

Mineral King Minerals, Inc.

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MATERIAL SAFETY DATA SHEET **IRON 6%**

SECTION I. IDENTIFICATION

Chemical Family: Mixture

Chemical Name and Synonyms: N/A -- Mixture

Formula: Proprietary

Trade Name and Synonyms: **IRON 6%**

SECTION II. PRODUCT AND COMPONENT HAZARD DATA

A. Components:	CAS. Reg. No:	Approx. Percent:	TLV:
Ferrous Sulfate	7720-78-7	24.5%	1 mg/m3 as Fe

SECTION III. PHYSICAL DATA

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| - <u>Appearance and Odor:</u> Brown; sweet, molasses-like odor | - <u>Boiling Point:</u> 212 ^o F. |
| - <u>Specific Gravity:</u> 1.24 | - <u>Vapor Pressure:</u> 30 mm (approximately) |
| - <u>Percent Volatile by Volume:</u> Proprietary | - <u>Vapor Density (Air = 1):</u> > 1 |
| - <u>Evaporation Rate (Ethyl Ether = 1):</u> < 1 | - <u>Solubility in Water:</u> > 99% |

SECTION IV. FIRE AND EXPLOSION HAZARD DATA

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|---|--|
| - <u>Flash Point:</u> N/A | - <u>Extinguishing Agent:</u> N/A |
| - <u>Flammable Limits:</u> N/A | - <u>Special Fire-Fighting Procedures:</u> N/A |
| - <u>Unusual Fire and Explosion Hazards:</u>
May evolve SO ₂ if involved in a fire. | |

SECTION V. REACTIVITY DATA

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|---|--|
| - <u>Stability:</u> Stable | - <u>Incompatibility:</u> Oxidizers, strong acids |
| - <u>Hazardous Polymerization:</u> Will not occur | - <u>Hazardous Decomposition Products:</u> Sulfur dioxide (SO ₂) may be evolved over 300 ^o C. |

SECTION VI. TOXICITY AND HEALTH

A. EXPOSURE LIMITS

- OSHA Permissible Exposure Limit (PEL): None established
- Threshold Limit Value (TLV): 1 mg/m3 as Fe

B. EFFECTS OF OVEREXPOSURE

1. ACUTE
 - a. Inhalation: Irritation.
 - b. Eyes: Irritation. May cause ulceration.
 - c. Ingestion: Gastric disturbance, nausea, vomiting, hyperactivity.
 - d. Skin: Irritation.
2. CHRONIC Implicated in adverse changes in male reproductive system at very high exposure levels.

C. EMERGENCY FIRST AID PROCEDURES

- Inhalation: Remove from exposure area. If irritation exists from mists, or in the event of massive inhalation, seek medical attention.
- Eyes: Rinse thoroughly with running water for 15 minutes. Seek medical attention.
- Ingestion: Drink at least 2 glasses of milk or water and induce vomiting. Consult a physician.
- Skin: Wash with soap and water. Rinse thoroughly. Seek medical attention if inflammation occurs.

D. ANIMAL TOXICITY DATA

- LD 50 (oral-rat) 319 mg/Kg as Fe SO₄
- LD 20 (child) 390 mg/Kg as Fe SO₄
- LD 20 (woman) 200 mg/Kg as Fe SO₄
- LD 20 (woman) 60 mg/Kg as Fe SO₄

SECTION VII. PERSONAL PROTECTION AND CONTROLS

A. RESPIRATORY PROTECTION

- As required by conditions. Use an OSHA or NIOSH approved respirator if required.

SECTION VII. PERSONAL PROTECTION AND CONTROLS (continued)

B. VENTILATION

- General: Not normally required. Use if needed for safe, comfortable working conditions.
- Local Exhaust: Not normally required.

C. SKIN AND EYE PROTECTION

- Safety glasses should be worn in any type of industrial operation. Protective gloves should be worn as good hygiene dictates.

D. OTHER CONTROL MEASURES

- An eye bath and washing facilities should be available. Wash thoroughly after handling. Do not smoke when handling chemicals.

SECTION VIII. SPECIAL STORAGE AND HANDLING PRECAUTIONS

Since emptied packages retain product residue follow label warning even after package is emptied. Dried residue can constitute a fire hazard. Keep equipment and workplace clean.

SECTION IX. SPILL, LEAK, AND DISPOSAL PRACTICES

- Steps to be Taken in Case Material is Released or Spilled: Collect and contain for salvage or disposal. Absorb waste on inert media and dispose of as solid waste.
- Waste Disposal Method: Landfill in compliance with all federal, state and local laws concerning health and environment.

SECTION X. ENVIRONMENTAL EFFECTS DATA

SUMMARY

While this product has not been tested for environmental hazards, long experience with iron salts would indicate that no adverse effects should be anticipated under normal conditions of use.

SECTION XI. TRANSPORTATION

- DOT Hazard Classification: ORM-E

SECTION XII. REFERENCES

1. The Merck Index: An Encyclopedia of Chemicals and Drugs, 1983 10th ed., Merck and Company, Rahway, N.J.
2. Dangerous Properties of Industrial Materials, 5th ed., 1979, Sax, N.I., Van Nostrand Reinhold & Co., N.Y., N.Y.
3. 29 C F R 1910 General Industry OSHA Safety and Health Standards., U.S. Department of Labor, Occupational Safety and Health Administration. Rev. 1983, 1985.
4. Threshold Limit Values for Chemical Substances and Physical Agents in the Workroom Environment with Intended Changes. American Conference of Governmental Industrial Hygienists, Cincinnati, OH. 1985.
5. Handbook of Chemistry and Physics, Chemical Rubber Co., Cleveland, OH.
6. Water Quality Criteria, J.E. McKee and H.W. Wolf, Editors., Pub. No. 3-A (Revised). State of California, 1963.
7. Registry of Toxic Effects of Chemical substances: 1983 Supplement to the 1981-1982 Edition. National Institute of Occupational Safety and Health, 1984.

IMPORTANT

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