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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

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

EMERGENCY PHONE 1-314-771-5765

DATE 12/27/95
CUST#: 2-097-94804
PO#: QH4757

MATERIAL SAFETY DATA SHEET PAGE 1

THIS MSDS IS FOR A COMPONENT OF CATALOG #: LAA-21

SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #: 12752
NAME: L-ISOLEUCINE

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #: 73-32-5
MF: C6H13NO2
EC NO: 200-793-2

SYNONYMS

ACETIC ACID, AMINO-SEC-BUTYL- * 2-AMINO-3-METHYLPENTANOIC ACID *
ALPHA-AMINO-BETA-METHYLVALERIC ACID * ISOLEUCINE * L-ISOLEUCINE *
NORVALINE, 3-METHYL- * VALERIC ACID, 2-AMINO-3-METHYL- *

SECTION 3. HAZARDS IDENTIFICATION

LABEL PRECAUTIONARY STATEMENTS

HARMFUL
HARMFUL BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.
POSSIBLE RISK OF IRREVERSIBLE EFFECTS.
POSSIBLE CARCINOGEN.
WEAR SUITABLE PROTECTIVE CLOTHING.
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.
IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS.
CALL A PHYSICIAN.
DISCARD CONTAMINATED CLOTHING AND SHOES.

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.

UNUSUAL FIRE AND EXPLOSIONS HAZARDS

CONTINUED ON NEXT PAGE

BRANCH OFFICES AT:

Table with 6 columns listing branch offices for SIGMA-ALDRICH in various countries including Germany, Spain, France, Belgium, Switzerland, Mexico, India, Italy, Australia, and South Korea.



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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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EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

SECTION 6. ACCIDENTAL RELEASE MEASURES

EVACUATE AREA.
WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS AND HEAVY RUBBER GLOVES.
WEAR DISPOSABLE COVERALLS AND DISCARD THEM AFTER USE.
SWEEP UP, PLACE IN A BAG 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.

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.
DO NOT BREATHE DUST.
AVOID ALL CONTACT.
WASH THOROUGHLY AFTER HANDLING.
POSSIBLE CARCINOGEN.
KEEP TIGHTLY CLOSED.
STORE IN A COOL DRY PLACE.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR
WHITE POWDER

PHYSICAL PROPERTIES
MELTING POINT: 288 C (DEC)

SECTION 10. STABILITY AND REACTIVITY

INCOMPATIBILITIES
STRONG OXIDIZING AGENTS

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS
TOXIC FUMES OF:
CARBON MONOXIDE, CARBON DIOXIDE
NITROGEN OXIDES

SECTION 11. TOXICOLOGICAL INFORMATION

ACUTE EFFECTS
HARMFUL IF SWALLOWED, INHALED, OR ABSORBED THROUGH SKIN.
MAY CAUSE IRRITATION.

CHRONIC EFFECTS

CONTINUED ON NEXT PAGE

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MATERIAL SAFETY DATA SHEET PAGE 3

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CATALOG #: I2752
NAME: L-ISOLEUCINE

POSSIBLE CARCINOGEN.
THE LEVOROTARY (L) FORMS OF LEUCINE, ISOLEUCINE AND VALINE HAVE BEEN
FOUND TO HAVE TUMOR-PROMOTING ACTIVITY FOR BLADDER CARCINOMAS.
SCIENCE 231, 843, 21 FEBRUARY 1986.
TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND
TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

RTECS #: NR4705000
ISOLEUCINE, L-

TOXICITY DATA
IPR-RAT LD50:6822 MG/KG ABBIA4 58,253,55
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 -----
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

HARMFUL
R 20/21/22
HARMFUL BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.
R 40
POSSIBLE RISK OF IRREVERSIBLE EFFECTS.
S 36
WEAR SUITABLE PROTECTIVE CLOTHING.
S 22
DO NOT BREATHE DUST.

REVIEWS, STANDARDS, AND REGULATIONS

DEL=MAX
DEL-RUSSIA:STEL 5 MG/M3 JAN93
NOHS 1974: HZD 81864; NIS 1; TNF 53; NDS 3; TNE 750
NOES 1983: HZD 81864; NIS 3; TNF 740; NDS 13; TNE 18202; TFE 13865
EPA TSCA SECTION 8(B) CHEMICAL INVENTORY

SECTION 16. ----- OTHER INFORMATION -----
CONTINUED ON NEXT PAGE

BRANCH OFFICES AT:

