MATERIAL SAFETY DATA SHEET

EM SCIENCE
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UNIV OF WISCONSIN-WHITEWATER
800 W. MAIN ST-LIBRARY RM 2008
WHITEWATER, WI
53190

Preparation Date ........: OCT 27,'87
Date Sent to Customer:....: MAR 12,'91
Information Phone Number: (609) 354-9200
Chemtrec Emergency Number:
1-800-424-9300

NFPA HAZARD RATINGS

<table>
<thead>
<tr>
<th>Health</th>
<th>Reactivity</th>
<th>Flammability</th>
<th>Special Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3</td>
<td>2</td>
<td>W</td>
</tr>
</tbody>
</table>

Catalog Number(s): AX0684

Chemical Name........: Aluminum Chloride, Anhydrous
Trade Name...........: N/A
C.A.S. Number.....: 7446-79-0
Chemical Family......: Inorganic Salt
Formula ............: AlCl3
Molecular Weight:...: 133.35
DOT Shipping Name:....: N/A
DOT Number........: N/A

SECTION II - HAZARDOUS INGREDIENTS

None other than specified product.

SECTION III - PHYSICAL DATA

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling Point (°C) (Hg)</td>
<td>180°C</td>
</tr>
<tr>
<td>Melting Point (°C)</td>
<td>194°C</td>
</tr>
<tr>
<td>Specific Gravity (H2O = 1)</td>
<td>2.46</td>
</tr>
<tr>
<td>Vapour Pressure (mm Hg)</td>
<td>N/A</td>
</tr>
<tr>
<td>Percent Volatile by Vol (%)</td>
<td>N/A</td>
</tr>
<tr>
<td>Vapor Density (Air=1)</td>
<td>9.19</td>
</tr>
<tr>
<td>Evaporation Rate (BuAc=1)</td>
<td>N/A</td>
</tr>
<tr>
<td>Solubility in Water (%)</td>
<td>Soluble</td>
</tr>
<tr>
<td>Appearance and Odor</td>
<td>Yellowish gray to white granular powder; pungent HCl odor</td>
</tr>
</tbody>
</table>

SECTION IV - FIRE & EXPLOSION HAZARD DATA

Flash Point (°F): Noncombustible
Flammable Limits:UEL %: N/A
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Extinguishing Media: CO2 Dry chemical (DO NOT USE WATER); wear self-contained breathing apparatus, full protective clothing
Firefighting Proc.: Contact with water generates excessive heat
Fire & Expl. Hazards: Contact with water may cause fire or explosion

SECTION V - HEALTH HAZARD DATA (ACUTE AND CHRONIC)

ACGIH TLV/OSHA PEL (TWA):...: 2 mg/cu.m. (as Al) (TWA)
OSHA-PEL: None established
Toxicity Data........: N/A
Symptoms of Exposure : Severe thermal and acid burns result from any bodily contact
Inhalation may burn nasal and respiratory passages as HCl fumes are created by contact of dust with moist air
Medical Point of View: Data not available.
Routes of Entry: Inhalation, ingestion or skin contact.
Carcinogenicity: See Comments, Section X; if no information appears, the material is not listed as a cancer causing agent.
Emergency First Aid:..: GET MEDICAL ASSISTANCE FOR ALL CASES OF OVEREXPOSURE
Skin: immediately flush with copious amounts of water.
Eyes: flush with water for at least 15 minutes holding eyelids apart
Inhalation: remove to fresh air; give artificial respiration if breathing has stopped.
Ingestion: do NOT induce vomiting; get immediate medical attention
Remove contaminated clothing promptly and launder before reuse

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SECTION VI - REACTIVITY DATA

Stability: YES

Conditions to Avoid: Contact with water; reacts with moisture, or water producing excessive heat and HCl gas. Heat of solution: 583 cal/gram - Do not heat closed containers.

Materials to Avoid: (X) Water  ( ) Acids
Bases ( ) Corrosives ('') Oxidizers
Other (specify) - N/A

Hazardous Polymerization: Data not available.
Hazardous Decomposition: - HCl fumes

SECTION VII - ENVIRONMENTAL PROTECTION PROCEDURES

Spill Response:
- Take up as much as possible, then flood with water
- Neutralize with soda ash

Waste Disposal: To be performed in compliance with all current local, state and federal regulations.

SECTION VIII - SPECIAL PROTECTION INFORMATION

Ventilation, Respiratory Protection, Protective Clothing, Eye Protection:
- Material must be handled or transferred in an approved fume hood or with equivalent ventilation
- Protective gloves (Neoprene, Natural rubber, PVC or equivalent) must be worn to prevent skin contact
- Safety glasses with side shields must be worn at all times

SECTION IX - SPECIAL PROTECTION INFORMATION

Handling & Storage:
- Keep container tightly closed
- Vent all containers carefully before opening
- Store in cool, dry, well-ventilated area; open cautiously
- Do not breathe dust or vapor
- Do not get in eyes, on skin or on clothing
- Do not take internally
- Retained residue may make empty containers hazardous; use caution

Work/Hygienic Practices: Wash thoroughly after handling. Do not take internally. Eye wash and safety equipment should be readily available.

SECTION X - OTHER INFORMATION

Comments:

Tests on laboratory animals indicate material may produce adverse mutagenic and reproductive effects

Revision History: 08/01/81, 05/01/84, 01/19/87

N/A = Not available: