Section 1 - Product and Company Information

Product Name AMMONIUM PERCHLORATE, FINE CRYST.
Product Number 09910
Brand FLUKA
Company Sigma-Aldrich Canada, Ltd
Address 2149 Winston Park Drive
          Oakville ON L6H 6J8 CA
Technical Phone: 9058299500
Fax: 9058299292
Emergency Phone: 800-424-9300

Section 2 - Composition/Information on Ingredient

Substance Name AMMONIUM PERCHLORATE
CAS # 7790-98-9
RTECS Number: SC7520000

Section 3 - Hazards Identification

EMERGENCY OVERVIEW
Explosive. Irritant.
Heating may cause an explosion. Contact with combustible material
may cause fire. Irritating to eyes, respiratory system and skin.
Strong oxidizer.

HMIS RATING
HEALTH: 2
FLAMMABILITY: 0
REACTIVITY: 3
SPECIAL HAZARD(S): Oxidizer

NFPA RATING
HEALTH: 2
FLAMMABILITY: 0
REACTIVITY: 3
SPECIAL HAZARD(S): Oxidizer

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

ORAL EXPOSURE
If swallowed, wash out mouth with water provided person is
conscious. Call a physician.

INHALATION EXPOSURE
If inhaled, remove to fresh air. If breathing becomes difficult,
  call a physician.
DERMAL EXPOSURE
    In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

EYE EXPOSURE
    In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

EXPLOSION HAZARDS
    May explode when heated.

FLASH POINT
    N/A

AUTOIGNITION TEMP
    N/A

FLAMMABILITY
    N/A

EXTINGUISHING MEDIA
    Suitable: Carbon dioxide, dry chemical powder, or appropriate foam.

FIREFIGHTING
    Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Specific Hazard(s): Emits toxic fumes under fire conditions. Contact with other material may cause fire. May accelerate combustion.

Section 6 - Accidental Release Measures

PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL
    Evacuate area.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)
    Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP
    Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

HANDLING
    User Exposure: Do not breathe dust. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

STORAGE
    Suitable: Keep tightly closed. Keep away from combustible materials, heat, sparks, and open flame.

Section 8 - Exposure Controls / PPE

ENGINEERING CONTROLS
Use only in a chemical fume hood. Safety shower and eye bath.

PERSONAL PROTECTIVE EQUIPMENT
Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.
Hand: Compatible chemical-resistant gloves.
Eye: Chemical safety goggles.

GENERAL HYGIENE MEASURES
Wash thoroughly after handling. Remove and wash contaminated clothing promptly. Discard contaminated shoes.

Section 9 - Physical/Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>At Temperature or Pressure</th>
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<tbody>
<tr>
<td>Appearance</td>
<td>Physical State: Solid</td>
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</tr>
<tr>
<td></td>
<td>Color: White</td>
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<tr>
<td></td>
<td>Form: Fine crystals</td>
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<td>Freezing Point</td>
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<tr>
<td>Vapor Pressure</td>
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<tr>
<td>Solubility</td>
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</table>

N/A = not available

Section 10 - Stability and Reactivity

STABILITY
Stable: Unstable.
Materials to Avoid: Strong reducing agents, Strong acids.
HAZARDOUS DECOMPOSITION PRODUCTS
Hazardous Decomposition Products: Ammonia.

HAZARDOUS POLYMERIZATION
Hazardous Polymerization: Will not occur

Section 11 - Toxicological Information

ROUTE OF EXPOSURE
Skin Contact: Causes skin irritation.
Skin Absorption: May be harmful if absorbed through the skin.
Eye Contact: Causes eye irritation.
Inhalation: May be harmful if inhaled. Material is irritating to mucous membranes and upper respiratory tract.
Ingestion: May be harmful if swallowed.

TOXICITY DATA

Oral
Rat
4200 mg/kg
LD50

Subcutaneous
Rat
1600 MG/KG
LD50

Oral
Mouse
1900 mg/kg
LD50

Subcutaneous
Mouse
940 MG/KG
LD50

Oral
Rabbit
1900 mg/kg
LD50

Oral
Guinea pig
3310 mg/kg
LD50

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations
APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION
Contact a licensed professional waste disposal service to dispose of this material. Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT
Proper Shipping Name: Ammonium perchlorate
UN#: 1442
Class: 5.1
Packing Group: Packing Group II
Hazard Label: Oxidizer
PIH: Not PIH

IATA
Proper Shipping Name: Ammonium perchlorate
IATA UN Number: 1442
Hazard Class: 5.1
Packing Group: II

Section 15 - Regulatory Information

EU DIRECTIVES CLASSIFICATION
Symbol of Danger: O
Indication of Danger: Oxidizing.
R: 9-44
Risk Statements: Explosive when mixed with combustible material.
Risk of explosion if heated under confinement.
S: 14-16-27-36/37
Safety Statements: Keep away from combustible material. Keep away from sources of ignition - no smoking. Take off immediately all contaminated clothing. Wear suitable protective clothing and gloves.

US CLASSIFICATION AND LABEL TEXT
Risk Statements: Heating may cause an explosion. Contact with combustible material may cause fire. Irritating to eyes, respiratory system and skin.
Safety Statements: Keep away from heat. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Take off immediately all contaminated clothing. Wear suitable protective clothing, gloves, and eye/face protection.
US Statements: Strong oxidizer.

UNITED STATES REGULATORY INFORMATION
SARA LISTED: No
TSCA INVENTORY ITEM: Yes

CANADA REGULATORY INFORMATION
WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
DSL: Yes
NDSL: No

Section 16 - Other Information

DISCLAIMER
For R&D use only. Not for drug, household or other uses.
WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.

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