



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

POST OFFICE BOX 14508 SAINT LOUIS, MISSOURI 63178, USA

FAX: USA/CANADA 1-800-325-5052 OUTSIDE USA/CANADA 314-771-5757 TELEX: 910-761-0593 or 434475 ANSWERBACK "SIG OK COLLECT"

TELEPHONE: USA/CANADA 1-800-325-3010 OUTSIDE USA/CANADA call COLLECT 314-771-5750

ATTN: SAFETY DIRECTOR UNIVERSITY OF WISCONSIN WHITEWATER ACCOUNTS PAYABLE PO BOX 296 WHITEWATER WI 53190-0296

EMERGENCY PHONE 1-314-771-5765

DATE 06/04/96 CUST#: 2-097-94804 PO#: UNF-64248

MATERIAL SAFETY DATA SHEET PAGE 1

THIS MSDS IS FOR A COMPONENT OF CATALOG #: 665-5

SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #: 665-3 NAME: PHOSPHOGLYCERATE MUTASE

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #: 9032-62-6 EC NO: 232-880-9

SECTION 3. HAZARDS IDENTIFICATION

LABEL PRECAUTIONARY STATEMENTS CAUTION: AVOID CONTACT AND INHALATION.

SECTION 4. FIRST-AID MEASURES

IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS. CALL A PHYSICIAN. IN CASE OF SKIN CONTACT, FLUSH WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND SHOES. CALL A PHYSICIAN. IF INHALED, REMOVE TO FRESH AIR. IF BREATHING BECOMES DIFFICULT, CALL A PHYSICIAN. IN CASE OF CONTACT WITH EYES, FLUSH WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. ASSURE ADEQUATE FLUSHING BY SEPARATING THE EYELIDS WITH FINGERS. CALL A PHYSICIAN.

SECTION 5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA WATER SPRAY. CARBON DIOXIDE, DRY CHEMICAL POWDER OR APPROPRIATE FOAM.

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

SECTION 6. ACCIDENTAL RELEASE MEASURES

WEAR PROTECTIVE EQUIPMENT. SPILLED MATERIAL SHOULD BE CAREFULLY WIPED UP OR MOISTENED WITH WATER AND REMOVED.

SECTION 7. HANDLING AND STORAGE

REFER TO SECTION 8.

CONTINUED ON NEXT PAGE

BRANCH OFFICES AT:

- SIGMA-ALDRICH VERTRIEBS GmbH, SIGMA-ALDRICH QUIMICA, S.A., SIGMA-ALDRICH s.r.o., SIGMA CHEMIE, SIGMA CHEMIE, SIGMA-ALDRICH QUIMICA, S.A. de C.V., SIGMA-ALDRICH CORPORATION, SIGMA CHIMIE, SIGMA-ALDRICH S.r.l., SIGMA-ALDRICH PTY., LIMITED, SIGMA-ALDRICH CHEMICAL REPRESENTAÇÕES LTDA., SIGMA CHEMICAL CO. LTD., SIGMA-ALDRICH Kft, SIGMA-ALDRICH L'ISLE D'Abreu Chesnes, Via Gallarate 154, Unit 2, 10 Anella Ave., Castle Hill NSW 2154, Australia, Rua Sabará, 566 - Conj. 53, 01239-010 São Paulo, SP, Brazil, Fancy Road, Poole, Dorset BH17 7NH, England, Téréz krt. 39, 1087 Budapest, Hungary, 17-3 Yoko-dong Yungdeungpo-ku, Seoul, South Korea



POST OFFICE BOX 14508
SAINT LOUIS, MISSOURI 63178, USA

FAX: USA/CANADA 1-800-325-5052 OUTSIDE USA/CANADA 314-771-5757
TELEX: 910-761-0593 or 434475 ANSWERBACK "SIG OK COLLECT"

