ATTN: SAFETY DIRECTOR
STEVEN ANDERSON
UNIVERSITY OF WISCONSIN WHITewater
P O BOX 296
WHITewater WI 53190

EMERGENCY PHONE 1-414-273-3850
DATE 01/11/99
CUST#: 523216
PO#: CC/ONSrud

MATERIAL SAFETY DATA SHEET

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

CATALOG #: 26140-8
NAME: THEOPHYLLINE, 99%

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

CAS #: 58-55-9
MF: C7H8N4O2
EC NO: 200-385-7

SYNONYMS
ACET-THEOCIN * ARMOPHYLLINE * ASMAYN * AUSTYN * 3,7-DIHYDRO-1,3-
DIMETHYL-1H-PURINE-2,6-DIONE * 1,3-DIMETHYXANTHINE * DURAPHY *
ELIXICON * ELIXOPHYLLIN * ELIXOPHYLLINE * EUPHYLONG * LANOPHYLLIN *
LIOUOPHYLLINE * NSC 2066 * NUELIN * OPTIPHYLLIN * PARKOPHYLLIN *
PSEUDOPHYLLIN * THEOCIN * THEOPHYLLINE * THEOPHYLLINE-N-OXIDE *
THEOPHYLLIN * THEOPHYLLINE, ANHYDROUS * UPHYLLIN * XANTHINE, 1,3-
DIMETHYL- *

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

LABEL PRECAUTIONARY STATEMENTS
TOXIC (USA)
HARMFUL (EU)
HARMFUL IF SWALLOWED.
TARGET ORGAN(S):
NERVES
HEART
WEAR SUITABLE PROTECTIVE CLOTHING.

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.
CARBON DIOXIDE, DRY CHEMICAL POWDER OR APPROPRIATE FOAM.

CONTINUED ON NEXT PAGE
ALDRICH CHEMICAL COMPANY, INC.  
P.O. BOX 355  
MILWAUKEE, WISCONSIN 53201, USA

CUST#: 523216
PO#: CC/ONSUD

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

CATALOG #: 26140-8  
NAME: THEOPHYLLINE, 99%

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.
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 CONTACT WITH EYES, SKIN AND CLOTHING.
AVOID PROLONGED OR REPEATED EXPOSURE.
WASH THOROUGHLY AFTER HANDLING.
KEEP TIGHTLY CLOSED.
STORE IN A COOL DRY PLACE.

SECTION 9. - - - - - - PHYSICAL AND CHEMICAL PROPERTIES - - - - - -
APPEARANCE AND ODOR
WHITE POWDER

PHYSICAL PROPERTIES
MELTING POINT: 274 C TO 275 C

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 - - - - - -
CONTINUED ON NEXT PAGE

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ACUTE EFFECTS
HARMFUL IF SWALLOWED.
MAY BE HARMFUL IF INHALED.
MAY BE HARMFUL IF ABSORBED THROUGH THE SKIN.
MAY CAUSE EYE IRRITATION.
MAY CAUSE SKIN IRRITATION.
MATERIAL MAY BE IRRITATING TO MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT.
TARGET ORGAN(S):
NERVES
HEART
KIDNEYS
SMOOTH MUSCLE

ADDITIONAL INFORMATION
WARNING: TOXIC SYNERGISM WITH EPHEDRINE HAS BEEN DOCUMENTED AND MAY OCCUR ALSO WITH SOME OTHER SYMPTOMIMETIC BRONCHODILATORS.
OVEREXPOSURE MAY CAUSE: NAUSEA, VOMITING, HEADACHES, DIARRHEA, EPIGASTRIC PAIN, HEMATOMESIS, INSOMNIA, CLONIC AND TONIC CONVULSIONS, TACHYCARDIA, HYPOTENSION, CIRCULATORY FAILURE, VENTRICULAR ARRTHYMIAS.

