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OUTSIDE USA/CANADA call COLLECT 314-771-5750

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

ATTN: SAFETY DIRECTOR
UNIVERSITY OF WISCONSIN
WHITEWATER
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DATE 05/22/96
CUST#: 2-097-94804
PO#: QH5081

M A T E R I A L S A F E T Y D A T A S H E E T PAGE 1

SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #: P7875
NAME: PERIODIC ACID

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #: 10450-60-9
MF: H5106
EC NO: 233-937-0

SECTION 3. HAZARDS IDENTIFICATION

LABEL PRECAUTIONARY STATEMENTS

OXIDIZING
CORROSIVE
CONTACT WITH COMBUSTIBLE MATERIAL MAY CAUSE FIRE.
CAUSES BURNS.
TOXIC BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.
KEEP AWAY FROM COMBUSTIBLE MATERIAL.
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.
TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING.

MAY 28 1996
FIRE & CHEMICAL
STATION

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.
IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS.
CALL A PHYSICIAN.
WASH CONTAMINATED CLOTHING BEFORE REUSE.

SECTION 5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA
WATER SPRAY.

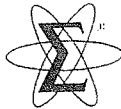
SPECIAL FIREFIGHTING PROCEDURES
WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO
PREVENT CONTACT WITH SKIN AND EYES.
STRONG OXIDIZER.

UNUSUAL FIRE AND EXPLOSIONS HAZARDS
CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE.
EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

CONTINUED ON NEXT PAGE

Table with 6 columns listing Sigma-Aldrich locations: S.A., S.A. S.r.l., S.A. S.p.A., S.A. de C.V., CORPORATION, and PTY., LIMITED. Includes address and phone numbers for each.

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

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NAME: PERIODIC ACID

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

SOLUTIONS OF PERIODIC ACID IN METHYL SULFOXIDE (DMSO) HAVE BEEN REPORTED TO EXPLODE AFTER STANDING A FEW MINUTES. EVAPORATION OF AN AQUEOUS SOLUTION OF TETRAETHYLAMMONIUM HYDROXIDE CONTAINING A SLIGHT EXCESS OF PERIODIC ACID RESULTED IN AN EXPLOSION AFTER VACUUM EVAPORATION OF MOST OF THE WATER.

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

WEAR APPROPRIATE NIOSH/MSHA-APPROVED RESPIRATOR, CHEMICAL-RESISTANT GLOVES, SAFETY GOGGLES, OTHER PROTECTIVE CLOTHING.  
USE ONLY IN A CHEMICAL FUME HOOD.  
SAFETY SHOWER AND EYE BATH.  
AVOID BREATHING DUST.  
DO NOT GET IN EYES, ON SKIN, ON CLOTHING.  
AVOID PROLONGED OR REPEATED EXPOSURE.  
WASH THOROUGHLY AFTER HANDLING.  
CORROSIVE.  
TOXIC.  
KEEP TIGHTLY CLOSED.  
KEEP AWAY FROM COMBUSTIBLE MATERIALS, HEAT, SPARKS, AND OPEN FLAME.  
STORE IN A COOL DRY PLACE.

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

APPEARANCE AND ODOR  
WHITE CRYSTALLINE POWDER

PHYSICAL PROPERTIES  
MELTING POINT: 122 C

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

INCOMPATIBILITIES  
STRONG REDUCING AGENTS  
FINELY POWDERED METALS  
STRONG BASES  
DIMETHYL SULFOXIDE (DMSO)

CONTINUED ON NEXT PAGE

LOCATIONS AT:

SIGMA-ALDRICH  
RIBBENS GmbH  
A-1100 Wien 11  
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1070  
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SIGMA-ALDRICH QUIMICA, S.A.  
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Avenida Piedad 2500, C.P. 13100  
Pachuca, Gto., Mexico  
1407 Mexico, D.F.

SIGMA-ALDRICH CHEMICAL  
PERFECTA INDUSTRIA S.A.  
C. de la Industria  
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Spain

SIGMA-ALDRICH CHEMICAL  
SIGMA CHEMICAL CO. LTD.  
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B-4, 1st Floor, Connaught Place  
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India

8431

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H-1024 Budapest  
Hungary

SIGMA-ALDRICH  
256, Canton Street, Suite 100  
New York, NY 10014  
USA



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M A T E R I A L S A F E T Y D A T A S H E E T PAGE 3

CATALOG #: P7875
NAME: PERIODIC ACID

PROTECT FROM MOISTURE.

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS
HYDROGEN IODIDE

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.
TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND
TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

SECTION 12. - - - - - ECOLOGICAL INFORMATION - - - - -

DATA NOT YET AVAILABLE.

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

DISSOLVE OR MIX THE MATERIAL WITH A COMBUSTIBLE SOLVENT AND BURN IN A
CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER.
OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

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

CONTACT SIGMA CHEMICAL COMPANY FOR TRANSPORTATION INFORMATION.

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

EUROPEAN INFORMATION

OXIDIZING
CORROSIVE
R 8
CONTACT WITH COMBUSTIBLE MATERIAL MAY CAUSE FIRE.
R 34
CAUSES BURNS.
R 23/24/25
TOXIC BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.
S 17
KEEP AWAY FROM COMBUSTIBLE MATERIAL.
S 45
IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE
IMMEDIATELY (SHOW THE LABEL WHERE POSSIBLE).
S 26
IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF
WATER AND SEEK MEDICAL ADVICE.

CONTINUED ON NEXT PAGE

Table with 6 columns: SIGMA-ALDRICH, SIGMA-ALDRICH QUIMICA, S.A., SIGMA-ALDRICH S.p.A., SIGMA-ALDRICH S.r.l., SIGMA-ALDRICH S.A., SIGMA-ALDRICH CORPORATION. Includes contact information for various regions like Europe, India, and Mexico.



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S 27  
TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING.

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

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- SIGMA-ALDRICH S.R.L.  
Via Gallarate 154, 20151 Milano, Italy
- SIGMA-ALDRICH PTY., LIMITED  
Unit 10, 70-72 Ave Road, Mascot, NSW 2122, Australia
- SIGMA-ALDRICH CHEMICAL REPRESENTACIONES S.A.  
Calle 100 No. 150, San Juan, P.R. 00901, Puerto Rico
- SIGMA-ALDRICH QUIMICA, S.A. de C.V.  
Avenida Piedad 2421, 71500 Toluca, Mexico
- SIGMA-ALDRICH CORPORATION New Delhi Location  
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