



THE WORLD'S FOREMOST MANUFACTURER OF RESEARCH  
BIOCHEMICALS AND DIAGNOSTIC REAGENTS

M A T E R I A L   S A F E T Y   D A T A   S H E E T                      P A G E   2

CUST#: 2-097-94816  
PO#: UND-41251

PRODUCT #:                      NAME: PHOSPHORIC ACID 85% CERTIFIED

**SPECIAL FIREFIGHTING PROCEDURES**  
WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO  
PREVENT CONTACT WITH SKIN AND EYES.  
**UNUSUAL FIRE AND EXPLOSIONS HAZARDS**  
EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

SECTION 6. - - - - - ACCIDENTAL RELEASE MEASURES - - - - -

EVACUATE AREA.  
WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS AND HEAVY  
RUBBER GLOVES.  
COVER WITH DRY LIME OR SODA ASH, PICK UP, KEEP IN A CLOSED CONTAINER  
AND HOLD FOR WASTE DISPOSAL.  
VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.

SECTION 7. - - - - - HANDLING AND STORAGE - - - - -  
REFER TO SECTION 8.

**ADDITIONAL INFORMATION**  
FORMS A DETONABLE MIXTURE WITH NITROMETHANE.

SECTION 8. - - - - - EXPOSURE CONTROLS/PERSONAL PROTECTION - - - - -

WEAR APPROPRIATE NIOSH/MSHA-APPROVED RESPIRATOR, CHEMICAL-RESISTANT  
GLOVES, SAFETY GOGGLES, OTHER PROTECTIVE CLOTHING.  
SAFETY SHOWER AND EYE BATH.  
USE ONLY IN A CHEMICAL FUME HOOD.  
FACESHIELD (8-INCH MINIMUM).  
DO NOT BREATHE DUST.  
DO NOT GET IN EYES, ON SKIN, ON CLOTHING.  
AVOID PROLONGED OR REPEATED EXPOSURE.  
WASH THOROUGHLY AFTER HANDLING.  
CORROSIVE.  
HARMFUL SOLID.  
KEEP TIGHTLY CLOSED.  
HYGROSCOPIC  
HANDLE AND STORE UNDER ARGON.  
REFRIGERATE.

SECTION 9. - - - - - PHYSICAL AND CHEMICAL PROPERTIES - - - - -

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APPEARANCE AND ODOR  
COLORLESS LIQUID  
FLASHPOINT NONE  
VAPOR PRESSURE: 2.2MM BY: 2.2MM 20 C 2.2MM 20 C  
VAPOR DENSITY: 3.4  
SPECIFIC GRAVITY: 1.685

SECTION 10. ----- STABILITY AND REACTIVITY -----

INCOMPATIBILITIES  
STRONG BASES  
FINELY POWDERED METALS  
HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS  
NATURE OF DECOMPOSITION PRODUCTS NOT KNOWN.

SECTION 11. ----- TOXICOLOGICAL INFORMATION -----

ACUTE EFFECTS  
HARMFUL IF SWALLOWED, INHALED, OR ABSORBED THROUGH SKIN.  
MATERIAL IS EXTREMELY DESTRUCTIVE TO TISSUE OF THE MUCOUS MEMBRANES  
AND UPPER RESPIRATORY TRACT, EYES AND SKIN.  
INHALATION MAY BE FATAL AS A RESULT OF SPASM, INFLAMMATION AND EDEMA  
OF THE LARYNX AND BRONCHI, CHEMICAL PNEUMONITIS AND PULMONARY EDEMA.  
SYMPTOMS OF EXPOSURE MAY INCLUDE BURNING SENSATION, COUGHING,  
WHEEZING, LARYNGITIS, SHORTNESS OF BREATH, HEADACHE, NAUSEA AND  
VOMITING.  
MAY CAUSE CYANOSIS (BLUE-GRAY COLORING OF SKIN AND LIPS CAUSED BY  
LACK OF OXYGEN).  
TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND  
TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

RTECS NO: TB6300000  
PHOSPHORIC ACID

IRRITATION DATA  
SKN-RBT 595 MG/24H SEV BIOFX\* 17-4/70  
EYE-RBT 119 MG SEV BIOFX\* 17-4/70

TOXICITY DATA  
UNR-MAN LDLD:220 MG/KG 85DCAT 2,73,70  
ORL-RAT LD50:1530 MG/KG BIOFX\* 17-4/70  
SKN-RBT LD50:2740 MG/KG BIOFX\* 17-4/70

TARGET ORGAN DATA  
BEHAVIORAL (SOMNOLENCE)

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KIDNEY, URETER, BLADDER (HEMATURIA)  
SKIN AND APPENDAGES (HAIR)  
ONLY SELECTED REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES  
(RTECS) DATA IS PRESENTED HERE. SEE ACTUAL ENTRY IN RTECS FOR  
COMPLETE INFORMATION.