TELEPHONE: USA/CANADA 1-800-325-3010
OUTSIDE USA/CANADA call COLLECT 314-771-5750

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

CUST#: 2-097-94804
PO#: UNE-64248

MATERIAL SAFETY DATA SHEET PAGE 2

THIS MSDS IS FOR A COMPONENT OF CATALOG #: 665-5

CATALOG #: 665-3
NAME: PHOSPHOGLYCERATE MUTASE

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

WEAR APPROPRIATE NIOSH/MSHA-APPROVED RESPIRATOR, CHEMICAL-RESISTANT
GLOVES, SAFETY GOGGLES, OTHER PROTECTIVE CLOTHING.
MECHANICAL EXHAUST REQUIRED.
KEEP CONTAINER CLOSED.
STORE AWAY FROM HEAT.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR
LIQUID.

SECTION 10. STABILITY AND REACTIVITY

STABILITY
STABLE.

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS
NATURE OF DECOMPOSITION PRODUCTS NOT KNOWN.

HAZARDOUS POLYMERIZATION
WILL NOT OCCUR.

SECTION 11. TOXICOLOGICAL INFORMATION

ACUTE EFFECTS
MAY BE HARMFUL BY INHALATION, INGESTION, OR SKIN ABSORPTION.
MAY CAUSE IRRITATION.
PROLONGED OR REPEATED EXPOSURE MAY CAUSE ALLERGIC REACTIONS IN CERTAIN
SENSITIVE INDIVIDUALS.
THE 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

DATA NOT AVAILABLE

CONTINUED ON NEXT PAGE

BRANCH OFFICES AT:

Table listing branch offices for SIGMA-ALDRICH in various countries including Germany, Spain, Italy, France, Belgium, Switzerland, Mexico, India, and South Korea.



POST OFFICE BOX 14508
SAINT LOUIS, MISSOURI 63178, USA

FAX: USA/CANADA 1-800-325-5052 OUTSIDE USA/CANADA 314-771-5757
TELEX: 910-761-0593 or 434475 ANSWERBACK "SIG OK COLLECT"

TELEPHONE: USA/CANADA 1-800-325-3010
OUTSIDE USA/CANADA call COLLECT 314-771-5750

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

CUST#: 2-097-94804
PO#: UNE-64248

MATERIAL SAFETY DATA SHEET PAGE 3

THIS MSDS IS FOR A COMPONENT OF CATALOG #: 665-5

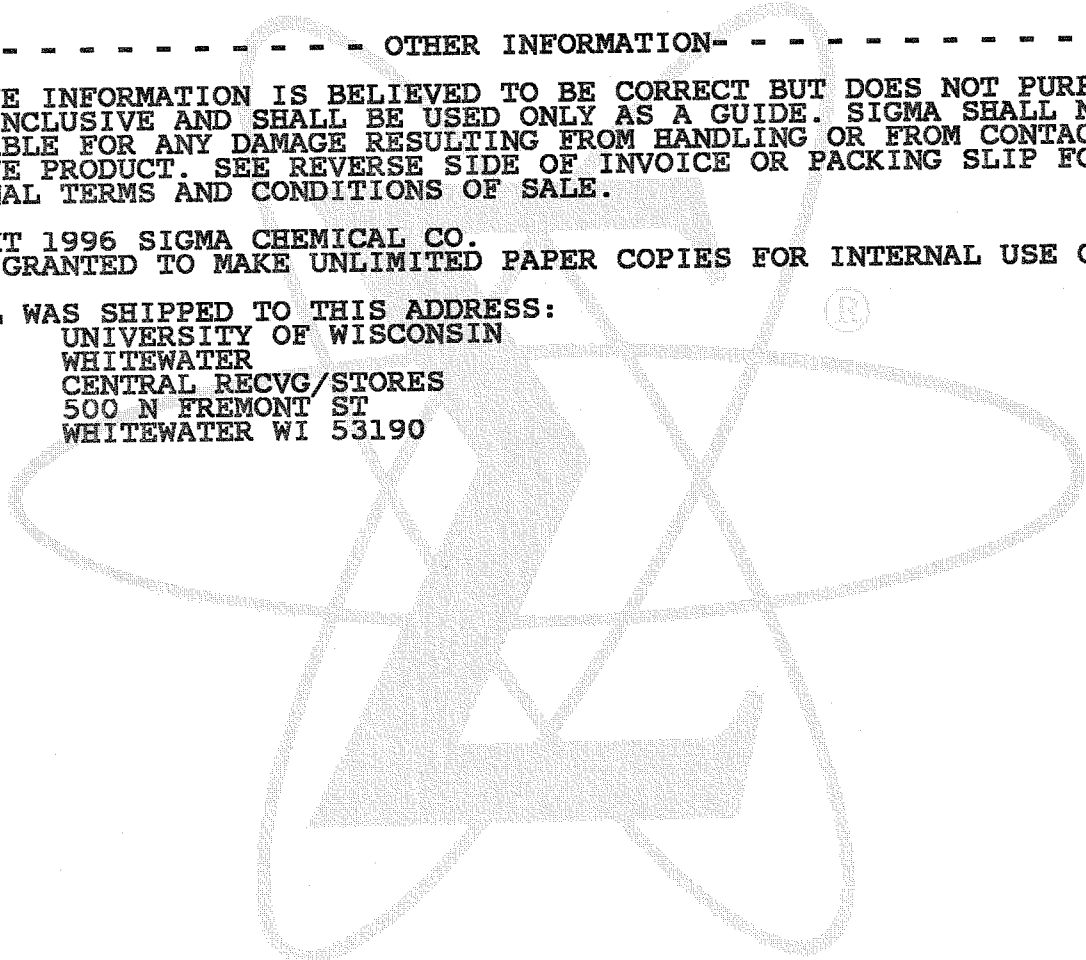
CATALOG #: 665-3
NAME: PHOSPHOGLYCERATE MUTASE

