



**ALDON CORPORATION**

# MATERIAL SAFETY DATA SHEET

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MSDS No. FF 210  
Effective Date September 9, 1998

## SECTION I NAME 24 HOUR EMERGENCY ASSISTANCE

<b>Product</b>	FERROUS SULFIDE	 <b>CHEMTREC</b> <b>800-424-9300</b> Day 716-226-6177 <b>NFPA</b> <b>HAZARD RATING</b> LEAST SLIGHT MODERATE HIGH EXTREME 0 1 2 3 4 <b>HMIS *</b> 0 1 2 3 4	<b>Health</b>	0
<b>Chemical Synonyms</b>	Iron Sulfuret, Troilite		<b>Fire</b>	0
<b>Formula</b>	FeS		<b>Reactivity</b>	2
<b>Unit Size</b>	up to 2.5 Kg.			
<b>C.A.S. No.</b>	1317-37-9			

## SECTION II INGREDIENTS OF MIXTURES

Principal Component(s)	%	TLV Units
Ferrous Sulfide	100%	None established.
<b>WARNING! DUST MAY BE HARMFUL IF INHALED OR SWALLOWED.</b>		
<b>CONTACT MAY CAUSE IRRITATION TO MUCOUS MEMBRANES.</b>		
<b>CONTACT WITH ACIDS LIBERATES HYDROGEN SULFIDE, A TOXIC GAS.</b>		

## SECTION III PHYSICAL DATA

Melting Point (°F)	1194°C (2178°F)	Specific Gravity (H <sub>2</sub> O = 1)	4.84
Boiling Point (°F)	Decomposes.	Percent Volatile by Volume (%)	Non-volatile (NA).
Vapor Pressure (mm Hg)	Negligible as solid.	Evaporation Rate (=1)	Non-volatile (NA).
Vapor Density (Air=1)	Data not listed.		
Solubility in Water	Insoluble.		
Appearance & Odor	Brownish-black lumps, rods or granular powder; no odor.		

## SECTION IV FIRE AND EXPLOSION HAZARD DATA

<b>Flash Point (Method Used)</b>	Non-flammable (NA).	<b>Flammable Limits in Air % by Volume</b>	NA	Lower	Upper
<b>Extinguisher Media</b>	Carbon dioxide, dry chemical, water spray or foam.				

<b>SPECIAL FIREFIGHTING PROCEDURES</b>	In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective clothing; wear goggles if eye protection is not provided.
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<b>UNUSUAL FIRE AND EXPLOSION HAZARDS</b>	Yields flammable hydrogen sulfide on contact with acids and sulfur dioxide when burning. Finely divided Ferrous Sulfide may form explosive mixture in air. Hydrogen Sulfide and sulfur dioxide are both extremely toxic gases.
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<b>D.O.T.</b>	<b>NON-REGULATED.</b>
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Approved by U.S. Department of Labor "essentially similar" to form OSHA-20

## SECTION V HEALTH HAZARD DATA

FF 210

<b>Threshold Limited Value</b>	None established. (ACGIH 1992-93).
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<b>Effects of Overexposure</b>	If free gastric acidity is high, the ingestion of Ferrous Sulfide may result in decomposition to hydrogen sulfide in the stomach, with subsequent systemic poisoning. <b>CONTACT:</b> Skin contact with Ferrous Sulfide presents very little hazard. <b>EYE CONTACT:</b> Particulate hazard only. Exercise appropriate procedures to minimize potential hazards.
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<b>Emergency and First Aid Procedures</b>	<b>INGESTION:</b> If swallowed, if conscious, give one or two glasses of water to drink. Induce vomiting and call physician immediately. Never give anything by mouth to an unconscious person. <b>EYES:</b> Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention. <b>SKIN:</b> Flush thoroughly with water, then wash with mild soap and water. <b>INHALATION:</b> Remove to fresh air. Treat symptomatically. If symptoms of illness develop, get medical attention.
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## SECTION VI REACTIVITY DATA

<b>Stability</b>	<b>Unstable</b>		<b>Conditions to Avoid</b>	Acids, high heat. Air and moisture sensitive.
	<b>Stable</b>	X		

<b>Incompatibility (Materials to Avoid)</b>	Contact with acids liberates hydrogen sulfide (H <sub>2</sub> S) a poisonous gas, strong oxidizers.
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<b>Hazardous Decomposition Products</b>	Oxides of Sulfur and Iron.
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<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

<b>Steps to be taken in case material is released or spilled</b>	Recycle or sweep up with care, avoiding contact with acids, strong oxidizers or very high temperatures. Place in a suitable container. Wash spill area with soap and water.
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<b>Waste Disposal Method</b>	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.
	Dispose of in accordance with federal, state and local regulations.

## SECTION VIII SPECIAL PROTECTION INFORMATION

<b>Respiration Protection (Specify Type)</b>	None should be needed in normal handling of ferrous sulfide in the laboratory. In contact with acids work in fume hood or wear NIOSH/MSHA-approved self-contained respirator.		
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<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Recommended.</b>	<b>Special</b>	No.
	<b>Mechanical (General)</b>	<b>Recommended.</b>	<b>Other</b>	No.

<b>Protective Gloves</b>	Rubber.	<b>Eye Protection</b>	Chemical safety glasses.
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<b>Other Protective Equipment</b>	Smock, apron, eye wash station, fume hood, proper gloves.
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## SECTION IX SPECIAL PRECAUTIONS

<b>Precautions to be Taken in Handling &amp; Storing</b>	Store in a cool, dry place away from acids, acid fumes, strong oxidizers or fire hazards. Wash thoroughly after handling.
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<b>Other Precautions</b>	Read label on container before using. Do not wear contact lenses when working with chemicals. <b>NOTE:</b> Do not depend on odor to detect presence of gas. Hydrogen sulfide gas deadens the sense of smell. Do not breathe dust. Use with adequate ventilation. Avoid contact with skin, eyes and mucous membranes. Remove and wash contaminated clothing.
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For laboratory use only. Not for drug, food or household use. Keep out of reach of children.	<b>Revision No. 4</b>	<b>Date</b> 9/9/98	<b>Approved</b> Michael Raszeja	<b>Chemical Safety Coordinator</b> MR
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