# Ammonium Perchlorate

**CAS No:** 7790-98-9  
**RTECS No:** SC7520000  
**UN No:** 1442  
**EC No:** 017-009-00-0

**Perchloric acid, ammonium salt**  
**NH₄ClO₄**  
**Molecular mass:** 117.5

## Types of Hazard/Exposure

<table>
<thead>
<tr>
<th>TYPES OF HAZARD/EXPOSURE</th>
<th>ACUTE HAZARDS/SYMPTOMS</th>
<th>PREVENTION</th>
<th>FIRST AID/FIRE FIGHTING</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FIRE</strong></td>
<td>Not combusible but enhances combustion of other substances. Many reactions may cause fire or explosion. Gives off irritating or toxic fumes (or gases) in a fire. See Notes.</td>
<td>NO contact with combustibles, reducing agents and organic materials.</td>
<td>In case of fire in the surroundings: water in large amounts, water spray.</td>
</tr>
<tr>
<td><strong>EXPLOSION</strong></td>
<td>Risk of fire and explosion, see Chemical Dangers.</td>
<td>Do NOT expose to heat, friction or shock.</td>
<td>In case of fire: keep drums, etc., cool by spraying with water. Combat fire from a sheltered position.</td>
</tr>
</tbody>
</table>

## Exposure

<table>
<thead>
<tr>
<th>EXPOSURE</th>
<th>PREVENT DISPERSION OF DUST!</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>Cough. Local exhaust or breathing protection. Fresh air, rest.</td>
</tr>
<tr>
<td>Skin</td>
<td>Redness. Pain. Protective gloves. Protective clothing. First rinse with plenty of water, then remove contaminated clothes and rinse again.</td>
</tr>
<tr>
<td>Eyes</td>
<td>Redness. Pain. Safety goggles, or eye protection in combination with breathing protection if powder. First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.</td>
</tr>
</tbody>
</table>

## Spillage Disposal

Evacuate danger area! Consult an expert! Personal protection: P2 filter respirator for harmful particles. Moisten first, then sweep spilled substance into covered containers, >>>> then remove to safe place. Do NOT absorb in saw-dust or other combustible absorbents. Do NOT let this chemical enter the environment.

## Packaging & Labelling

- **EU classification**  
  - O Symbol
  - R: 9-44
  - S: (2-14-16-27-36/37
  - Note: G

- **UN classification**  
  - UN Hazard Class: 5.1
  - UN Pack Group: II

## Emergency Response

- **Transport Emergency Card:** TEC (R)-51S1442
- **NFPA Code:** H1; F0; R4

## Safe Storage

Fireproof. Separated from combustible and reducing substances, and metals. See Chemical Dangers. Well closed.
AMMONIUM PERCHLORATE

IMPORTANT DATA

Physical State; Appearance
WHITE HYGROSCOPIC CRYSTALS

Chemical dangers
May decompose explosively on shock, friction, or concussion, and on heating. The substance is a strong oxidant and reacts violently with combustible and reducing materials and metals, producing toxic and corrosive fumes including ammonia and hydrogen chloride, causing fire and explosion hazard.

Occupational exposure limits
TLV not established.
MAK not established.

Routes of exposure
The substance can be absorbed into the body by inhalation of its aerosol and by ingestion.

Inhalation risk
A harmful concentration of airborne particles can be reached quickly when dispersed

Effects of short-term exposure
The aerosol is irritating to the eyes, the skin and the respiratory tract.

Effects of long-term or repeated exposure
The substance may have effects on the thyroid, resulting in reduced levels of thyroid hormones.

PHYSICAL PROPERTIES

Decomposes below melting point See Notes
Density: 1.95 g/cm³

Solubility in water, g/100 ml at 25°C: 20

ENVIRONMENTAL DATA

This substance may be hazardous in the environment; special attention should be given to crustacea.

NOTES

Melting point: decomposes/ explodes from 65.6 to 439°C
Health effects of exposure to the substance have not been investigated adequately.
Rinse contaminated clothes (fire hazard) with plenty of water.

ADDITIONAL INFORMATION

LEGAL NOTICE
Neither the EC nor the IPCS nor any person acting on behalf of the EC or the IPCS is responsible for the use which might be made of this information.

©IPCS 2006