Section I  Product Identification and Use

Manufacturer:                     For More Information Call
EM SCIENCE                        856-423-6300 Technical Service
A Division of EM Industries       Monday - Friday; 8:00 AM to 5:00 PM
P.O. Box 70                     In Case of Emergency Call
480 Democrat Road                 800-424-9300 CHEMTREC (USA)
Gibbstown, N.J. 08027             416-201-6383 CANUTEC (Canada)
24 Hours/Day: 7 Days/Week

Product Name: Manganous nitrate solution
Product Code(s): B29143,
Chemical Name/Other Name: Manganous nitrate solution
Chemical Formula: Mn(NO_3)_2·6H_2O, H_2O
Chemical Family: Inorganic salt solution
TDG Shipping Name/UN: Manganese nitrate UN 2724
TDG Classification/Packing group: 5.1 PG III
Use: Laboratory reagent, industrial processes

Section II Hazardous Ingredients

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manganous nitrate</td>
<td>17141-63-8</td>
<td>50</td>
</tr>
</tbody>
</table>

Section III Physical Data

Physical State: Liquid
Appearance and Odour: Pink solution; odourless
Odour Threshold: Not applicable
Specific Gravity: 1.36
Vapour Pressure: Not available
Vapour Density: Not available
Evaporation Rate: Not available
Boiling Point: Not available
Freezing Point: Not available
pH: Slightly acidic
Coefficient of water/oil distribution: Not available

Section IV Fire or Explosion Hazard

Conditions of Flammability: Noncombustible
Extinguishing Media: Water spray
Flash point / method: Not applicable
UEL: Not applicable
LEL: Not applicable
Autoignition Temperature: Not applicable
Hazardous Combustion Products: NOx
Explosion data - sensitivity to mechanical impact: No
- sensitivity to static discharge: No

Section V Reactivity Data

Conditions of instability: Normally stable
Incompatibilities: Reducing agents, urea, combustibles materials such as wood, or organic materials, metal such as iron, copper and their alloys.
Conditions of reactivity: Normally stable
Hazardous decomposition products: NOx

Section VI Toxicological Properties / Health Hazard Data

Route of entry:
- skin contact: Irritates
- skin absorption: Harmful
- eye contact: Irritates
- inhalation: Harmful
- ingestion: Harmful

LC50: Not available
LD50: Not available

Exposure Limits: TLV: 5 mg/m³ as Mn

Effects of Acute Exposure: Inhalation of mist may cause CNS effects, such as sleepiness, weakness in legs and languor which is oppressive stillness of air. Eye and skin contact may result in irritation.

Effects of Chronic Exposure: Chronic ingestion may cause irritation, headaches, dermatitis, liver enlargement followed by a progressive deterioration similar to Parkinsonian syndrome.

Irritancy: No experimental information available
Sensitization to Product: No information available
Carcinogenicity: No information available
Reproductive Toxicity: No information available
Teratogenicity: No information available
Mutagenicity: No information available
Toxicologically Synergistic Products: None found

Section VII First aid measures

Skin: Flush the contact area with lukewarm running water for at least 15 minutes. Remove contaminated clothing, taking care not to spread the chemical. If contamination is extensive, remove clothing under running water. Discard or decontaminate clothing under running water. Discard or decontaminate clothing before use. Unless contact has been slight, seek medical attention. Seek medical attention if irritation persists.

Eye: Flush the contaminated eye(s) for at least 15 minutes with lukewarm running water, holding the eyelids open. Take care not to rinse contaminated water into the non-affected eye. Always seek medical attention for accidents involving the eyes.
Inhalation: Take proper precautions to ensure your own safety before attempting rescue. Remove source of contamination or move victim to fresh air. If breathing has stopped, trained personnel should begin artificial respiration, or if the heart has stopped, cardiopulmonary resuscitation (CPR) immediately. Seek medical attention.

Ingestion: Never give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. Rinse mouth thoroughly with water. If conscious, induce vomiting. Have victim drink 200-400 ml of water to dilute. If breathing has stopped, trained personnel should begin artificial respiration, or if the heart has stopped, cardiopulmonary resuscitation (CPR) immediately. Seek medical attention.

Section VIII Preventive Measures

Engineering Controls: Engineering control methods to reduce hazardous exposures are preferred. Methods include mechanical ventilation (dilution and local exhaust), process or personnel enclosure, control of process conditions, and process modification. Administrative controls and personal protective equipment may also be required.

Personal protective equipment:
- gloves: Rubber, plastic
- respiratory protection: Fumehood
- eye protection: Chemical safety goggles
- clothing: Plastic apron, sleeves and boots as appropriate

Storage Requirements: Store in suitable labelled containers. Keep containers tightly closed when not in use and when empty. Protect from damage. Store in a cool, dry, well-ventilated area, out of direct sunlight. Store away from incompatible materials.

Handling Procedures and Equipment: Follow routine safe handling procedures.

Leak or Spill Clean-up: Before dealing with spillages take necessary protective measures, inform others to keep at a safe distance and, for flammable materials, shut off all possible sources of ignition. Mix with wet sand, transfer to container and arrange removal by disposal company. As contact with any oxidant can render organic matter (paper, wood, textiles) dangerously combustible, wash area of spillage and contaminated clothing thoroughly with water.

Disposal: Follow all federal, provincial and local regulations for disposal. Use only licensed disposal and waste hauling companies. Disposal of small amounts of spilled material may be handled as described under "Leak or Spill Cleanup". Large spills must be dealt with separately and must be handled by qualified disposal companies.

Special Shipping Information: Follow all TDG regulations and see classification in Section I

Section IX Preparation Information

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(416) 255-8521

For questions contact: Regulatory Affairs Department, EM Science
Gibbstown, NJ
(856) 423-6300
Date: MAY 17, 1989

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WHMIS Classification: C, D2B

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