

MSDS – Ammonium Persulphate

MATERIAL SAFETY DATA SHEET (MSDS) / SAFETY DATA SHEET (SDS)

1. Identification

- **Product Name:** Ammonium Persulphate
- **Chemical Name:** Ammonium Peroxydisulphate
- **Synonyms:** Ammonium persulfate, APS
- **Chemical Formula:** $(\text{NH}_4)_2\text{S}_2\text{O}_8$
- **Molecular Weight:** 228.20 g/mol
- **Recommended Use:** Oxidizing agent, polymerization initiator, etching agent, laboratory reagent
- **Restrictions on Use:** Not for consumer use

2. Hazard(s) Identification

GHS Classification:

- Oxidizing Solid – Category 3
- Acute Toxicity (Oral) – Category 4
- Skin Corrosion/Irritation – Category 2
- Serious Eye Damage – Category 1
- Respiratory Sensitizer – Category 1
- Skin Sensitizer – Category 1
- Specific Target Organ Toxicity (Single Exposure) – Category 3 (Respiratory irritation)
- Hazardous to the Aquatic Environment (Chronic) – Category 3

Signal Word: DANGER

Hazard Statements:

- May intensify fire; oxidizer
- Harmful if swallowed
- Causes serious eye damage
- Causes skin irritation
- May cause allergy or asthma symptoms or breathing difficulties if inhaled
- May cause an allergic skin reaction

3. Composition / Information on Ingredients

Component	CAS Number	Concentration
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Ammonium Persulphate	7727-54-0	≥ 98%
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4. First-Aid Measures

- **Inhalation:** Move person to fresh air. If breathing is difficult, seek medical attention immediately.
- **Skin Contact:** Remove contaminated clothing. Wash skin with plenty of soap and water. Seek medical advice if irritation occurs.
- **Eye Contact:** Rinse cautiously with water for at least 15 minutes. Remove contact lenses if present. Seek immediate medical attention.
- **Ingestion:** Rinse mouth. Do NOT induce vomiting. Seek medical attention immediately.

5. Fire-Fighting Measures

- **Suitable Extinguishing Media:** Water spray (large amounts)
- **Specific Hazards:** Strong oxidizer; may enhance combustion of other materials
- **Hazardous Decomposition Products:** Sulphur oxides, nitrogen oxides, ammonia
- **Protective Equipment:** Full protective clothing and self-contained breathing apparatus

6. Accidental Release Measures

- Evacuate area and ensure adequate ventilation
- Avoid dust generation
- Wear appropriate PPE
- Collect spilled material carefully using non-combustible tools
- Prevent release into drains or waterways

7. Handling and Storage

Handling:

- Avoid inhalation of dust and contact with skin and eyes
- Use only with adequate ventilation
- Keep away from combustible materials and reducing agents

Storage:

- Store in a cool, dry, well-ventilated place
- Keep container tightly closed
- Store away from heat, moisture, and incompatible materials

8. Exposure Controls / Personal Protection

Exposure Limits:

- No specific OSHA PEL established
- Treat as nuisance dust; minimize exposure

Engineering Controls: Local exhaust ventilation

Personal Protective Equipment (PPE):

- Safety goggles or face shield
- Chemical-resistant gloves
- Protective clothing
- Dust respirator if airborne concentrations are high

9. Physical and Chemical Properties

- **Appearance:** White crystalline powder
- **Odour:** Odourless
- **pH:** Acidic (aqueous solution)
- **Melting Point:** ~120 °C (decomposes)
- **Solubility:** Soluble in water
- **Oxidizing Properties:** Strong oxidizer

10. Stability and Reactivity

- **Stability:** Stable under recommended storage conditions
- **Reactivity:** Strong oxidizing agent
- **Incompatible Materials:** Reducing agents, organic materials, bases, metals
- **Hazardous Decomposition Products:** Sulphur oxides, ammonia, oxygen

11. Toxicological Information

- **Routes of Exposure:** Inhalation, ingestion, skin and eye contact
- **Acute Effects:** Irritation to eyes, skin, and respiratory tract
- **Chronic Effects:** Sensitization leading to asthma-like symptoms
- **Carcinogenicity:** Not classified as carcinogenic

12. Ecological Information

- Harmful to aquatic organisms in high concentrations

- Avoid uncontrolled release into the environment
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13. Disposal Considerations

- Dispose of as hazardous waste in accordance with local, regional, and national regulations
 - Do not discharge into drains or the environment
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14. Transport Information

- **UN Number:** UN 1444
 - **Proper Shipping Name:** Ammonium persulphate
 - **Hazard Class:** 5.1 (Oxidizer)
 - **Packing Group:** III
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15. Regulatory Information

- Regulated as an oxidizing and sensitizing substance
 - Subject to occupational safety and environmental regulations
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16. Other Information

- **Prepared for:** Educational and reference purposes
- **Revision Date:** [10thDecember 2026]