PHOSPHORIC ACID LIQUID

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS Name: PHOSPHORIC ACID LIQUID
Manufacturer Name: FISHER SCIENTIFIC CO CHEMICAL DIV.
Address:
   1 REAGENT LANE
   City: FAIR LAWN
   State: NJ
   Zip: 07410
   Country: US
Business Phone: 201-796-7100
For information in North America, call: 201-796-7100
Health Phone: 201-796-7100 OR 201-796-7523
Manufacturer MSDS Creation Date:
   02/11/1994

SECTION 2: COMPOSITION, INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS#</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHOSPHORIC ACID (SARA III)</td>
<td>7664-38-2</td>
<td>85.0</td>
</tr>
</tbody>
</table>

RTECS:
TB6300000

OSHA PEL TWA: 1 MG/M3/3 STEL
ACGIH TLV TWA: 1 MG/M3/3 STEL; 9192
ACGIH STEL/Ceiling: N/P
Comments:
Other REC Limits: NONE SPECIFIED ; EPA Rpt Qty: 5000 LBS ; DOT Rpt Qty: 5000 LBS ; Ozone Depleting Chemical: N ;

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS#</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>WATER</td>
<td>7732-18-5</td>
<td>15</td>
</tr>
</tbody>
</table>

RTECS:
2C0110000

OSHA PEL TWA: NOT ESTABLISHED
ACGIH TLV TWA: NOT ESTABLISHED
ACGIH STEL/Ceiling: N/P
Comments:
Other REC Limits: NONE SPECIFIED ; Ozone Depleting Chemical: N ;

SECTION 3: HAZARDS IDENTIFICATION

Applies to all Ingredients:
Route of Exposure:
Inhalation: YES Skin: YES Ingestion: YES

Potential Health Effects:
MAY CAUSE RESPIRATORY TRACT IRRITATION, MUCOUS MEMBRANES BURNS, CENTRAL NERVOUS SYSTEM EFFECTS, SKIN BURNS, EYE BURNS, CIRCUMORAL BURNS WITH DISCOLORATION AND CORROSION OF THE MUCOUS MEMBRANES OF THE MOUTH, THROAT AND ESOPHAGUS. ASPIRATIONHAZARD.

Carcinogenicity:
THIS COMPOUND CONTAINS NO INGREDIENTS AT CONCENTRATIONS OF 0.1% OR GREATER THAT ARE CARCINOGENS OR SUSPECT CARCINOGENS.

OSHA Designation: NO
NTP Designation: NO
IARC Designation: NO

Signs/Symptoms:
RESPIRATORY TRACT IRRITATION, COUGHING, CHOKING, DIZZINESS, HEADACHE, NAUSEA, WEAKNESS, PULMONARY EDEMA, TIGHTNESS IN CHEST, ERROSION OF TEETH, SKIN BURNS, EYE BURNS, LACRIMATION, PHOTOPHOBIA, DISCOLO RATION AND CORROSION OF THE MUCOUS MEMBRANES OF THE MOUTH, THROAT AND ESOPHAGUS, UNCONSCIOUSNESS, COMA, DEATH.

Aggravation of Pre-Existing Conditions:
NONE SPECIFIED BY MANUFACTURER.

LD 50 LC 50 Mixture
ORAL LD50 (RAT) = 1530 MG/KG

SECTION 4 : FIRST AID MEASURES

First Aid
INHALATION: REMOVE FROM EXPOSURE. RESTORE BREATHING. KEEP WARM AND QUIET. GET MEDICAL ATTENTION. SKIN: WASH AFFECTED AREA THOROUGHLY WITH SOAP AND WATER. IF IRRITATION PERSISTS, GET MEDICAL ATTENTION. EYES: FLUSH WITH LARGE AMOUNTS OF WATER FOR 15 MINUTES. GET MEDICAL ATTENTION. INGESTION: DO NOT INDUCE VOMITING. DILUTE IMMEDIATELY BY DRINKING WATER OR MILK. CALL PHYSICIAN. TREAT FOR SHOCK.

SECTION 5 : FIRE FIGHTING MEASURES

Flash Point:
NONFLAMMABLE
Flash Point Method:
N/P
Upper Flammable or Explosive Limit: NOT GIVEN
Lower Flammable or Explosive Limit: NOT GIVEN
Auto Ignition Temperature: N/A
Extinguishing Media:
DRY CHEMICAL, CARBON DIOXIDE, WATER SPRAY OR REGULAR FOAM
Fire Fighting Instructions:
MOVE CONTAINER FROM FIRE AREA IF CAN DO SO WITHOUT RISK. APPLY COOLING WATER TO SIDES OF CONTAINERS THAT ARE EXPOSED TO FLAMES UNTIL WELL AFTER FIRE IS EXTINGUISHED.
OUT.
Unusual Fire Hazards:
AVOID BREATHING CORROSIVE VAPORS. KEEP UPWIND. STAY AWAY FROM ENDS OF TANKS.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

