

## Material Safety Data Sheet (MSDS)

# FERROUS SULFATE MONOHYDRATE

<b>1. Identification of the Substance</b>	<b>PRODUCT NAME:</b> Ferrous Sulfate Monohydrate <b>DISTRIBUTOR:</b> EcoFusion Inc., PO Box 251408. Plano, TX 75025 – 1408 (USA) <b>TEL:</b> +1 972 403 7449 <b>FAX:</b> +1 214 291 5348 <b>EMERGENCY:</b> CHEMTREC 800 424 9300
<b>2. Hazards Identification</b>	<b>WARNING!</b> Harmful if swallowed or inhaled. Causes irritation to skin, eyes and respiratory tract. Affects the liver. <b>POTENTIAL HEALTH EFFECTS</b> <b>EYE:</b> Causes irritation, redness, and pain. <b>SKIN:</b> Causes irritation to skin. Symptoms include redness, itching, and pain. <b>INGESTION:</b> Low toxicity in small quantities but larger dosages may cause nausea, vomiting, diarrhea, and black stool. Pink urine discoloration is a strong indicator of iron poisoning. Liver damage, coma, and death from iron poisoning has been recorded. Smaller doses are much more toxic to children. <b>INHALATION:</b> Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath. <b>CHRONIC:</b> Severe or chronic ferrous sulfate poisonings may damage blood vessels. Large chronic doses cause rickets in infants. Chronic exposure may cause liver effects. Prolonged exposure of the eyes may cause discoloration.
<b>3. Composition / Information on Ingredients</b>	<b>CHEMICAL FORMULA:</b> FeSo4.H2O <b>MOLECULAR WEIGHT:</b> 278.01 <b>CAS NO.:</b> 17375-41-6 <b>INGREDIENTS:</b> Iron, Sulfur <b>% (BY WEIGHT):</b> 90-100% <b>CLASSIFICATION:</b> Not Regulated
<b>4. First Aid Measures</b>	<b>SKIN:</b> Immediately flush skin with plenty of soap and water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse. <b>EYES:</b> Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid. <b>INGESTION:</b> Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention. <b>INHALATION:</b> Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention
<b>5. Fire Fighting Measures</b>	<b>GENERAL PROTECTION:</b> As in any fire, wear a self-contained breathing apparatus in pressure-demand, and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Substance is noncombustible. This material in sufficient quantity and reduced particle size is capable of creating a dust explosion. <b>EXTINGUISHING MEDIA:</b>

	Use extinguishing media most appropriate for the surrounding fire. Use any means suitable for extinguishing surrounding fire.
<b>6. Accidental Release Measures</b>	<b>GENERAL INFORMATION:</b> Use proper personal protective equipment as indicated in Section 8. Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation. Place under an inert atmosphere.
<b>7. Handling and Storage</b>	<b>HANDLING:</b> Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use only in a well-ventilated area. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Do not ingest or inhale. Handle under an inert atmosphere. Store protected from air. <b>STORAGE:</b> Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Do not expose to air. Do not use this product if coated with brownish-yellow basic ferric sulfate. Isolate from incompatible substances.
<b>8. Exposure Controls / Personal protection</b>	<b>ENGINEERING CONTROLS:</b> Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low. <b>EXPOSURE LIMITS:</b> 1 mg/m <sup>3</sup> (TWA) soluble iron salt as Fe <b>PERSONAL PROTECTIVE EQUIPMENT</b> <b>EYE:</b> Use chemical safety goggles and/or full-face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area. <b>SKIN:</b> Wear appropriate protective gloves to prevent skin exposure. <b>CLOTHING:</b> Wear appropriate protective clothing to prevent skin exposure. <b>RESPIRATORS:</b> A respiratory protection program that meets OSHA's 29 CFR: 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.
<b>9. Physical and Chemical properties</b>	<b>PHYSICAL STATE:</b> Slight grey to off-white powder or granular <b>ODOUR:</b> Odorless <b>MELTING POINT:</b> 57C (135F) Loses water <b>BOILING POINT:</b> > 300C (> 572F) Decomposes. <b>SOLUBILITY:</b> 48.6 g/100 g water @ 50C (122F) <b>SPECIFIC GRAVITY/DENSITY:</b> 1.90
<b>10. Stability and Reactivity</b>	<b>STABILITY:</b> Stable under ordinary conditions of use and storage. Loses water in dry air and oxidizes upon exposure to moisture, forming a brown coating of extremely corrosive basic ferric sulfate <b>CONDITIONS TO AVOID:</b> Moisture <b>MATERIALS TO AVOID:</b> Alkalis, soluble carbonates, and oxidizing materials. Reacts in moist air to form ferric sulfate. <b>HAZARDOUS POLYMERIZATION:</b> Has not been reported <b>HAZARDOUS DECOMPOSITION PRODUCTS:</b> Burning may produce sulfur oxides
<b>11. Toxicological</b>	No information available

Information	
<b>12. Ecological Information</b>	Don't allow undiluted product or large quantities to penetrate into ground water, water bodies or sewage system.
<b>13. Disposal Considerations</b>	Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Additionally, waste generators must consult government, state and local hazardous waste regulations to ensure complete and accurate classification.
<b>14. Transport Information</b>	Not Available
<b>15. Regulatory Information</b>	GB12268-2005 And any applicable national regulations for this product.
<b>16. Other Information</b>	N/A

*THE INFORMATION IN THIS MSDS RELATES TO THIS SPECIFIC MATERIAL. IT MAY NOT BE VALID FOR THIS MATERIAL IF USED IN COMBINATION WITH ANY OTHER MATERIALS OR IN ANY PROCESS. IT IS THE USERS' RESPONSIBILITY TO SATISFY THEMSELVES AS TO THE SUITABILITY AND COMPLETENESS OF THIS INFORMATION FOR THEIR OWN PARTICULAR USE.*

All non-emergency questions should be  
Directed to Customer Service at

**24 hour emergency Telephone: Chemtrec 800-424-9300**  
**National response in Canada: Canutec 613-996-6666**  
**Outside US & Canada: Chemtrec: 202-483-7616**

Note: Chemtrec and Canutec emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, exposure or accident involving chemicals.