

MALLINCKRODT BAKER INC -- PHOSPHORIC ACID, 0260 -- 6810-00-300-6121

=====
Product Identification
=====

Product ID:PHOSPHORIC ACID, 0260
MSDS Date:06/30/1998
FSC:6810
NIIN:00-300-6121
Status Code:A
MSDS Number: CJQTT
=== Responsible Party ===
Company Name:MALLINCKRODT BAKER INC
Address:222 RED SCHOOL LANE
City:PHILLIPSBURG
State:NJ
ZIP:08865
Country:US
Info Phone Num:800-582-2537
Emergency Phone Nu
m:908-859-2151
Chemtrec Ind/Phone:(800)424-9300
CAGE:70829
=== Contractor Identification ===
Company Name:MALLINCKRODT BAKER, INC.
Address:222 RED SCHOOL LANE
Box:City:PHILLIPSBURG
State:NJ
ZIP:08865
Country:US
Phone:800-582-2537
CAGE:70829

=====
Composition/Information on Ingredients
=====

Ingred Name:PHOSPHORIC ACID
CAS:7664-38-2
RTECS #:TB6300000
Minumum % Wt:74.
Maxumum % Wt:95.
OSHA PEL:1 MG/M3
ACGIH TLV:1 MG/M3
ACGIH STEL:3 MG/M3
EPA Rpt Qty:5000 LBS
DOT Rpt Qty:5000 L

BS

Ingred Name:WATER
CAS:7732-18-5
RTECS #:ZC0110000
Minumum % Wt:5.
Maxumum % Wt:26.

=====
===== Hazards Identification =====
=====

Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:ACUTE: INHALATION: IS NOT AN EXPECTED
HAZARD UNLESS MISTED OR HEATED TO HIGH TEMPERATURES. MIST OR VAPOR
INHALATION CAN CAUSE IRRITATON TO THE NOSE, THROAT, AND UPPER
RESPIRATORY TRACT. S
EVERE EXPOSUR ES CAN LEAD TO CHEMICAL
PNEUMONITIS. INGESTION: CORROSIVE. MAY CAUSE SORE THROAT, ABDOMINAL
PAIN, NAUSEA, AND SEVERE BURNS OF THE MOUTH, THROAT, AND STOMACH.
SEVERE EXPOSURES CAN LEAD TO SHOCK, CIRCUL ATORY COLLAPSE, AND
DEATH. SKIN CONT: CORROSIVE. MAY CAUSE REDNESS, PAIN, AND SEVERE
SKIN BURNS. EYE CONT: CORROSIVE. MAY CAUSE REDNESS, PAIN, BLURRED
VISION, EYE BURNS, AND (EFTS OF OVEREXP)
Effects of Overexposure:HLTH HAZS: PERMANENT EYE DAMAGE. CHRONIC: NO
INFORMATION FOUND.
Medical Cond Aggravated by Exposure:PERSONS WITH PRE EXISITING SKIN
DISORDERS OR EYE PROBLEMS, OR IMPAIRED RESPIRATORY FUNCTION MAY BE
MORE SUSCEPTIBLE TO THE EFFECTS OF THE SUBSTANCE.

=====
===== First Aid Measures =====
=====

First Aid:INHAL: REMOVE TO FRESH AIR. IF NOT BRTHG, GIVE ARTF RESP. IF
BRTHG IS DFCLT, GIVE OXYG. CALL PHYS IMMED. INGEST: DO NOT INDUCE
VOMIT. GIVE LG QTYS OF WATER. NEVER GIVE ANYTHING BY MOUTH TO UNCON
PERSO N. GET MED ATTN IMMED. SKIN CONT: IMMED FLUSH W/PLENTY OF
WATER FOR AT LST 15 MINS WHILE REMOVING CONTAMD CLTHG & SHOES. CALL
PHYS IMMED. WASH CLTHG BEFORE REUSE. EYE CONT: IMMED FLUSH W/GENTLE
BUT LG STREAM OF WATER FOR AT LST 15 MINS, LIFTING LOWER & UPPER
EYELIDS OCCASIONALLY. CALL PHYS IMMED.

