



**ALDON CORPORATION**

# MATERIAL SAFETY DATA SHEET

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MSDS No. FF 80  
Effective Date February 25, 1999

## SECTION I NAME 24 HOUR EMERGENCY ASSISTANCE

|                          |                                      |  |          |        |          |      |         |   |   |   |   |   |        |   |      |   |            |   |
|--------------------------|--------------------------------------|--|----------|--------|----------|------|---------|---|---|---|---|---|--------|---|------|---|------------|---|
| <b>Product</b>           | FERRIC CHLORIDE, HEXAHYDRATE         |  <p>CHEMTREC<br/>800-424-9300<br/>Day 716-226-6177</p> <p>NFPA<br/>HAZARD RATING</p> <table border="1"> <tr> <td>LEAST</td> <td>SLIGHT</td> <td>MODERATE</td> <td>HIGH</td> <td>EXTREME</td> </tr> <tr> <td>0</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </table> <p>HMIS *</p> <table border="1"> <tr> <td>Health</td> <td>2</td> </tr> <tr> <td>Fire</td> <td>0</td> </tr> <tr> <td>Reactivity</td> <td>1</td> </tr> </table> | LEAST    | SLIGHT | MODERATE | HIGH | EXTREME | 0 | 1 | 2 | 3 | 4 | Health | 2 | Fire | 0 | Reactivity | 1 |
| LEAST                    | SLIGHT                               |  | MODERATE | HIGH   | EXTREME  |      |         |   |   |   |   |   |        |   |      |   |            |   |
| 0                        | 1                                    |  | 2        | 3      | 4        |      |         |   |   |   |   |   |        |   |      |   |            |   |
| Health                   | 2                                    |  |          |        |          |      |         |   |   |   |   |   |        |   |      |   |            |   |
| Fire                     | 0                                    |  |          |        |          |      |         |   |   |   |   |   |        |   |      |   |            |   |
| Reactivity               | 1                                    |  |          |        |          |      |         |   |   |   |   |   |        |   |      |   |            |   |
| <b>Chemical Synonyms</b> | Iron Chloride, Hexahydrate           |  |          |        |          |      |         |   |   |   |   |   |        |   |      |   |            |   |
| <b>Formula</b>           | FeCl <sub>3</sub> •6H <sub>2</sub> O |  |          |        |          |      |         |   |   |   |   |   |        |   |      |   |            |   |
| <b>Unit Size</b>         | up to 2.5 Kg.                        |  |          |        |          |      |         |   |   |   |   |   |        |   |      |   |            |   |
| <b>C.A.S. No.</b>        | 10025-77-1                           |  |          |        |          |      |         |   |   |   |   |   |        |   |      |   |            |   |

## SECTION II INGREDIENTS OF MIXTURES

| Principal Component(s)                         | %    | TLV Units      |
|--|------|----------------|
| Ferric Chloride, Hexahydrate                   | 100% | See Section V. |
| <b>DANGER! CORROSIVE! CAUSES SEVERE BURNS.</b> |      |                |
| <b>HARMFUL IF SWALLOWED. VERY HYGROSCOPIC.</b> |      |                |

## SECTION III PHYSICAL DATA

|                        |  |   |                  |
|------------------------|--|---|------------------|
| Melting Point (°F)     | 37°C (99°F)  | Specific Gravity (H <sub>2</sub> O = 1) | Not established. |
| Boiling Point (°F)     | Not established.   | Percent Volatile by Volume (%)          | Data not listed. |
| Vapor Pressure (mm Hg) | Not established.   | Evaporation Rate (=1)                   | Data not listed. |
| Vapor Density (Air=1)  | Data not listed.   |   |                  |
| Solubility in Water    | Soluble.   |   |                  |
| Appearance & Odor      | Yellowish, brown lumps; slightly Hydrochloric acid odor. |   |                  |

## SECTION IV FIRE AND EXPLOSION HAZARD DATA

|                                  |   |  |       |       |
|----------------------------------|---|--|-------|-------|
| <b>Flash Point (Method Used)</b> | Non-combustible (NA).                                     | <b>Flammable Limits in Air % by Volume</b> | Lower | Upper |
|                                  |   | NA   | ----- | ----- |
| <b>Extinguisher Media</b>        | Use any media suitable for extinguishing supporting fire. |  |       |       |

### SPECIAL FIREFIGHTING PROCEDURES

In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective clothing.

(1996 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.7, GUIDE PAGE NO. 154)

### UNUSUAL FIRE AND EXPLOSION HAZARDS

Fire or excessive heat may cause production of toxic and corrosive Hydrochloric acid fumes or chlorine gas.

