



MATERIAL SAFETY DATA SHEET

Ammonium Sulfate

Product name: Ammonium Sulfate

Chemical formula: $(\text{NH}_4)_2\text{SO}_4$

CAS number: 7783-20-2

EC number: 231-984-1

Molecular weight: 132.14 g/mol

Common use: Fertilizer and industrial raw material

1. Hazard Identification

Ammonium sulfate is generally not classified as a hazardous substance under standard GHS criteria.

Important hazards:

- Dust may irritate the eyes, skin and respiratory tract.
- Harmful decomposition gases may form when strongly heated.
- Large releases may affect water quality due to nitrogen content.

Pictogram: Not normally required

Signal word: Not normally required

2. Composition

Component	CAS Number	Concentration
Ammonium Sulfate	7783-20-2	Typically 98–100%

Impurities and additives depend on the product grade.

3. First-Aid Measures

Inhalation: Move the person to fresh air. Seek medical attention if irritation or breathing difficulty continues.

Eye contact: Rinse carefully with clean water for at least 15 minutes. Remove contact lenses when easy to do.

Skin contact: Wash thoroughly with soap and water. Remove contaminated clothing.



Ingestion: Rinse the mouth and drink water. Do not induce vomiting. Seek medical advice if a large amount is swallowed or symptoms occur.

4. Firefighting Measures

Ammonium sulfate is not combustible.

Use extinguishing media suitable for the surrounding fire.

Strong heating may produce:

- Ammonia
- Sulfur oxides
- Nitrogen oxides

Firefighters should wear protective clothing and self-contained breathing equipment.

5. Accidental Release

- Avoid creating or breathing dust.
- Wear gloves, safety glasses and suitable respiratory protection when necessary.
- Sweep or vacuum the material into a suitable container.
- Keep the product away from drains and waterways.
- Wash the affected area after collection.

6. Handling and Storage

- Handle in a well-ventilated area.
- Avoid contact with eyes and prolonged skin contact.
- Avoid generating dust.
- Keep containers or bags tightly closed.
- Store in a cool, dry and ventilated place.
- Protect from moisture and excessive heat.
- Keep away from strong alkalis, oxidising agents and incompatible chemicals.

7. Personal Protection

Eye protection: Safety glasses or goggles.

Hand protection: Chemical-resistant protective gloves.



Respiratory protection: Use an approved dust mask or particulate respirator when ventilation is insufficient or dust is excessive.

Body protection: Suitable work clothing and closed footwear.

8. Physical and Chemical Properties

Property	Typical Information
Appearance	White crystals, granules or powder
Odour	Odourless or slight ammonia odour
Solubility in water	Highly soluble
Density	Approximately 1.77 g/cm ³
Melting/decomposition point	Decomposes at approximately 280°C
Flammability	Non-combustible
pH	Approximately 5–6 in aqueous solution

Values may vary according to grade and concentration.

9. Stability and Reactivity

Stable under normal storage conditions.

Avoid:

- Excessive heat
- Moisture
- Strong alkalis
- Strong oxidising agents

Contact with strong alkalis may release ammonia gas.

10. Toxicological Information

The product has low acute toxicity under normal industrial use.

Dust may cause:

- Eye irritation
- Skin irritation
- Coughing



- Throat and respiratory irritation

Repeated or excessive exposure should be avoided.

11. Environmental Information

Ammonium sulfate is soluble in water.

Prevent large quantities from entering soil, drains, rivers or lakes. Excess nitrogen may contribute to environmental nutrient pollution.

12. Disposal

Reuse or recycle uncontaminated material when possible.

Dispose of waste and contaminated packaging according to local regulations.

Do not discharge large quantities into drains or waterways.

13. Transport Information

Ammonium sulfate is generally not regulated as dangerous goods for road, sea or air transport.

UN number: Not assigned

Transport hazard class: Not regulated

Packing group: Not assigned

14. Important Notice

This is a general MSDS for ammonium sulfate. The supplier must confirm product purity, additives, emergency contact details and local regulatory classification before official use.