



**ALDON CORPORATION**

# MATERIAL SAFETY DATA SHEET

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MSDS No. IX 220  
Effective Date March 16, 1999

## SECTION V HEALTH HAZARD DATA

IX 220

**Threshold Limited Value** None established. (ACGIH 1992-93). The OSHA Permissible exposure limit for the crystalline silica contained in iron pyrite is 10 mg/m<sup>3</sup> Crystalline Silica +2 for respirable dust averaged over an 8 hour work shift and 30 mg/m<sup>3</sup> Crystalline Silica +2 for total dust.

### Effects of Overexposure

Health hazards can occur from excessive inhalation of silica dust, otherwise non-toxic. Crystalline Silica in the lung can produce a pneumoconiosis, commonly called Silicosis, which is a chronic, slowly developing disease. Symptoms are usually delayed, (10 yrs. or more).

### Emergency and First Aid Procedures

**INGESTION:** 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. **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. **INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

## SECTION VI REACTIVITY DATA

Stability	Unstable	Conditions to Avoid
	Stable	X High temperatures, acids.

Incompatibility (Materials to Avoid)	Exposure to acids may result in emission of toxic Hydrogen Sulfide gas.
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Hazardous Decomposition Products	Hydrogen sulfide, a highly toxic gas.
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Hazardous Polymerization		Conditions to Avoid
May Occur	Will Not Occur	Not applicable.
	X	

## SECTION VII SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled	Sweep up spill and recycle if possible or place in a suitable container for disposal. Avoid raising dust clouds. Flush spill area with water.
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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. Dispose of in an approved incinerator equipped with an afterburner and scrubber or if uncontaminated material may be disposed of in a sanitary landfill.
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## SECTION VIII SPECIAL PROTECTION INFORMATION

Respiration Protection (Specify Type)	None should be needed in normal laboratory handling. If dusty conditions prevail, work in ventilation hood or wear a NIOSH/MSHA-approved dust mask.
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Ventilation	Local Exhaust	Recommended.	Special	No.
	Mechanical (General)	Recommended.	Other	No.

Protective Gloves	Cotton work gloves.	Eye Protection	Chemical safety glasses.
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Other Protective Equipment	Smock, apron, eye wash station, proper gloves, ventilation hood.
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## SECTION IX SPECIAL PRECAUTIONS

Precautions to be Taken in Handling & Storing	Store in a cool, dry place away from acids and fire hazards. <b>NOTE:</b> Hydrogen sulfide gas deadens the sense of smell. Do not depend on odor to detect presence of gas. Wash thoroughly after handling.
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Other Precautions	Read label on container before using. Do not wear contact lenses when working with chemicals.
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Remove and wash contaminated clothing.

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

Revision	No. 5	Date	3/16/99	Approved	Michael Raszeja	Chemical Safety Coordinator	MR
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The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. \* Hazardous Materials Industrial Standards. Printed on recycled paper.

## SECTION I NAME 24 HOUR EMERGENCY ASSISTANCE

Product	IRON PYRITES
Chemical Synonyms	Iron Disulfide
Formula	FeS <sub>2</sub>
Unit Size	up to 2.5 Kg.
C.A.S. No.	1309-36-0

CHEMTREC  
800-424-9300  
Day 716-226-6177

NFPA HAZARD RATING  
LEAST SLIGHT MODERATE HIGH EXTREME  
0 1 2 3 4

Health	1
Fire	0
Reactivity	1

HMIS \*

## SECTION II INGREDIENTS OF MIXTURES

Principal Component(s)	%	TLV Units
Iron pyrite is a Sulfide ore consisting of approximately 50-52% Sulfur and approximately 44-45% iron. There are no OSHA Permissible Exposure Limits (PEL) for pyrites. However, Pyrite may contain up to 4% Crystalline Silica. The presence of Crystalline Silica in Pyrite may present a health hazard if inhaled over long periods of time. (Please see SECTION VI for applicable health hazard information.) *		None established.

## SECTION III PHYSICAL DATA

Melting Point (°F)	1171°C (2140°F)	Specific Gravity (H <sub>2</sub> O = 1)	4.95-5.10
Boiling Point (°F)	Decomposes.	Percent Volatile by Volume (%)	Non-volatile (NA).
Vapor Pressure (mm Hg)	Negligible as solid.	Evaporation Rate ( )	Non-volatile (NA).
Vapor Density (Air=1)	Data not listed.		
Solubility in Water	Insoluble in water. (0.00049 grams per 100 mL.)		
Appearance & Odor	Pale brass yellow granules or powder; no odor.		

## SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	Non-flammable.	Flammable Limits in Air % by Volume	N/A	Lower	Upper
Extinguisher Media	Water spray; carbon dioxide (CO <sub>2</sub> ); dry chemical (ABC).				

### SPECIAL FIREFIGHTING PROCEDURES

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

\* Sulfur: (CAS No. 7704-34-9)  
Iron: (CAS No. 7439-89-6)  
Crystalline Silica: (CAS No. 14808-60-7)

### UNUSUAL FIRE AND EXPLOSION HAZARDS

Do **NOT** expose this material to flame or high temperatures. Ignition may occur with Toxic Sulfur gas being generated. Exposure to acids may result in emission of toxic hydrogen sulfide gas.

D.O.T.	NON-REGULATED.
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Approved by U.S. Department of Labor "essentially similar" to form OSHA-20