

**SECTION 1: PRODUCT AND COMPANY IDENTIFICATION**

|                                   |                                                                                                                 |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------|
| <b>Product Name</b>               | Manganese Sulfate                                                                                               |
| <b>Chemical Name</b>              | Manganese (II) Sulfate Monohydrate                                                                              |
| <b>Recommended use</b>            | Fertilizer                                                                                                      |
| <b>Uses advised against</b>       | None Non-hazardous                                                                                              |
| <b>Company</b>                    | Southern Agricultural Insecticides, Inc.<br>P.O. Box 218<br>Palmetto, FL 34220                                  |
| <b>Company Telephone/Fax</b>      | (941) 722-3285/(941) 723-2974                                                                                   |
| <b>Emergency Telephone Number</b> | For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident,<br>Call CHEMTREC Day or Night: 1-800-424-9300 |

**SECTION 2: HAZARD IDENTIFICATION**

|                                                   |                                                                                                                        |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| <b>Classification of the substance or mixture</b> | <b>Specific target organ toxicity - repeated exposure (Category 2)</b><br><b>Chronic aquatic toxicity (Category 2)</b> |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|

**GHS label elements**
**Hazard pictograms**

**Signal word**
**Warning**
**Hazard statements**

May cause damage to organs through prolonged or repeated exposure, category 2  
 Eye damage, category 1  
 Toxic to aquatic life with long lasting effects. Category 2

**Precautionary statements**  
**General**

Wear eye/face protection.  
 Do not breathe dust, fume, gas, mist, vapors, spray.  
 Do not eat, drink or smoke when using this product.  
 Get Medical Advice / Attention if you feel unwell.  
 Avoid release to the environment.  
 Collect Spillage.  
 Store locked up.  
 Dispose in accordance with local, state and federal regulations.

**SECTION 3: COMPOSITION INFORMATION ON INGREDIENTS**

| <b>INGREDIENT</b>              | <b>CAS NO.</b> | <b>% WT</b> |
|--------------------------------|----------------|-------------|
| Manganous Sulfate, Monohydrate | 10034-96-5     | 95-100%     |

**SECTION 4: FIRST AID MEASURES**

General Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice(show the label where possible).

**Skin** Remove affected clothing and immediately wash all exposed skin area with mild soap and water, followed by warm water rinse.

|                   |                                                                                                                                                                                    |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Eyes</b>       | Rinse eyes cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists get medical advice/attention. |
| <b>Inhalation</b> | Remove victim to fresh air. Clean nasal cavity with water. Seek medical attention if discomfort or irritation persists.                                                            |
| <b>Ingestion</b>  | Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.                                                                                                           |
| <b>Symptoms:</b>  | Chills, fever, nausea, vomiting, coughing, weakness and headaches, skin irritation                                                                                                 |

## SECTION 5: FIRE-FIGHTING MEASURES

|                                                         |                                                                                                                                                                   |
|---------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Extinguishing Media</b>                              | Foam. Dry powder. Carbon dioxide. Water spray. Sand.                                                                                                              |
| <b>Special Fire Fighting Procedures</b>                 | Use water spray or fog for cooling exposed containers.<br>Exercise caution when fighting any chemical fire. Prevent firefighting water from entering environment. |
| <b>Advice for Firefighters</b>                          | Use NIOSH-approved respiratory protection/breathing apparatus with full face shield. Wear suitable protective clothing.                                           |
| <b>Hazardous combustion and Decomposition products:</b> | None                                                                                                                                                              |

## SECTION 6: ACCIDENTAL RELEASE MEASURES

|                                   |                                                                                    |
|-----------------------------------|------------------------------------------------------------------------------------|
| <b>Personal precautions:</b>      | Wear suitable gloves and eye/face protection. Avoid dust creation.                 |
| <b>Environmental precautions:</b> | Avoid allowing product to enter drains, sewage system, ground water.               |
| <b>Methods for cleaning up:</b>   | Sweep up and shovel into suitable containers for disposal. Reuse or recycle waste. |

## SECTION 7: HANDLING AND STORAGE:

|                  |                                                                                                                                                                                                                                    |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Handling:</b> | Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Avoid breathing dust. Avoid moisture |
| <b>Storage:</b>  | Store in a cool location. Provide ventilation for containers. Store away from foodstuffs.                                                                                                                                          |

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION INFORMATION

|                               |                                                                                                                                                       |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Control Parameters</b>     | USA ACGIH ACGIH TWA (mg/m <sup>3</sup> ) 0.2 mg/m <sup>3</sup><br>USA OSHA OSHA PEL (Ceiling) (mg/m <sup>3</sup> ) 5 mg/m <sup>3</sup>                |
| <b>Engineering Controls</b>   | Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation. |
| <b>Respiratory Protection</b> | Wear appropriate mask.                                                                                                                                |
| <b>Eye Protection</b>         | Chemical goggles or safety glasses.                                                                                                                   |
| <b>Hand Protection:</b>       | Wear protective gloves.                                                                                                                               |
| <b>Protective Equipment:</b>  | Avoid all unnecessary exposure.                                                                                                                       |
| <b>Other information:</b>     | Do not eat, drink or smoke during use.                                                                                                                |

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

|                             |                             |
|-----------------------------|-----------------------------|
| <b>Form:</b>                | Solid granular powder(fine) |
| <b>Melting Point:</b>       | 700 degrees celcius.        |
| <b>Solubility in water:</b> | Soluble                     |
| <b>Odor:</b>                | None                        |
| <b>Density:</b>             | 2.95 g/cm <sup>3</sup>      |
| <b>Specific Gravity:</b>    | 3:25                        |