RTECS #: XH38500000
THEOPHYLLINE

TOXICITY DATA
ORL-WMN LD50: 130 MG/KG
IVN-MAN LD50: 342 MG/KG
PAR-MAN LD50: 12 MG/KG
ORL-RAT LD50: 225 MG/KG
IPR-RAT LD50: 188 MG/KG
UNR-RAT LD50: 300 MG/KG
ORL-MUS LD50: 235 MG/KG
IPR-MUS LD50: 70 MG/KG
SCU-MUS LD50: 138 MG/KG
IVN-MUS LD50: 136 MG/KG
IMS-MUS LD50: 271 MG/KG
UNR-MUS LD50: 400 MG/KG
REC-MUS LD50: 166 MG/KG
ORL-RBT LD50: 150 MG/KG
IVN-RBT LD50: 115 MG/KG
ORL-GPG LD50: 183 MG/KG

TARGET ORGAN DATA
BEHAVIORAL (SOMNOLENCE)
BEHAVIORAL (TREMOR)
BEHAVIORAL (CONVULSIONS OR EFFECT ON SEIZURE THRESHOLD)
BEHAVIORAL (EXCITEMENT)
BEHAVIORAL (ANOREXIA, HUMAN)
BEHAVIORAL (MUSCLE CONTRACTION OR SPASTICITY)
BEHAVIORAL (COMA)

CONTINUED ON NEXT PAGE

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CATALOG #: 26140-8
NAME: THEOPHYLLINE, 99%

BEHAVIORAL (HEADACHE)
BEHAVIORAL (IRRITABILITY)
CARDIAC (ARRHYTHMIAS)
CARDIAC (EKG CHANGES NOT DIAGNOSTIC OF ABOVE)
CARDIAC (PULSE RATE INCREASED WITHOUT FALL IN BP)
CARDIAC (CHANGE IN RATE)
VASCULAR (BP LOWERING NOT CHARACTERIZED IN AUTONOMIC SECTION)
LUNGS, THORAX OR RESPIRATION (CYANOSIS)
LUNGS, THORAX OR RESPIRATION (RESPIRATORY STIMULATION)
LUNGS, THORAX OR RESPIRATION (OTHER CHANGES)
GASTROINTESTINAL (CHANGES IN STRUCTURE OR FUNCTION OF SALIVARY GLANDS)
GASTROINTESTINAL (NAUSEA OR VOMITING)
GASTROINTESTINAL (CONTRACTION)
ENDOCRINE (HYPERGLYCEMIA)
EFFECTS ON FERTILITY (POST-IMPLANTATION MORTALITY)
EFFECTS ON EMBRYO OR FETUS (FETOTOXICITY)
SPECIFIC DEVELOPMENTAL ABNORMALITIES (CRANIOFACIAL)
SPECIFIC DEVELOPMENTAL ABNORMALITIES (BODY WALL)
SPECIFIC DEVELOPMENTAL ABNORMALITIES (MUSCULOSKELETAL SYSTEM)
SPECIFIC DEVELOPMENTAL ABNORMALITIES (OTHER DEVELOPMENTAL ABNORMALITIES)
EFFECTS ON NEWBORN (OTHER NEONATAL MEASURES OR EFFECTS)
NUTRITIONAL AND GROSS METABOLIC (CHANGES IN: K)
NUTRITIONAL AND GROSS METABOLIC (CHANGES IN: METABOLIC ACIDOSIS)
NUTRITIONAL AND GROSS METABOLIC (BODY TEMPERATURE DECREASE)
BIOCHEMICAL EFFECTS (OTHER)

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 ALDRICH CHEMICAL COMPANY FOR TRANSPORTATION INFORMATION.

SECTION 15. - - - - - - REGULATORY INFORMATION - - - - - - -
EUROPEAN INFORMATION
HARMFUL
R 22
HARMFUL IF SWALLOWED.
S 36
WEAR SUITABLE PROTECTIVE CLOTHING.

REVIEWS, STANDARDS, AND REGULATIONS
CONTINUED ON NEXT PAGE
CATALOG #: 26140-8
NAME: THEOPHYLLINE, 99%

OEL=MAK
IARC CANCER REVIEW: HUMAN INADEQUATE EVIDENCE IMMMDT 51, 391, 1991
IARC CANCER REVIEW: ANIMAL INADEQUATE EVIDENCE IMMMDT 51, 391, 1991
IARC CANCER REVIEW: GROUP 3 IMMMDT 51, 391, 1991
EPA TSCA SECTION 8(B) CHEMICAL INVENTORY
NTP CARCINOGENESIS STUDIES: TEST COMPLETED (POST PEER REVIEW), OCTOBER 1997

SECTION 16. OTHER INFORMATION

THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT PURPORT TO
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