Acute toxicity (inhalation:dust/mist)	No classification
Skin corrosion/irritation	No classification
Serious eye damage/irritation	Category 2A
Respiratory sensitization	classification not possible
Skin sensitization	classification not possible
Germ cell mutagenicity	classification not possible
Carcinogenicity	classification not possible
Reproductive toxicity	classification not possible
STOT-single exposure	classification not possible
STOT-repeated exposure	Category 1
Aspiration hazard	classification not possible

12. Ecological information

The information in this section is based on the "GHS Classification Results" by NITE.

Ammonium sulfate	
Hazardous to Aquatic Environment - Acute Hazard	classification not possible
Hazardous to Aquatic Environment - Chronic Hazard	classification not possible
Persistence and degradability	No data available
Bioaccumulative potential	No data available
Mobility in soil	No data available
Hazardous to the ozone layer	classification not possible
Ammonium nitrate	
Hazardous to Aquatic Environment - Acute Hazard	No classification
Hazardous to Aquatic Environment - Chronic Hazard	No classification
Persistence and degradability	No data available
Bioaccumulative potential	No data available
Mobility in soil	No data available
Hazardous to the ozone layer	classification not possible

13. Disposal considerations

- Ecology - waste materials : With the detail information of the waste, subcontract its disposal to a waste disposer authorized by a Prefectural Governor.
- Contaminated container and packaging : Empty the packaging completely prior to disposal.
Empty containers should be taken for recycle, recovery or waste in accordance with local regulation.

14. Transport information

International Regulations

Transport by sea(IMDG)

- UN-No. (IMDG) : Not applicable
- Proper Shipping Name (IMDG) : Not applicable
- Packing group (IMDG) : Not applicable
- Transport hazard class(es) (IMDG) : Not applicable

Air transport(IATA)

- UN-No. (IATA) : Not applicable
- Proper Shipping Name (IATA) : Not applicable
- Packing group (IATA) : Not applicable
- Transport hazard class(es) (IATA) : Not applicable

- Marine pollutant : Not applicable

Regulations in Japan

- Regulatory information by sea : Not applicable
- Regulatory information by air : Not applicable

- Special transport precautions : When transporting, load containers so that they do not tip over, damage, drop or collapse. Make sure there is no leak in containers.

15. Regulatory information

National law

- Industrial Safety and Health Law : Harmful Substances Whose Names Are to be Indicated on the Label (Law Art.57, Para.1, Enforcement Order Art.18)
Dangerous or Harmful Substances for Notification of Chemical Name etc. on SDS (Law Art.57-2, Enforcement Order Art.18-2)
Ammonium nitrate
- Japanese Poisonous and Deleterious Substances Control Law : Not applicable
- Water Pollution Prevention Law : Hazardous Substances (Act, Art.2, Enforcement Order Art.2, Ministerial Ordinance to Provide for Effluent Standards, Art.1)

Fire Service Law	: Not applicable
Foreign Exchange and Foreign Trade Control Act	: Export Trade Control Ordinance appendix 1-16
Waterworks Law	: Hazardous Substances (Act Article 4 paragraph 2), Standard for Water Quality (Ministry Order No.101 of 2003)
Japanese Pollutant Release and Transfer Register Law (PRTR Law)	: Not applicable

16. Other information

Data sources	: Handbook of 17524 Chemical Products, The Chemical Daily Co, Ltd. International Chemical Safety Cards. National Institute of Technology and Evaluation (NITE). 2020 Emergency Response Guidebook (ERG 2020).
Other information	: The SDS is copyrighted material of Hayashi Pure Chemical Ind, Ltd. This Safety Data Sheet is intended to be provided for business operators who handle chemical substance products of the relevant product and is not intended to assure safety in any way. The Safety Data Sheet does not verify all the information on the applicable chemical substance in the present time. With the recognition in that unknown danger constantly exists in the relevant chemical substance, the product shall be used in the principle of self-responsibility of the user with the highest priority to safety from transport and unpacking to disposal. When the relevant chemical substance is used, the user him/herself shall collect safety information and shall investigate laws and regulations at the place, organizations, countries, etc. where the substance is actually used and give the highest priority to them. The Company shall take no responsibility for investigating state and local regulations and the user shall handle this problem on his/her own responsibility. In the event that SDS in Japanese and SDS translated into other languages exist, the document described in Japanese is prior to all other documents whether or not there is any difference in contents, and documents in other languages shall be references.