1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER: EM SCIENCE
A DIVISION OF EM INDUSTRIES
P.O. BOX 70
GIBBSTOWN, N.J. 08027

PREPARATION DATE: 12/09/92
DATE MSDS PRINTED: DEC 21, 1992

INFORMATION PHONE NUMBER: 609-354-9200
HOURS: MON. TO FRI. 8:30-5
CHEMTREC EMERGENCY NUMBER: 800-424-9300
HOURS: 24 HRS A DAY

CATALOG NUMBER(S):
MX0070   MX0078   MX0080   MX0208

CHEMICAL NAME: MAGNESIUM SULFATE
TRADE NAME: EPSOM SALTS
CHEMICAL FAMILY: INORGANIC SALT
FORMULA: 1000 PPM DA IN SOLUTION

MOLECULAR WEIGHT: 246.5

2. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>CAS #</th>
<th>APPR %</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAGNESIUM SULFATE</td>
<td>10034-99-8</td>
<td>100%</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
HANDLING CARE GENERALLY IN KEEPING WITH SAFE LABORATORY PRACTICES IS RECOMMENDED.

APPEARANCE:
WHITE ODORLESS CRYSTALS

POTENTIAL HEALTH EFFECTS (ACUTE AND CHRONIC)

SYMPTOMS OF EXPOSURE:
DUST INHALATION MAY IRRITATE UPPER RESPIRATORY PASSAGES.
MEDICAL CONDITION AGGRAVATED BY EXPOSURE:
DATA NOT AVAILABLE.

ROUTES OF ENTRY:
INHALATION, INGESTION

CARCINOGENICITY:
The material is not listed (IARC, NTP, OSHA) as cancer causing agent.

4. FIRST AID MEASURES

EMERGENCY FIRST AID:
GET MEDICAL ASSISTANCE FOR ALL CASES OF OVEREXPOSURE.
SKIN: WASH THOROUGHLY WITH SOAP AND WATER.
EYES: IMMEDIATELY FLUSH THOROUGHLY WITH WATER FOR AT LEAST 15
MINUTES.
DUST INHALATION: REMOVE TO FRESH AIR.
INGESTION: GET IMMEDIATE MEDICAL ATTENTION; IF CONSCIOUS, GIVE
WATER FREELY.

5. FIRE FIGHTING MEASURES

FLASH POINT (F): NONCOMBUSTIBLE
FLAMMABLE LIMITS LEL (%): N/A
FLAMMABLE LIMITS UEL (%): N/A
EXTINGUISHING MEDIA:
USE ANY SUITABLE FOR ADJACENT MATERIAL.

FIRE FIGHTING PROCEDURES:
WEAR SELF-CONTAINED BREATHING APPARATUS.

FIRE & EXPLOSION HAZARDS:
THERMAL DECOMPOSITION PRODUCES TOXIC FUMES.

6. ACCIDENTAL RELEASE MEASURES

SPILL RESPONSE:
EVACUATE THE AREA OF ALL UNNECESSARY PERSONNEL.
WEAR SUITABLE PROTECTIVE EQUIPMENT LISTED UNDER EXPOSURE /
PERSONAL PROTECTION.
ELIMINATE ANY IGNITION SOURCES UNTIL THE AREA IS DETERMINED TO BE
FREE FROM EXPLOSION OR FIRE HAZARDS.
CONTAIN THE RELEASE AND ELIMINATE ITS SOURCE, IF THIS CAN BE DONE
WITHOUT RISK.
TAKE UP AND CONTAINERIZE FOR PROPER DISPOSAL AS DESCRIBED UNDER
DISPOSAL.
COMPLY WITH FEDERAL, STATE, AND LOCAL REGULATIONS ON REPORTING
RELEASES. REFER TO REGULATORY INFORMATION FOR REPORTABLE
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7. HANDLING AND STORAGE