=====
===== Fire Fighting Measures =====
=====

Extinguishing Media:FIRE: NOT CONSIDERED TO BE FIRE HAZARD. CONTACT
WITH MOST METALS CAUSES FORMATIO

N OF FLAMM AND EXPLOSIVE HYDROGEN

GAS. USE ANY MEDIA SUITABLE FOR EXTINGUISHING SURROUNDING FIRE.

Fire Fighting Procedures:USE NIOSH APPROVED SCBA AND FULL PROTECTIVE EQUIPMENT . WATER SPRAY MAY BE USED TO KEEP FIRE EXPOSED CONTAINERS COOL. IF WATER IS USED, USE IN ABUNDANCE TO CONTROL HEAT AND ACID BUILD-UP.

Unusual Fire/Explosion Hazard:NOT CONSIDERED TO BE AN EXPLOSION HAZARD.

===== Accidental Release Measures =====

Spill Release Procedures:VENTIL

ATE AREA OF LEAK/SPILL. WEAR APPROP

PERSONAL PROT EQUIP AS SPECIFIED IN EXPOSURE CONTROLS/PERSONAL PROT SECTION. ISOLATE HAZARD. KEEP UNNEC & UNPROTECTED PERS FROM ENTERING. CNTN & RECOVER LIQ W HEN POSS. NEUT W/ALKALINE MATL (SODA ASH LIME) THEN ABSORB W/INERT MATL (E.G. VERMICULITE, DRY SAND, EARTH), & PLACE IN CHEM WASTE CNTNR. DO NOT USE COMBUST MATLS, (SUPDAT)

Neutralizing Agent:J.J. BAKER NEUTRASORB(TM) OR TEAM(TM) 'LOW NA+' ACID NEUTRALIZERS ARE RECOMMENDED FOR SPILLS OF THIS PRODUCT.

===== Handling and Storage =====

Handling and Storage Precautions:KEEP IN TIGHTLY CLSD CNTNR. PROTECT FROM PHYSICAL DMG. STORE IN COO, DRY, VENTILATED AREA AWAY FROM SOURCES OF HEAT,MOISTURE, INCOMPATIBILITIES, & DIRECT SUNLIGHT. CORR! MILD STEEL. STORE IN RUBB LINE D/316 STAINLESS STEEL DESIGNED FOR PHOSPHORIC ACID. DO NOT WASH OUT CNTNR & USE FOR OTHER PURPOSES.

Other Precautions:WHEN DILUTING, ACID SHOULD ALWAYS BE ADDED SLOWLY TO

WATER & IN SM AMTS. NEVER USE HOT WATER & NEVER ADD WATER TO ACID. WATER ADDED TO ACID CAN CAUSE UNCONTROLLED BOILING & SPLASHING. PROTECT FROM FRE EZING. CNTNRS OF MATL MAY BE HAZ WHEN EMPTY SINCE THEY RETAIN PROD RESIDUES(VAPS, LIQ): OSBSERVE ALL (OTHER INFO)

===== Exposure Controls/Personal Protection =====

Respiratory Protection:IF EXPOS LIMIT IS EXCEEDED, A NIOSH APPRVD FULL FACEPIECE RESP W/HIGH EFFICIENCY DUST/MIST FILTER MAY B

E WORN UP TO

50 TIMES EXPOS LIMIT/MAX USE CONC SPECIFIED BY APPROP REGULATORY AGENCY/RESP SUPPLIE R, WHICHEVER IS LOWEST. FOR EMER/INSTANCES WHERE EXPOS LEVELS ARE NOT KNOWN, USE NIOSH APPRVD FULL-FACEPIECE POS-PRESS AIR-SUPPLIED RESP. WARNING: (OTHER INFO)

Ventilation:SYS OF LOC AND/OR GEN EXHST IS REC TO KEEP EMPLOYEE EXPOS BELOW AIRBORNE EXPOS LIMITS. LOC EXHST VENT IS GENERALLY PREF (OTHER INFO)

Protective Gloves:IMPERVIOUS GLOVES.