SECTION 12. ----- ECOLOGICAL INFORMATION -----  
DATA NOT YET AVAILABLE.

SECTION 13. ----- DISPOSAL CONSIDERATIONS -----

FOR SMALL QUANTITIES: CAUTIOUSLY ADD TO A LARGE STIRRED EXCESS OF  
WATER. ADJUST THE PH TO NEUTRAL. SEPARATE ANY INSOLUBLE SOLIDS OR  
LIQUIDS AND PACKAGE THEM FOR HAZARDOUS-WASTE DISPOSAL. FLUSH THE  
AQUEOUS SOLUTION DOWN THE DRAIN WITH PLENTY OF WATER. THE HYDROLYSIS  
AND NEUTRALIZATION REACTIONS MAY GENERATE HEAT AND FUMES WHICH CAN BE  
CONTROLLED BY THE RATE OF ADDITION.  
OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

SECTION 14. ----- TRANSPORT INFORMATION -----  
CONTACT SIGMA CHEMICAL COMPANY FOR TRANSPORTATION INFORMATION.

SECTION 15. ----- REGULATORY INFORMATION -----

REVIEWS, STANDARDS, AND REGULATIONS  
ACGIH TLV-TWA 1 MG/M3; STEL 3 MG/M3 85INA8 5,483,86  
EPA FIFRA 1988 PESTICIDE SUBJECT TO REGISTRATION OR RE-REGISTRATION  
FEREAC 54,7740,89  
MSHA STANDARD-AIR: TWA 1 MG/M3  
DTLVS\* 3,210,71  
OSHA PEL: 8H TWA 1 MG/M3  
FEREAC 54,2923,89  
OSHA PEL FINAL: 8H TWA 1 MG/M3; STEL 3 MG/M3  
FEREAC 54,2923,89  
DEL-ARAB REPUBLIC OF EGYPT: TWA 1 MG/M3 JANUARY 1993  
DEL-AUSTRALIA: TWA 1 MG/M3; STEL 3 MG/M3 JANUARY 1993  
DEL-BELGIUM: TWA 1 MG/M3; STEL 3 MG/M3 JANUARY 1993  
DEL-DENMARK: TWA 1 MG/M3 JANUARY 1993  
DEL-FINLAND: TWA 1 MG/M3; STEL 3 MG/M3; SKIN JANUARY 1993  
DEL-FRANCE: TWA 1 MG/M3; STEL 3 MG/M3 JANUARY 1993

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DEL-JAPAN:TWA 1 MG/M3 JANUARY 1993  
DEL-THE NETHERLANDS:TWA 1 MG/M3 JANUARY 1993  
DEL-THE PHILIPPINES:TWA 1 MG/M3 JANUARY 1993  
DEL-SWEDEN:TWA 1 MG/M3;STEL 3 MG/M3 JANUARY 1993  
DEL-SWITZERLAND:TWA 1 MG/M3 JANUARY 1993  
DEL-THAILAND:TWA 1 MG/M3 JANUARY 1993  
DEL-UNITED KINGDOM:TWA 1 MG/M3;STEL 1 PPM (3 MG/M3) JANUARY 1993  
DEL IN BULGARIA, COLOMBIA, JORDAN, KOREA, NEW ZEALAND, SINGAPORE,  
VIETNAM CHECK ACGIH TLV  
NIOSH REL TO PHOSPHORIC ACID-AIR: 10H TWA 1 MG/M3;STEL 3 MG/M3  
NIOSH\* DHHS #92-100,92  
NCHS 1974: HZD 58520; NIS 257; TNF 42406; NOS 146; TNE 454920  
NOES 1983: HZD 58520; NIS 309; TNF 61396; NOS 198; TNE 1256907; TFE  
450478  
EPA GENETOX PROGRAM 1988, NEGATIVE: CELL TRANSFORM.-SA7/SHE  
EPA TSCA CHEMICAL INVENTORY, JUNE 1990  
EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, JANUARY 1993  
NIOSH ANALYTICAL METHODS: SEE ACIDS, INORGANIC, 7903  
OSHA ANALYTICAL METHOD #ID-111  
THIS PRODUCT IS SUBJECT TO SARA SECTION 313 REPORTING REQUIREMENTS.

SECTION 16. - - - - - OTHER INFORMATION - - - - -

THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT PURPORT TO  
BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE. SIGMA SHALL NOT BE  
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