## SECTION 10: STABILITY AND REACTIVITY DATA

|                  |                                           |
|------------------|-------------------------------------------|
| <b>Stability</b> | Stable under normal conditions of storage |
|------------------|-------------------------------------------|

|                               |                                                                                                            |
|-------------------------------|------------------------------------------------------------------------------------------------------------|
| <b>Hazardous reactions</b>    | Hazardous decomposition products formed under fire conditions,- Sulphur oxides, Manganese/manganese oxides |
| <b>Incompatible materials</b> | Strong oxidizing agents. Avoid moisture                                                                    |

## SECTION 11: TOXICOLOGICAL INFORMATION

|                               |                                                                                                                                                         |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>LD50 oral rat</b>          | 2150 mg/kg                                                                                                                                              |
| <b>Target Organs</b>          | May cause damage to organs through prolonged or repeated exposure                                                                                       |
| <b>Acute Toxicity</b>         |                                                                                                                                                         |
| <b>Skin</b>                   | May cause skin irritation                                                                                                                               |
| <b>Eyes</b>                   | Causes serious eye irritation                                                                                                                           |
| <b>Inhalation</b>             | May be harmful if inhaled. May cause respiratory tract irritation.                                                                                      |
| <b>Ingestion</b>              | Harmful if swallowed. Danger of serious damage to health.                                                                                               |
| <b>Carcinogenicity:</b>       | No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. |
| <b>Mutagenicity:</b>          | Not available.                                                                                                                                          |
| <b>Reproductive toxicity:</b> | No additional information                                                                                                                               |

## SECTION 12: ECOLOGICAL INFORMATION

|                                       |                                                                                             |
|---------------------------------------|---------------------------------------------------------------------------------------------|
| <b>Persistence and degradability:</b> | Not applicable.                                                                             |
| <b>Bioaccumulative potential:</b>     | Not applicable.                                                                             |
| <b>Ecotoxicity:</b>                   | Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. |
| <b>Mobility:</b>                      | Not applicable.                                                                             |

## SECTION 13: DISPOSAL INFORMATION

|                              |                                                                                                                                                                                                                        |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Waste Disposal Method</b> | Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to comply with local, state and federal regulations. Avoid release to the environment. See information on label. |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## SECTION 14: TRANSPORT INFORMATION

### U.S. DEPARTMENT OF TRANSPORTATION

|             |                                                                                                                                                                                                  |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>DOT</b>  | Not Regulated                                                                                                                                                                                    |
| <b>IMDG</b> | UN-Number: 3077, Class: 9 ,Packing group: III EMS-No: F-A, S-F<br>Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Manganese Sulfate monohydrate) Marine pollutant: Yes |
| <b>IATA</b> | UN-Number: 3077, Class: 9 , Packing group: III Proper shipping name: Environmentally hazardous substance, solid, N.O.S. (Manganese Sulfate monohydrate)                                          |

## SECTION 15: REGULATORY INFORMATION

### US federal regulations

#### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

#### CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

#### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

#### SARA 304 Emergency release notification

Not regulated.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

|                                               |                        |
|-----------------------------------------------|------------------------|
| <b>Hazard categories</b>                      | Immediate Hazard - No  |
|                                               | Delayed Hazard - No    |
|                                               | Fire Hazard - No       |
|                                               | Pressure Hazard - No   |
|                                               | Reactivity Hazard - No |
| <b>SARA 302 Extremely hazardous substance</b> | No                     |
| <b>SARA 311/312 Hazardous chemical</b>        | No                     |

**SECTION 16: OTHER INFORMATION**

All information in this SDS was obtained from sources we believe are reliable. HOWEVER, THE INFORMATION AND RECOMMENDATIONS ARE PRESENTED WITHOUT WARRANTY, REPRESENTATION OR LICENSE OF ANY KIND, EXPRESS OR IMPLIED, WITH RESPECT TO THEIR ACCURACY, CORRECTNESS OR COMPLETENESS, AND THE SELLER, SUPPLIER AND MANUFACTURER OF THE MATERIAL AND THEIR RESPECTIVE AFFILIATES (COLLECTIVELY, THE "SUPPLIER") DISCLAIM ALL LIABILITY FOR RELIANCE ON SUCH INFORMATION AND RECOMMENDATIONS. This SDS is not a guarantee of safety. A buyer or user of the Material (a "Recipient") is responsible for ensuring that it has all current information necessary to safely use the Material for its specific purpose. FURTHERMORE, THE RECIPIENT ASSUMES ALL RISK IN CONNECTION WITH THE USE OF THE MATERIAL. THE RECIPIENT ASSUMES ALL RESPONSIBILITY FOR ENSURING THE MATERIAL IS USED IN A SAFE MANNER IN COMPLIANCE WITH APPLICABLE ENVIRONMENTAL, HEALTH, SAFETY AND SECURITY LAWS, POLICIES AND GUIDELINES. THE SUPPLIER DOES NOT WARRANT THE MERCHANTABILITY OF THE MATERIAL OR THE FITNESS OF THE MATERIAL FOR ANY PARTICULAR USE AND ASSUMES NO RESPONSIBILITY FOR INJURY OR DAMAGE CAUSED DIRECTLY OR INDIRECTLY BY OR RELATED TO THE USE OF THE MATERIAL.