

DR-0016-2210

PHOSPHORIC ACID (75-85% AQUEOUS SOLUTIONS)

REPT 2

LATEST REVISIONS: 01/18/89

THIS INFORMATION APPLIES TO THE STATED MATERIAL AND MAY NOT
APPLY TO DILUTIONS OR FORMULATIONS OF THE MATERIAL.

CAS NUMBER: 0007664-38-2

OTHER IDENTIFIERS: K-017071

SYNONYMS: ORTHOPHOSPHORIC ACID

CHEMICAL AND PHYSICAL PROPERTIES

THESE DATA COMPILED FROM VARIOUS SOURCES AND NOT VERIFIED. ADDITIONAL
INFORMATION IS AVAILABLE THROUGH YOUR SITE'S REACTIVE CHEMICAL PROGRAM.
APPEARANCE: CLEAR, COLORLESS LIQUID (85% IS SYRUPY; 75%, A MOBILE LIQUID).
MOLECULAR WEIGHT: 98.0

BOILING POINT: 85%=158 C, 239 F; 75%=135 C 275 F

VAPOR PRESSURE: 100% = 0.0285 @ 20 C; 85% = 2.16 @ 20 C; 75% = 5 @ 20 C.

FLASH POINT: NONE

STABILITY/REACTIVITY: STABLE. NON-FLAMMABLE BUT CAN REACT WITH METALS
PRODUCING HYDROGEN. CORROSIVE TO MANY METALS; REACTS
READILY WITH ALKALIES.

ODOR DESCRIPTION: ODORLESS

POTENTIAL HEALTH EFFECTS

(REVISED: 01/18/89)

THIS SECTION INCLUDES POSSIBLE ADVERSE EFFECTS WHICH COULD OCCUR
IF THIS MATERIAL IS NOT HANDLED IN THE RECOMMENDED MANNER.

EYE:

- MAY CAUSE SEVERE IRRITATION WITH CORNEAL INJURY WHICH MAY RESULT IN
PERMANENT IMPAIRMENT OF VISION, EVEN BLINDNESS.
- MISTS MAY IRRITATE THE EYES.

SKIN:

- SHORT SINGLE EXPOSURE MAY CAUSE SEVERE SKIN BURNS.
- A SINGLE PROLONGED EXPOSURE MAY RESULT IN THE MATERIAL BEING ABSORBED IN
HARMFUL AMOUNTS.
- THE LD50 FOR SKIN ABSORPTION IN RABBITS IS BETWEEN 1200 & 2000 MG/KG (85%
SOLUTION); 3160 MG/KG (75%).
- MISTS MAY CAUSE SKIN IRRITATION.
- DOT CLASSIFICATION: CORROSIVE.

INGESTION:

- SINGLE DOSE ORAL TOXICITY IS LOW.
- THE ORAL LD50 FOR RATS IS 3500 MG/KG FOR THE 85% SOLUTION; 4400 MG/KG FOR
75%.
- AMOUNTS INGESTED INCIDENTAL TO INDUSTRIAL HANDLING ARE NOT LIKELY TO CAUSE

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INJURY; HOWEVER, INGESTION OF LARGER AMOUNTS MAY CAUSE INJURY.

- INGESTION MAY CAUSE GASTROINTESTINAL IRRITATION OR ULCERATION.
- INGESTION MAY CAUSE BURNS OF MOUTH AND THROAT.

ACUTE INHALATION EFFECTS:

- SINGLE EXPOSURE TO VAPORS IS NOT LIKELY TO BE HAZARDOUS.
- MISTS MAY IRRITATE THE UPPER RESPIRATORY TRACT AND EYES.

SUBCHRONIC EFFECTS:

- REPEATED EXCESSIVE EXPOSURES TO HIGH AMOUNTS MAY CAUSE KIDNEY EFFECTS.
- REPEATED EXPOSURE TO LOW DIETARY LEVELS DID NOT SIGNIFICANT ADVERSE EFFECTS IN LABORATORY ANIMALS.

CHRONIC EFFECTS / CARCINOGENICITY:

- AVAILABLE DATA ARE INADEQUATE TO EVALUATE CARCINOGENICITY.

TERATOGENIC EFFECTS:

- NO RELEVANT INFORMATION FOUND.

REPRODUCTIVE EFFECTS:

- IN ANIMAL STUDIES, HAS BEEN SHOWN NOT TO INTERFERE WITH REPRODUCTION.

MUTAGENICITY:

- NO RELEVANT INFORMATION FOUND.

EXPOSURE GUIDELINES

HANDLING PRECAUTIONS AND PROTECTIVE EQUIPMENT (REVISED:06/12/85)

THESE RECOMMENDED PRECAUTIONS ARE INTENDED FOR USE DURING NORMAL OPERATING CONDITIONS: EMERGENCY CONDITIONS COULD REQUIRE ADDITIONAL PRECAUTIONS. (FOR AN EXPLANATION OF THE LOW, MODERATE AND HIGH POTENTIAL EXPOSURE CATEGORIES OR SPECIFIC RECOMMENDATIONS FOR YOUR SPECIFIC OPERATION CONTACT YOUR INDUSTRIAL HYGIENIST.)

EYE

- LOW - USE CHEMICAL GOGGLES.
- MODERATE - USE CHEMICAL GOGGLES.
- HIGH - USE CHEMICAL GOGGLES.
- EYE WASH FOUNTAIN SHOULD BE LOCATED IN IMMEDIATE WORK AREA.

