



# Material Safety Data Sheet (MSDS)

## Ammonium Perchlorate

### Section 1: Chemical Product

**Product Name:** Ammonium Perchlorate  
**CAS Number:** 7790-98-9  
**Synonym:** AP  
**Chemical Name:** Ammonium Perchlorate  
**Chemical Formula:** NH<sub>4</sub>ClO<sub>4</sub>

### Section 2: Composition and Information on Ingredients

#### Composition:

Name	CAS Number:	% by Weight
Ammonium Perchlorate	7790-98-9	100

**Toxicological Data on Ingredients:** Ammonium Perchlorate

### Section 3: Hazards Identification

#### Potential Acute Health Effects:

Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Prolonged exposure may result in skin burns and ulcerations. Over-exposure by inhalation may cause respiratory irritation.

#### Potential Chronic Health Effects:

Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.  
CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to blood, kidneys. Repeated or prolonged exposure to the substance can produce target organs damage.

## Section 4: First Aid Measures

### **Eye Contact:**

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.

### **Skin Contact:**

In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

### **Serious Skin Contact:**

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

### **Inhalation:**

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

### **Serious Inhalation:**

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

### **Ingestion:**

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

**Serious Ingestion:** Not available.

## Section 5: Fire and Explosion Data

**Flammability of the Product:** May be combustible at high temperature.

**Auto-Ignition Temperature:** Not available.

**Flash Points:** Not available.

**Flammable Limits:** Not available.

**Products of Combustion:** Not available.

**Fire Hazards in Presence of Various Substances:** Flammable in presence of shocks, of heat, of reducing materials, of combustible materials, of organic materials.

**Explosion Hazards in Presence of Various Substances:**

Extremely explosive in presence of open flames and sparks, of shocks, of heat, of reducing materials, of organic materials. Slightly explosive in presence of acids.

**Fire Fighting Media and Instructions:**

Oxidizing material. Do not use water jet. Use flooding quantities of water. Avoid contact with organic materials.

**Special Remarks on Fire Hazards:** Not available.

**Special Remarks on Explosion Hazards:** Not available

## Section 6: Accidental Release Measures

**Small Spill:** Use appropriate tools to put the spilled solid in a convenient waste disposal container.

**Large Spill:**

Oxidizing material. Stop leak if without risk. Avoid contact with a combustible material (wood, paper, oil, clothing...). Keep substance damp using water spray. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dyke if needed. Eliminate all ignition sources. Call for assistance on disposal.

## Section 7: Handling and Storage

**Precautions:**

Keep away from heat. Keep away from sources of ignition. Keep away from combustible material.. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not breathe dust. Take precautionary measures against electrostatic discharges. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If you feel unwell, seek medical attention and show the label when possible. Avoid contact with skin and eyes. Keep away from incompatibles such as reducing agents, combustible materials, organic materials, acids.

**Storage:**

Keep container tightly closed. Keep container in a cool, well-ventilated area. Separate from acids, alkalies, reducing agents and combustibles.

## Section 8: Exposure Controls/Personal Protection

**Engineering Controls:**

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

**Personal Protection:**

Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

**Personal Protection in Case of a Large Spill:**

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

**Exposure Limits:** Not available

## Section 9: Physical and Chemical Properties

**Physical state and appearance:** Solid Crystalline Powder.

**Odour:** Not available.

**Taste:** Not available.

**Molecular Weight:** Not available.

**Colour:** Silver.

**pH (1% soln/water):** Not available.

**Boiling Point:** Not available.

**Melting Point:** Not available.

**Critical Temperature:** Not available.

**Specific Gravity:** 1.95 (Water = 1).

**Vapour Pressure:** Not applicable.

**Vapour Density:** Not available.

**Volatility:** Not available.

**Odour Threshold:** Not available.

**Water/Oil Dist. Coeff.:** Not available.

**Ionicity (in Water):** Not available.

**Dispersion Properties:** Not available.

**Solubility:** Soluble in cold water, methanol. Partially soluble in acetone. Insoluble in diethyl ether.

## Section 10: Stability and Reactivity Data

**Stability:** Unstable.

**Instability Temperature:** Not available.

**Conditions of Instability:** No additional remark.

**Incompatibility with various substances:**

Extremely reactive or incompatible with reducing agents, combustible materials, organic materials. Reactive with acids.

**Corrosivity:** Non-corrosive in presence of glass.

**Special Remarks on Reactivity:** Not available.

**Special Remarks on Corrosivity:** Not available.

**Polymerization:** Will not occur

## Section 11: Toxicological Information

**Routes of Entry:** Eye contact. Inhalation. Ingestion.

**Toxicity to Animals:**

LD50: Not available. LC50: Not available.

**Chronic Effects on Humans:** Causes damage to the following organs: blood, kidneys.

**Other Toxic Effects on Humans:** Hazardous in case of skin contact (irritant), of ingestion, of inhalation.

**Special Remarks on Toxicity to Animals:** Not available.

**Special Remarks on Chronic Effects on Humans:** Not available.

**Special Remarks on other Toxic Effects on Humans:** Not available.

## Section 12: Ecological Information

**Ecotoxicity:** Not available.

**BOD5 and COD:** Not available.

**Products of Biodegradation:** Possibly hazardous short/long term degradation products are to be expected.

**Toxicity of the Products of Biodegradation:** The products of degradation are more toxic.

**Special Remarks on the Products of Biodegradation:** Not available.

### Section 13: Disposal Considerations

**Waste Disposal:**

Waste must be disposed of in accordance with local environmental control regulations.

### Section 14: Transport Information

**DOT Classification:** Class 5.1. Oxidising Material

**Identification:** Ammonium Perchlorate. UN1442. PG: II

**Special Provisions for Transport:** Not available.

### Section 15: Regulatory Information

**Chemical Safety Assessment:** A chemical safety assessment has not been carried out for the substance or the mixture by the supplier

### Section 16: Other Information

**References:** Not available.

**Other Special Considerations:** Not available.

**Created:** 1<sup>st</sup> February 2014

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