Eye Protection:ANSI APPROVED CHEMICAL WORKERS GOGGLES .

Other Protective Equipment:ANSI APPROVED EYE WASH & DELUGE SHOWER . WEAR IMPERVIOUS CLTHG, INCL BOOTS, LAB COAT, APRON OR COVERALLS, AS APPROP TO PVNT SKIN CONT.

Work Hygienic Practices:WASH CLOTHING BEFORE REUSE. WASH THOROUGHLY AFTER HANDLING.

Supplemental Safety and Health

SPILL PROC: SUCH AS SAW DUST. DO NOT FLUSH TO SEWER. US REGS (CERCLA) REQ RPTG SPILLS & RELEASES TO SOIL, WATER & AIR IN EXCESS OF REPORTABLE QTYS. TOLL FREE NUMBER FOR US COAST GUARD

NATL RESPONSE

CT R IS (800)424-8802. WASTE DISP METH: & UNUSED CONTENTS I/A/W FED, STATE & LOC REQUIREMENTS. PH: 1.5(0.1 N AQUEOUS SOLN).

=====
===== Physical/Chemical Properties =====

Boiling Pt:=158.C, 316.4F

Melt/Freeze Pt:=21.C, 69.8F

Vapor Pres:0.03 @ 20C

Vapor Density:3.4

Spec Gravity:1.69 @ 25C

pH:SUPDAT

Evaporation Rate & Reference:NO INFORMATION FOUND

Solubility in Water:MISCIBLE

Appearance and Odor:CLEAR, COLORLESS SYRUPY LIQUID. ODORLESS.

Percent Vo

latiles by Volume:100 @ 21C

=====
===== Stability and Reactivity Data =====

Stability Indicator/Materials to Avoid:YES

LIBERATES EXPLO HYDROGEN GAS WHEN REACTING W/CHLORIDES & STAINLESS STEEL. CAN REACT VIOLENTLY W/SODIUM TETRAHYDROBORATE. EXOTHERMIC RXNS W/ALDEHYDES, AMINES, AMIDES, ALCOHOLS & GLYCOLS, AZO-CMPDS, CARBAMATES, ESTERS, CAUSTI

Stability Condition to Avoid:STABLE UNDER ORDINARY CNDTNS OF USE & STORAGE. SUBSTANCE CAN SUPERCOOL WITHOUT CRYSTALLIZI

NG.

INCOMPATIBILITIES.

Hazardous Decomposition Products:PHOSPHORUS OXIDES MAY FORM WHEN HEATED TO DECOMPOSITION.

===== Toxicological Information =====

Toxicological Information:ORAL RAT LD50: 1530 MG/KG: INVESTIGATED AS A MUTAGEN. OTHER INFO: IT ALSO FORMS TOXIC FUMES WITH EYANIDES, SULFIDE, FLUORIDES, ORGANIC PEROXIDES AND HALOGENATED ORGANICS. MIXTURES WITH NITROMETHANE AR E EXPOLOSIVE.

===== Ecological Information =====
=====

Ecological:ENVIRONMENTAL FATE: WHEN RELEASED INTO SOIL, THIS MATL MAY LEACH INTO GROUNDWATER. WHEN RELEASED TO WATER, ACIDS MAY BE READILY REDICED BY NATURAL WATER HARDNESS MINERALS. THE PHOSPHATE, HOWEVER, MAY PERSIST INDEFINITELY. ENVIRONMENTAL TOX: NO INFORMATION FOUND.

