MATERIAL SAFETY DATA SHEET

SECTION 1. --- --- --- --- --- CHEMICAL IDENTIFICATION--- --- --- --- --- ---
CATALOG #: 298220
NAME: PHOSPHORUS PENTOXIDE, POWDER, 98+%; A.C.S. REAGENT

SECTION 2. --- --- --- COMPOSITION/INFORMATION ON INGREDIENTS --- --- --- ---
CAS #: 1314-56-3
MF: O10P4
EC NO: 215-236-1
SYNONYMS
DIPHOSPHORUS PENTOXIDE * PHOSPHORUS(V) OXIDE * PHOSPHORUS PENTAOXIDE *

SECTION 3. --- --- --- --- --- HAZARDS IDENTIFICATION --- --- --- --- ---
LABEL PRECAUTIONARY STATEMENTS
HIGHLY TOXIC (USA)
VERY TOXIC (EU)
VERY TOXIC BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.
CAUSES BURNS.
REACTS VIOLENTLY WITH WATER.
IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE IMMEDIATELY (SHOW THE LABEL WHERE POSSIBLE).
IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE.
WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE PROTECTION.
DO NOT BREATHE DUST.

SECTION 4. --- --- --- --- --- FIRST-AID MEASURES--- --- --- --- --- ---
IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES OR SKIN WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING AND SHOES.
IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.
ASSURE ADEQUATE FLUSHING OF THE EYES BY SEPARATING THE EYELIDS WITH FINGERS.

SECTION 5. --- --- --- --- --- FIRE FIGHTING MEASURES --- --- --- --- ---
EXTINGUISHING MEDIA
USE EXTINGUISHING MEDIA APPROPRIATE TO SURROUNDING FIRE CONDITIONS.
DO NOT USE WATER.
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.
Sweep up, place in a bag and hold for waste disposal.
AVOID Raising DUST.

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

SECTION 8. --- --- --- --- EXPOSURE CONTROLS/PERSONAL PROTECTION--- --- --- ---
WASH CONTAMINATED CLOTHING BEFORE REUSE.
DISCARD CONTAMINATED SHOES.
WASH THOROUGHLY AFTER HANDLING.
WEAR APPROPRIATE NIOSH/MSHA-APPROVED RESPIRATOR, CHEMICAL-RESISTANT

http://infonew.sigma-aldrich.com/cgi-bin/gx.cgi/Applogic+MSDSInfo.ReturnMSDS 7/15/02
GLOVES, SAFETY GOGGLES, OTHER PROTECTIVE CLOTHING.
SAFETY SHOWER AND EYE BATH.
USE ONLY IN A CHEMICAL FUME HOOD.
DO NOT BREATHE DUST.
DO NOT GET IN EYES, ON SKIN, ON CLOTHING.
AVOID PROLONGED OR REPEATED EXPOSURE.
CORROSIVE.
KEEP TIGHTLY CLOSED.
STORE IN A COOL DRY PLACE.
DO NOT ALLOW CONTACT WITH WATER.

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

APPEARANCE AND ODOR
WHITE POWDER

PHYSICAL PROPERTIES
VAPOR PRESSURE: 10MM 238 C 1MM 384 C
VAPOR DENSITY: 4.9

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

INCOMPATIBILITIES
REACTS VIOLENTLY WITH:
SODIUM
POTASSIUM
AMMONIA
PEROXIDES
MAGNESIUM
ALCOHOLS
HYDROGEN FLUORIDE
METALS
OXIDIZING AGENTS
REACTS VIOLENTLY WITH WATER.
HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS
THERMAL DECOMPOSITION MAY PRODUCE TOXIC FUMES OF PHOSPHORUS OXIDES
AND/OR PHOSPHINE.
HAZARDOUS POLYMERIZATION
WILL NOT OCCUR.

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

ACUTE EFFECTS
MAY BE FATAL IF INHALED, SWALLOWED, OR ABSORBED THROUGH SKIN.
MATERIAL IS EXTREMELY Destructive TO TISSUE OF THE MUCOUS MEMBRANES
AND UPPER RESPIRATORY TRACT, EYES AND SKIN.
INHALATION MAY RESULT IN 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.
TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND
TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

RTECS #: TH3945000
PHOSPHORUS OXIDE

TOXICITY DATA
IHL-RAT LC50:1217 MG/M3/1H
IHL-MUS LC50:271 MG/M3/1H
IHL-RBT LC50:1689 MG/M3/1H
IHL-GPG LC50:61 MG/M3/1H

ADDITIONAL INFORMATION
ORL-RAT LD50: >1000 MG/KG
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 - - - - - -

CONTACT A LICENSED PROFESSIONAL WASTE DISPOSAL SERVICE TO DISPOSE OF
THIS MATERIAL.

OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

SECTION 14. - - - - - - - - TRANSPORT INFORMATION - - - - - -

CONTACT ALDRICH CHEMICAL COMPANY FOR TRANSPORTATION INFORMATION.

SECTION 15. - - - - - - REGULATORY INFORMATION - - - - - -
EUROPEAN INFORMATION
EC INDEX NO: 015-010-00-0
VERY TOXIC
R 35
CAUSES SEVERE BURNS.
S 22
DO NOT BREATHE DUST.
S 26
IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE.
S 45
IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE IMMEDIATELY (SHOW THE LABEL WHERE POSSIBLE).
REVIEWS, STANDARDS, AND REGULATIONS
OEL=MAK
OEL-AUSTRIA: MAK 1 MG/M3, JAN1999
OEL-DENMARK: CEILING 1 MG/M3, JAN1999
OEL-FRANCE: VML 1 MG/M3, JAN1999
OEL-GERMANY: MAK 1 MG/M3, JAN1999
OEL-HUNGARY: TWA 1 MG/M3, STEL 2 MG/M3, JAN1993
OEL-THE NETHERLANDS: MAC-TGG 1 MG/M3, JAN1999
OEL-NORWAY: TWA 1 MG/M3, JAN1999
OEL-Poland: MAC(TWA) 1 MG/M3, STEL 3 MG/M3, JAN1999
OEL-RUSSIA: STEL 1 MG/M3, SKIN, JAN1993
OEL-SWITZERLAND: MAK-W 1 MG/M3, KZG-W 2 MG/M3, JAN1999
OEL-TURKEY: TWA 1 MG/M3, JAN1993
OEL-UNITED KINGDOM: STEL 2 MG/M3, SEP2000
NOHS 1974: HDZ 59115; NIS 25; TNF 1139; NOS 43; TNE 13561
NOES 1983: HDZ 59115; NIS 58; TNF 4491; NOS 46; TNE 84850; TFE 15744
EPA TSCA SECTION 8(B) CHEMICAL INVENTORY
EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, JANUARY 2001

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 ALDRICH, FLUKA SHALL NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING FROM HANDLING OR FROM CONTACT WITH THE ABOVE PRODUCT. SEE REVERSE SIDE OF INVOICE OR PACKING SLIP FOR ADDITIONAL TERMS AND CONDITIONS OF SALE.
COPYRIGHT 2001 SIGMA ALDRICH CO.
LICENSE GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY

http://infonew.sigma-aldrich.com/cgi-bin/gx.cgi/Applogic+MSDSInfo.ReturnMSDS 7/15/02