MATERIAL SAFETY DATA SHEET

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

SECTION 1. --- --- --- --- --- --- CHEMICAL IDENTIFICATION--- --- --- --- --- ---

CATALOG #: M9625
NAME: L-METHIONINE

SECTION 2. --- --- --- --- --- COMPOSITION/INFORMATION ON INGREDIENTS --- --- --- --- ---

CAS #: 63-68-3
MF: C5H11N1O2S1
EC No: 200-562-9

SYNONYMS
L-ALPHA-AMINO-GAMMA-METHYLMERCAPTOBUTYRIC ACID * (S)-2-AMINO-4-(METHYLTHIO)BUTANOIC ACID * L (-)-AMINO-GAMMA-METHYLMETHIONINE BUTYRIC ACID * 2-AMINO-4-METHYLTHIOBUTANOIC ACID * 2-AMINO-4-(METHYLTHIO)BUTYRIC ACID * BUTYRIC ACID, 2-AMINO-4-(METHYLTHIO)-, (S)- * CYSTEINE * LACTET * LIQUIMETH * METHIONINE * L-METHIONINE * L-(-)-METHIONINE * S-METHIONINE * L-GAMMA-METHYLMETHIONINE * ALPHAMETHIONINE BUTYRIC ACID *

SECTION 3. --- --- --- --- --- HAZARDS IDENTIFICATION --- --- --- --- ---

DATA NOT AVAILABLE

SECTION 4. --- --- --- --- --- FIRST-AID MEASURES--- --- --- --- --- ---

IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES WITH ABUNDANT AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. IN CASE OF CONTACT, IMMEDIATELY WASH SKIN WITH SOAP AND ABUNDANT AMOUNTS OF WATER. IF INHALED, REMOVE TO FRESH AIR.

SECTION 5. --- --- --- --- --- FIRE FIGHTING MEASURES --- --- --- --- ---

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

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

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

WEAR RESPIRATOR, CHEMICAL SAFETY GOGGLES, RUBBER BOOTS AND HEAVY RUBBER GLOVES.
SLEEP UP, PLACE IN A BAG AND HOLD FOR WASTE DISPOSAL.

CONTINUED ON NEXT PAGE
MATERIAL SAFETY DATA SHEET

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CATALOG #: M9625
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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

CHEMICAL SAFETY GOGGLES.
COMPATIBLE CHEMICAL-RESISTANT GLOVES.
SAFETY SHOWER AND EYE BATH.
MECHANICAL EXHAUST REQUIRED.
AVOID BREATHING DUST.
AVOID CONTACT WITH EYES, SKIN AND CLOTHING.
WASH THOROUGHLY AFTER HANDLING.
KEEP CONTAINER CLOSED.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR
WHITE CRYSTALS

PHYSICAL PROPERTIES
MELTING POINT: 234 C (DEC)

SECTION 10. STABILITY AND REACTIVITY

INCOMPATIBILITIES
STRONG OXIDIZING AGENTS

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS
CARBON MONOXIDE, CARBON DIOXIDE
NITROGEN OXIDES
SULFUR OXIDES

SECTION 11. TOXICOLOGICAL INFORMATION

ACUTE EFFECTS
THE TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

RTECS #: PD0457000
METHIONINE, L-

TOXICITY DATA
QRL-RAI LD50: 36 GM/KG
IPR-RAI LD50: 4328 MG/KG
IPR-HUS LD50: 2950 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

CONTINUED ON NEXT PAGE
MATERIAL SAFETY DATA SHEET

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

CATALOG #: M9625
NAME: L-METHIONINE

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

REVIEWS, STANDARDS, AND REGULATIONS

DEL=MAK
DEL-RUSSIA: STEL 5 M6/M3 JAN93
NOHS 1974: H20 01091; NES 5; TNE 273; NOS 17; TNE 12017
NIES 1980: H20 01091; NES 4; N110; NOS 16; TNE 23520; TFE 17038
EPA GENETOX PROGRAM 1985, NEGATIVE: SPERM MORPHOLOGY-ouse
EPA GENETOX PROGRAM 1983, INCONCLUSIVE: MAMMALIAN MICRONUCLEUS
EPA TSCA SECTION 8(b) CHEMICAL INVENTORY
EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, OCTOBER 1995

SECTION 16. OTHER INFORMATION

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