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 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 1996 SIGMA CHEMICAL CO.
LICENSE GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.

MATERIAL WAS SHIPPED TO THIS ADDRESS:
UNIVERSITY OF WISCONSIN
WHITEWATER
CENTRAL RECVG/STORES
500 N FREMONT ST
WHITEWATER WI 53190



BRANCH OFFICES AT:

- | | | | | | | |
|---|--|---|--|---|--|---|
| SIGMA-ALDRICH
VERTRIEBS GmbH
Grünwalder Weg 30
82041 Deisenhofen
Deutschland | SIGMA-ALDRICH QUIMICA, S.A.
Apt. Correos 161
28100 Alcobendas
(Madrid)
España | SIGMA-ALDRICH s.r.o.
Krizikova 27
188 00 Praha 8
Česká Republika | SIGMA CHEMIE
K. Cardijnplein, 8
B-2880 Bornem
België/Belgique | SIGMA CHEMIE
P.O. Box 260
CH-9470 Buchs
Switzerland | SIGMA-ALDRICH QUIMICA, S.A. de C.V.
Avenida Picacho Ajusco No. 130-303
Fraccionamiento Jardines en la Montaña
14210 Mexico, D.F. | SIGMA-ALDRICH CORPORATION 10397
New Delhi Location
8-4/158, Safdarjung Enclave
New Delhi - 110 029
India |
| SIGMA CHIMIE
L'ISLE D'Abeau Chesnes
S.P. 701
38297 St. Quentin Fallavier
Cedex
France | SIGMA-ALDRICH S.r.l.
Via Gallarate 154
20151 Milano
Italia | SIGMA-ALDRICH PTY., LIMITED
Unit 2, 10 Anella Ave.
Castle Hill NSW 2154
Australia | SIGMA-ALDRICH CHEMICAL
REPRESENTAÇÕES LTDA.
Rua Sabará, 566 - Conj. 53
01239-010 São Paulo, SP
Brasil | SIGMA CHEMICAL CO. LTD.
Fancy Road, Poole
Dorset BH17 7NH
England | SIGMA-ALDRICH Kft
Terep krt. 39
1067 Budapest
Hungary | SIGMA-ALDRICH
206 Samhan Campus Building
17-3 Yoido-dong Yungdeungpo-ku
Seoul
South Korea |