===== Disposal Considerations =====

Waste Disposal Methods:WHATEVER CANNOT BE SAVED FOR RECOVERY/RECYCLING SHOULD BE HNDLD AS HAZ WASTE & SENT TO RCRA APPRVD INCIN/DISPOSED IN RCRA APPRVD WASTE FACILITY. PROCESSING, USE/CONTAM OF PROD MAY CHANGE WASTE MANAGEM ENT OPTIONS. STATE & LOC DISP REGS MAY DIFFER FROM FED DISP REGS. DISPOSE OF CNTNR (SUPDAT)

===== MSDS Transport Information =====

Transport Information:DOMESTIC (LAND, D.O.T.). PROPER SHIPPING NAME: PHOSPHORIC ACID. HAZARD CLASS: 8. UN/NA: UN;805. PACKING GROUP: III. INFORMATION REPORTED FOR PRODUCT/SIZE: 355LB. INTERNATIONAL (WATER, I.M. O.). PROPER SHIPPING NAME: PHOSPHORIC ACID. LIQUID. HAZARD CLASS: 8. UN/NA: UN850. PACKING GROUP: III. INFORMATION REPORTED FOR PRODUCT/SIZE: 355LB.

===== Regulatory Information =====

SARA Title III Information:FED, STATE & INTERNATION REGS - PART 1. INGRED: PHOSPHORIC ACID(7664-38-2). SARA 302 - RQ, NO, TPO-NO, SARA 313- LIST-YES, CHEM CATG-NO. INGRED: WATER(7732-18-5). SARA 302-RQ-NO, TPO-NO, SARA 313-LIS T-NO, CHEMICAL CATG-NO. CHEMIC

AL

WEAPONS CONVENTION: NO. TSCA 12(B): NO. CDTA: NO. SARA 311/312:
ACUTE: YES. CHRONIC: NO. FIRE: NO. PRESSURE: NO. REACTIVITY: NO.
(PURE/LIQUID).

Federal Regulatory Information:CHEM INVENTORY STATUS-PART 1. INGRED:
PHOSPHORIC ACID(7664-38-2). TSCA-YES, EC-YES, JAPAN-YES,
AUSTRALIA-YES. INGRED: WATER(7732-18-5). TSCA-YES, EC-YES,
JAPAN-YES, AUSTRALIA-YES. CHEM INVENTORY STATU S-PART 2. INGRED:
PHOSPHORIC ACID(7664-38-2). CANADA - KOREA-YES, DSL-YES, NDSL-NO,
PHIL-

YES. INGRED: WATER (7732-18-5). KOREA-YES, DSL-YES, NDSL-NO,
PHIL-YES. FED, STATE & INTERNATION REGS-PART 2. IN GRED: PHOSPHORIC
ACID(7664-38-2). CERCLA-5000, RCRA 261.33-NO, TSCA-8(D)-NO. INGRED:
WATER(7732-18-5). CERCLA-NO, RCRA 261.33-NO, TSCA-8(D)-NO.

State Regulatory Information:AUSTRALIAN HAZCHEM CODE: 2R. POISON
SCHEDULE S5. WHMIS: THIS MSDS HAS BEEN PREPARED ACCORD TO HAZ
CRITERIA OF CONTROLLED PRODS REGS (CPR) & MSDS CNTNS ALL OF INFO
REQD BY CPR. OTHER INFO: NF

PA RATINGS : HLTH: 3. FLAMM: 0.

REACTIVITY:0. LBL HAZ WARNING: DANGER! CORR. CAUSES SEV IRRIT &
BURNS TO EVERY AREA OF CONT. HARMFUL IF SWALLOWED/INHALED. LABEL
PRECAUTIONS: DO NOT GET IN EYES, ON SKIN/ON CLTHG. KEEP CNTNR
CLSD. USE ONLY W/ADEQ VENT. DO NOT BREATH VAP/MIST.

===== Other Information =====

Disclaimer (provided with this information by the compiling agencies):

This information is formulated for use by elements of the Department

of

Defense. The United States of America in no manner whatsoever,
expressly or implied, warrants this information to be accurate and
disclaims all liability for its use. Any person utilizing this
document should seek competent professional advice to verify and
assume responsibility for the suitability of this information to their
particular situation.