## SECTION V HEALTH HAZARD DATA

FF 80

**Threshold Limited Value** 1 mg/m<sup>3</sup> as iron (ACGIH 1992-93) LD<sub>50</sub> (oral-rat) 1872 mg/kg.

**Effects of Overexposure** **TARGET ORGANS AFFECTED:** Cardiovascular and nervous system, liver, kidneys, gastrointestinal system. **INHALATION:** Dust may cause upper respiratory tract and mucous membrane irritation. **EYES:** Causes severe irritation and/or burns. Risk of serious or permanent eye lesions. **SKIN:** Causes irritation. Prolonged contact may result in burns. **INGESTION:** Harmful if swallowed. May cause moderate to severe gastric irritation and injury.

**Emergency and First Aid Procedures** **INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. **EYES:** Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention. **SKIN:** Flush thoroughly with water, then wash with mild soap and water. **INGESTION:** If swallowed, if conscious, give one or two glasses of water to drink, then egg whites. Get immediate medical attention. Never give anything by mouth to an unconscious person.

## SECTION VI REACTIVITY DATA

|                  |                 |   |  |
|------------------|-----------------|---|--|
| <b>Stability</b> | <b>Unstable</b> |   | <b>Conditions to Avoid</b> Excessive temperature and heat. Contact with water releases heat. |
|                  | <b>Stable</b>   | X |  |

**Incompatibility (Materials to Avoid)** Metals, strong bases, oxidizing agents, water, alkaline materials.

**Hazardous Decomposition Products** Decomposes @ 160°C. Produces Hydrochloric acid fumes on exposure to moisture or light. Chlorine gas and/or hydrogen chloride at high temperatures.

|                                 |                            |
|---------------------------------|----------------------------|
| <b>Hazardous Polymerization</b> | <b>Conditions to Avoid</b> |
| <b>May Occur</b>                | <b>Will Not Occur</b>      |
|                                 | X                          |
| Not applicable.                 |                            |

## SECTION VII SPILL OR LEAK PROCEDURES

**Steps to be taken in case material is released or spilled** Recover for use if not contaminated. Wearing proper safety equipment and with good ventilation, sweep up and place in a suitable container for proper disposal. Wash spill area with soap and water.

**Waste Disposal Method** Discharge, treatment, or disposal may be subject to Federal, State or Local laws. These disposal guidelines are intended for the disposal of catalog-size quantities only. Dissolve in water and neutralize with sodium carbonate. Flush to sewer with copious amounts of water.

## SECTION VIII SPECIAL PROTECTION INFORMATION

|  |  |                     |                |
|--|--|---------------------|----------------|
| <b>Respiration Protection (Specify Type)</b> | None should be needed in normal laboratory handling. Work in a ventilation hood if fumes of Hydrochloric acid are present or wear a NIOSH/MSHA-approved dust mask or respirator. |                     |                |
| <b>Ventilation</b>                           | <b>Local Exhaust</b>   | <b>Recommended.</b> | <b>Special</b> |
|  | <b>Mechanical (General)</b>  | <b>Recommended.</b> | <b>Other</b>   |
|  |  |                     | No.            |
|  |  |                     | No.            |

**Protective Gloves** Rubber. **Eye Protection** Chemical safety glasses.

**Other Protective Equipment** Smock, apron, eye wash station, goggles, proper gloves, ventilation hood.

## SECTION IX SPECIAL PRECAUTIONS

**Precautions to be Taken in Handling & Storing** Isolate from oxidizing materials. Store in a cool, dry place and protect from light and moisture. Wash thoroughly after handling. Keep container tightly closed when not in use.

**Other Precautions** Read label on container before using. Do not wear contact lenses when working with chemicals. Avoid contact with eyes, skin and mucous membranes. Avoid breathing dust. Use with adequate ventilation. Remove and wash contaminated clothing.

For laboratory use only. Not for drug, food or household use. Keep out of reach of children.

|                       |                     |                                 |                                       |
|-----------------------|---------------------|---------------------------------|---------------------------------------|
| <b>Revision</b> No. 5 | <b>Date</b> 2/25/99 | <b>Approved</b> Michael Raszeja | <b>Chemical Safety Coordinator</b> MR |
|-----------------------|---------------------|---------------------------------|---------------------------------------|

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D.O.T. Corrosive solids, n.o.s., (Ferric chloride, hexahydrate), 8, UN 1759, PG III

Approved by U.S. Department of Labor "essentially similar" to form OSHA-20