Leak Response:
DO NOT TOUCH SPILLED MATERIAL. STOP LEAK IF CAN DO SO WITHOUT RISK. TAKE UP WITH SAND OR OTHER ABSORBENT MATERIAL AND PLACE INTO CONTAINERS FOR DISPOSAL. RQ = 5000 POUNDS

Other Precautions:
STORE AWAY FROM INCOMPATIBLE SUBSTANCES. MAY BURN BUT DOES NOT IGNITE READILY. FLAMMABLE, POISONOUS GASES MAY ACCUMULATE IN TANKS AND HOPPER CARS. MAY IGNITE COMBUSTIBLES (WOOD, PAPER, OIL, ETC.)

Neutralizing Agent
AGRICULTURAL LIME, SLAKED LIME, CRUSHED LIMESTONE OR SODIUM BICARBONATE.

SECTION 7 : HANDLING and STORAGE

Handling:
PROTECT AGAINST PHYSICAL DAMAGE. STORE IN COOL, DRY, WELL VENTILATED PLACE, AWAY FROM ANY AREA WHERE THE FIRE HAZARD MAY BE ACUTE.

SECTION 8 : EXPOSURE CONTROLS, PERSONAL PROTECTION

Ventilation System:
PROVIDE LOCAL EXHAUST VENTILATION SYSTEM TO MEET PUBLISHED EXPOSURE LIMITS.

Hand Protection Description:
RECOMMENDED

Eye/Face Protection:
SPASH PROOF GOGGLES

Respiratory Protection:
IF VENTILATION DOES NOT MAINTAIN INHALATION EXPOSURES BELOW PEL (TLV), USE NIOSH/MSHA APPROVED RESPIRATOR AS PER CURRENT 29 CFR 1910.134, INSTRUCTIONS/WARNINGS AND NIOSH RESPIRATOR SELECTION.

Other Protective:
EYE WASH FOUNTAIN, QUICK DRENCH SHOWER IN IMMEDIATE WORK AREA.

Other:
REMOVE CONTAMINATED CLOTHING, SHOES IMMEDIATELY.

Work Hygienic Practices
WASH WITH SOAP AND WATER AFTER HANDLING PRODUCT AND BEFORE EATING DRINKING OR SMOKING.

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

Physical State/Appearance:
ODORLESS, COLORLESS SYRUPY LIQUID

http://65.170.37.129:81/3888.html 12/16/02
pH:
  1.5
Decomposition Temperature:
  UNKNOWN
Vapor Pressure:
  2.2
Vapor Density:
  NOT GIVEN
Boiling Point:
  316F,158C
Melting Point:
  70.0F,21.1C
Solubility In Water:
  COMPLETE
Specific Gravity:
  1.685
Evaporation Point:
  NOT GIVEN
Percent Volatile:
  N/K
Viscosity:
  N/P
Other:
  Corrosion Rate: UNKNOWN

HCC
  C1

SECTION 10 : STABILITY AND REACTIVITY

Chemical Stability:
  YES
Conditions to Avoid:
  REACTS MILDLY WITH WATER AND EVOLVES HEAT.
Incompatibilities with Other Materials:
  BASES, CHLORIDES, STAINLESS STEEL, FERROUS METALS AND ALLOYS, GRANITE, METALS,
  NITROMETHANE, PLASTICS, RUBBER, PORCELAIN
Hazardous Polymerization:
  NO
Hazardous Decomposition Products:
  TOXIC OXIDES OF PHOSPHORUS

Conditions To Avoid Polymerization
  NONE. WILL NOT OCCUR.

SECTION 11 : TOXICOLOGICAL INFORMATION

Toxicological Paragraph:
  N/P
SECTION 12 : ECOLOGICAL INFORMATION

Ecological Paragraph:
N/P

SECTION 13 : DISPOSAL CONSIDERATIONS

Waste Disposal:
PREVENT WASTE FROM CONTAMINATING SURROUNDING ENVIRONMENT. DISCARD ANY PRODUCT, RESIDUE, DISPOSAL CONTAINER OR LINER IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.

SECTION 14 : TRANSPORT INFORMATION

Transportation Information:
N/P

SECTION 15 : REGULATORY INFORMATION

Applies to all ingredients:
SARA:
N/P
US Federal:
N/P
State:
N/P

SECTION 16 : ADDITIONAL INFORMATION

MSDS Author:
N/P
Disclaimers:
Please note that although the information, opinions and recommendations contained in these Material Safety Data Sheets are compiled from sources believed to be reliable, we accept no responsibility for the accuracy, sufficiency, or reliability or for any loss or injury resulting from the use of the information. Newly discovered hazards are frequent and this information may not be completely up to date.

Other Information
N/P

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