- SIGMA-ALDRICH VERTRIEBS GmbH
SIGMA-ALDRICH QUIMICA, S.A.
SIGMA-ALDRICH S.r.l.
SIGMA-ALDRICH PTY., LIMITED
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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 P A G E 4

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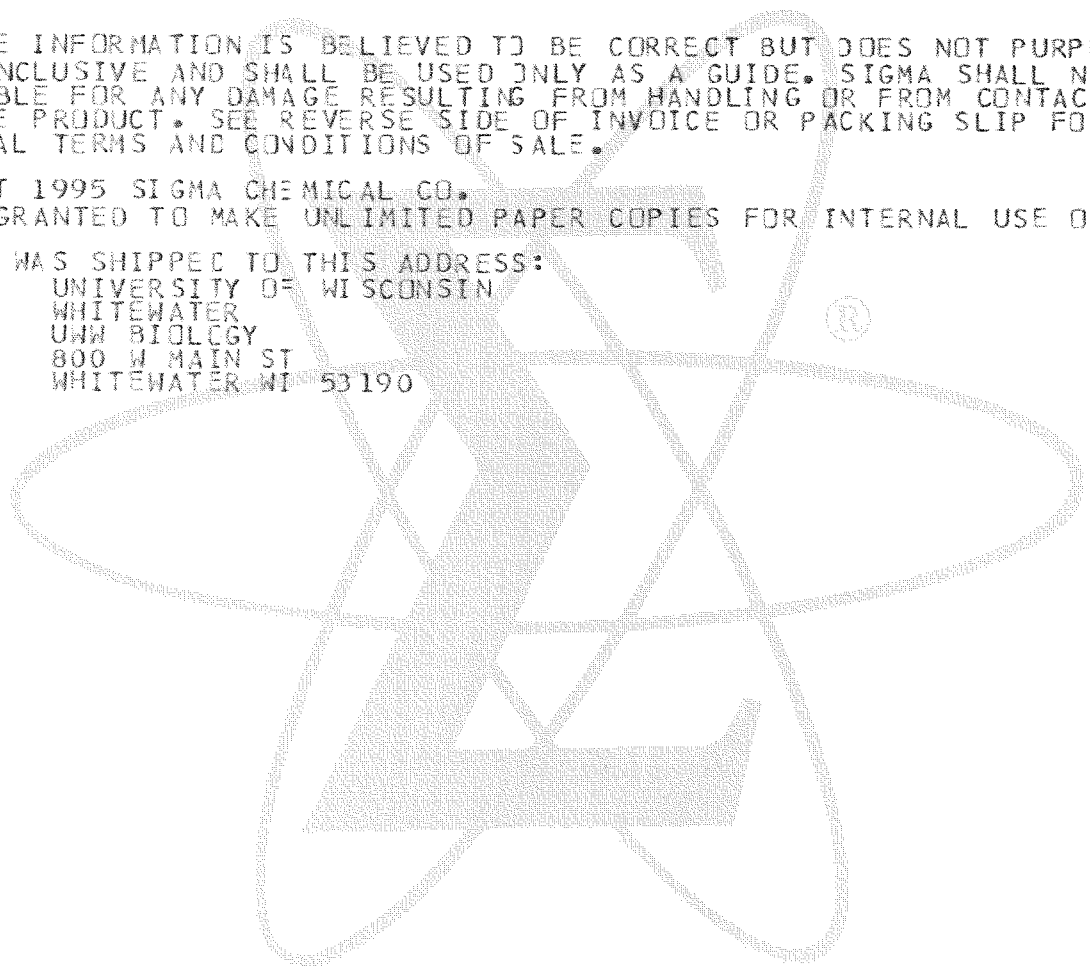
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NAME: L-ISOLEUCINE

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WHITEWATER
UWW BIOLOGY
800 W MAIN ST
WHITEWATER WI 53190



BRANCH OFFICES AT:

SIGMA-ALDRICH /ERTRIEBS GmbH Rünwalder Weg 30 12041 Delsenhofen Deutschland	SIGMA-ALDRICH QUIMICA, S.A. Apt. Correos 161 28100 Alcobendas (Madrid) España	SIGMA-ALDRICH s.r.l. Krizikova 27 186 00 Praha 8 Ceská 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 2708 New Delhi Location B-4/158, Safdarjung Enclave New Delhi - 110 029 India
SIGMA CHIMIE ISLE D'Abau Chesnes P. 701 18297 St. Quentin Fallavier Fedex 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 Terež krt. 39 1067 Budapest Hungary	SIGMA-ALDRICH 206 Samhan Campus Building 17-3 Yoido-dong Yungdeungpo-ku Seoul South Korea