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SKIN

- LOW - FOR BRIEF CONTACT, NO PRECAUTIONS OTHER THAN CLEAN BODY-COVERING CLOTHING SHOULD BE NEEDED.
- MODERATE - FOR BRIEF CONTACT, NO PRECAUTIONS OTHER THAN CLEAN BODY-COVERING CLOTHING SHOULD BE NEEDED.
 - USE IMPERVIOUS GLOVES WHEN PROLONGED OR FREQUENTLY REPEATED CONTACT COULD OCCUR.
- HIGH - USE PROTECTIVE CLOTHING IMPERVIOUS TO THIS MATERIAL. SELECTION OF SPECIFIC ITEMS SUCH AS GLOVES, BOOTS, APRON, OR FULL-BODY SUIT WILL DEPEND ON OPERATION.
 - WEAR A FACE-SHIELD WHICH ALLOWS USE OF CHEMICAL GOGGLES, OR WEAR A FULL-FACE RESPIRATOR, TO PROTECT FACE AND EYES WHEN THERE IS ANY LIKELIHOOD OF SPLASHES.
 - REMOVE CONTAMINATED CLOTHING IMMEDIATELY, WASH SKIN AREA WITH SOAP AND WATER, AND LAUNDER CLOTHING BEFORE REUSE.

INHALATION

- LOW - NO RESPIRATORY PROTECTION SHOULD BE NEEDED.
- MODERATE - ATMOSPHERIC LEVELS SHOULD BE MAINTAINED BELOW THE EXPOSURE GUIDELINE. WHEN RESPIRATORY PROTECTION IS REQUIRED FOR CERTAIN OPERATIONS, USE AN APPROVED AIR-PURIFYING RESPIRATOR.
- HIGH - ATMOSPHERIC LEVELS SHOULD BE MAINTAINED BELOW THE EXPOSURE GUIDELINE. WHEN RESPIRATORY PROTECTION IS REQUIRED FOR CERTAIN OPERATIONS, USE AN APPROVED AIR-PURIFYING RESPIRATOR.
 - FOR EMERGENCY AND OTHER CONDITIONS WHERE THE EXPOSURE GUIDELINE MAY BE GREATLY EXCEEDED, USE AN APPROVED POSITIVE-PRESSURE SELF-CONTAINED BREATHING APPARATUS OR POSITIVE-PRESSURE AIRLINE WITH AUXILIARY SELF-CONTAINED AIR SUPPLY.

INGESTION

- AVOID INGESTION OF EVEN VERY SMALL AMOUNTS; DO NOT CONSUME OR STORE FOOD OR TOBACCO IN THE WORK AREA; WASH HANDS AND FACE BEFORE SMOKING OR EATING.

VENTILATION

- PROVIDE GENERAL AND/OR LOCAL EXHAUST VENTILATION TO CONTROL AIRBORNE LEVELS BELOW THE EXPOSURE GUIDELINES.

PROTECTIVE EQUIPMENT INFORMATION

- PERMEATION TEST DATA INDICATE THAT THE FOLLOWING ARE EFFECTIVE PROTECTIVE CLOTHING MATERIALS: NEOPRENE, NITRILE BUTADIENE RUBBER, NATURAL RUBBER.
- THERE IS NO RESPIRATOR TEST DATA AVAILABLE FOR THIS CHEMICAL. DATA FOR RELATED CHEMICALS INDICATE THAT THE FOLLOWING SHOULD BE EFFECTIVE TYPES OF AIR-PURIFYING RESPIRATORS: ACID GAS WITH MIST FILTER.

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EMERGENCY TREATMENT AND MEDICAL NOTES REVISED:06/05/85)

EYE

- IMMEDIATE AND CONTINUOUS IRRIGATION WITH FLOWING WATER FOR AT LEAST 30 MINUTES IS IMPERATIVE. PROMPT MEDICAL CONSULTATION IS ESSENTIAL.

SKIN

- IN CASE OF CONTACT, IMMEDIATELY FLUSH SKIN WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING AND SHOES. CALL A PHYSICIAN IF IRRITATION PERSISTS. WASH CLOTHING BEFORE REUSE. DESTROY CONTAMINATED SHOES.

INGESTION

- DO NOT INDUCE VOMITING. GIVE LARGE AMOUNTS OF WATER OR MILK IF AVAILABLE AND TRANSPORT TO MEDICAL FACILITY.

INHALATION

- REMOVE TO FRESH AIR IF EFFECTS OCCUR. CONSULT A PHYSICIAN.

NOTES TO PHYSICIAN:

- MAY CAUSE TISSUE DESTRUCTION LEADING TO STRICTURE. IF LAVAGE IS PERFORMED, SUGGEST ENDOTRACHEAL AND/OR ESOPHAGOSCOPIC CONTROL.
- IF BURN IS PRESENT, TREAT AS ANY THERMAL BURN, AFTER DECONTAMINATION.
- NO SPECIFIC ANTIDOTE.
- SUPPORTIVE CARE. TREATMENT BASED ON JUDGMENT OF THE PHYSICIAN IN RESPONSE TO REACTIONS OF THE PATIENT.

END OF REPORT; FOR ADDITIONAL INFORMATION CONTACT:
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