HANDLING & STORAGE:
KEEP CONTAINER CLOSED.
STORE AT CONTROLLED ROOM TEMPERATURE.
DO NOT BREATHE DUST.
DO NOT GET IN EYES.
AVOID PROLONGED, OR REPEATED, SKIN CONTACT.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS AND PERSONAL PROTECTIVE EQUIPMENT:

VENTILATION, RESPIRATORY PROTECTION, PROTECTIVE CLOTHING, EYE PROTECTION
MATERIAL SHOULD BE HANDLED OR TRANSFERRED IN AN APPROVED FUME
HOOD OR WITH ADEQUATE VENTILATION.
PROTECTIVE GLOVES (NEOPRENE, PVC OR EQUIVALENT) SHOULD BE WORN TO
PREVENT SKIN CONTACT.
SAFETY GLASSES WITH SIDE SHIELDS SHOULD BE WORN AT ALL TIMES.

WORK / HYGENIC PRACTICES:
WASH THOROUGHLY AFTER HANDLING.
DO NOT TAKE INTERNALLY.
EYE WASH AND SAFETY EQUIPMENT SHOULD BE READILY AVAILABLE.

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EXPOSURE GUIDELINES

OSHA - PEL:

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>TWA</th>
<th>MG/M³</th>
<th>STEL</th>
<th>MG/M³</th>
<th>CL</th>
<th>MG/M³</th>
<th>SKIN</th>
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ACGIH - TLV:

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<th>MG/M³</th>
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9. PHYSICAL AND CHEMICAL PROPERTIES

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10. STABILITY AND REACTIVITY

STABILITY: YES

HAZARDOUS POLYMERIZATION:
DOES NOT OCCUR

HAZARDOUS DECOMPOSITION:
SOX

CONDITIONS TO AVOID:
EXTREME HEAT

MATERIALS TO AVOID:
( )WATER
( )ACIDS
( )BASES
( )CORROSIVES
( )OXIDIZERS
( )OTHER:
NONE INDICATED

11. TOXICOLOGICAL INFORMATION

TOXICITY DATA:

ORL-MAN TDL0: 183 MG/KG/4H-1

TOXICOLOGICAL FINDINGS:
NONE
CITED IN REGISTRY OF TOXIC EFFECTS OF SUBSTANCES (RTECS)

12. DISPOSAL CONSIDERATIONS

EPA WASTE NUMBERS:
TREATMENT:

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MATERIAL DOES NOT HAVE AN EPA WASTE NUMBER AND IS NOT A LISTED WASTE; HOWEVER CONSULTATION WITH A PERMITTED WASTE DISPOSAL SITE (TSD) SHOULD BE ACCOMPLISHED. ALWAYS CONTACT A PERMITTED WASTE DISPOSER (TSD) TO ASSURE COMPLIANCE WITH ALL CURRENT LOCAL, STATE AND FEDERAL REGULATIONS.

13. TRANSPORT INFORMATION

DOT PROPER SHIPPING NAME...: NON-REGULATED

DOT ID NUMBER..............: NONE

14. REGULATORY INFORMATION

TSCA INVENTORY.............:
THIS PRODUCT IS A "MIXTURE". THE CAS NUMBERS OF ALL COMPONENTS ARE LISTED ON THE TSCA INVENTORY.

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>SARA EHS (302)</th>
<th>SARA EHS TPQ (LBS)</th>
<th>CERCLA RQ (LBS)</th>
</tr>
</thead>
<tbody>
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<tr>
<th>COMPONENT</th>
<th>OSHA FLOOR LIST</th>
<th>SARA 313</th>
<th>DEMINIMIS FOR SARA 313 (%)</th>
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15. OTHER INFORMATION

COMMENTS:
NONE

NFPA HAZARD RATINGS:
HEALTH : 2
FLAMMABILITY : 0
REACTIVITY : 0
SPECIAL HAZARDS :

REVISION HISTORY:
03/01/82  10/23/86  10/27/87  03/01/91
- = REVISED SECTION

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N/A = NOT AVAILABLE
N/E = NONE ESTABLISHED

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