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 #: 13482-1
NAME: BORON TRIFLUORIDE-METHANOL COMPLEX, IN EXCESS METHANOL (CA. 50 WT. % BF3)

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #: 373-57-9
MF: CH4BF3O
EC NO: 206-766-4

HAZARDOUS INGREDIENTS CONTAINS METHYL ALCOHOL, CHEMICAL ABSTRACTS REGISTRY NUMBER 67-56-1.

SECTION 3. HAZARDS IDENTIFICATION

LABEL PRECAUTIONARY STATEMENTS
FLAMMABLE (USA)
HIGHLY FLAMMABLE (EU)
TOXIC
TOXIC BY INHALATION AND IF SWALLOWED.
CAUSES BURNS
TARGET ORGAN(S): EYES
KIDNEYS
KEEP CONTAINER TIGHTLY CLOSED.
KEEP AWAY FROM SOURCES OF IGNITION - NO SMOKING.
AVOID CONTACT WITH SKIN.
IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE IMMEDIATELY (SHOW THE LABEL WHERE POSSIBLE).
MOISTURE SENSITIVE
NOTE: CLOUDINESS OR PRECIPITATION IS UNAVOIDABLE AND SHOULD NOT AFFECT USE.

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.
ASSURE ADEQUATE FLUSHING OF THE EYES BY SEPARATING THE EYELIDS WITH FINGERS.
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

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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.
EXTREMELY FLAMMABLE.

UNUSUAL FIRE AND EXPLOSIONS HAZARDS
VAPOR MAY TRAVEL CONSIDERABLE DISTANCE TO SOURCE OF IGNITION AND FLASH BACK.
CONTAINER EXPLOSION MAY OCCUR UNDER FIRE CONDITIONS.
EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

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

EVACUATE AREA.
SHUT OFF ALL SOURCES OF IGNITION.
WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS AND HEAVY RUBBER GLOVES.
COVER WITH DRY-LIME, SAND, OR SODA ASH. PLACE IN COVERED CONTAINERS USING NON-SPARKING TOOLS AND TRANSPORT OUTDOORS.
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.
MECHANICAL EXHAUST REQUIRED.
SAFETY SHOWER AND EYE BATH.
DO NOT BREATHE VAPOR.
AVOID CONTACT WITH EYES, SKIN AND CLOTHING.
AVOID PROLONGED OR REPEATED EXPOSURE.
DO NOT USE IF SKIN IS CUT OR SCRATCHED. WASH THOROUGHLY AFTER HANDLING.
KEEP TIGHTLY CLOSED.
KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAME.
STORE IN A COOL DRY PLACE.

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

APPEARANCE AND ODOR
COLORLESS LIQUID

PHYSICAL PROPERTIES
BOILING POINT: 59 C/4MM.
FLASHPOINT 52 F
11C

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AUTOIGNITION TEMPERATURE: 788 F 419C
VAPOR PRESSURE: 19.5MM 20 C
SPECIFIC GRAVITY: 1.203

SECTION 10. STABILITY AND REACTIVITY
STABILITY
STABLE.

INCOMPATIBILITIES
ACIDS
ACID CHLORIDES
ACID ANHYDRIDES
OXIDIZING AGENTS
REDDUCING AGENTS
ALKALI METALS
PROTECT FROM MOISTURE.

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS
TOXIC FUMES OF:
CARBON MONOXIDE, CARBON DIOXIDE
HYDROGEN FLUORIDE
BORANE/BORON OXIDES

HAZARDOUS POLYMERIZATION
WILL NOT OCCUR.

SECTION 11. TOXICOLOGICAL INFORMATION
ACUTE EFFECTS
HARMFUL IF INHALED.
HARMFUL IF SWALLOWED.
MAY BE HARMFUL IF ABSORBED THROUGH THE SKIN.
MATERIAL IS EXTREMELY DESTRUCTIVE TO TISSUE OF THE MUCOUS MEMBRANES
AND UPPER RESPIRATORY TRACT, EYES AND SKIN.
INHALATION MAY RESULT IN 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. EXPOSURE CAN CAUSE:
GASTROINTESTINAL DISTURBANCES
MAY CAUSE CONVULSIONS.
TARGET ORGAN(S):
EYES
KIDNEYS
LIVER
HEART

SECTION 12. ECOLOGICAL INFORMATION
DATA NOT YET AVAILABLE.

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

CUST#: 523216
PO#: CC/ONSRUD

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

BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERTURNER AND SCRUBBER BUT EXERT EXTRA CARE IN IGNITING AS THIS MATERIAL IS HIGHLY FLAMMABLE.

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
HIGHLY FLAMMABLE
TOXIC
R 23/25
TOXIC BY INHALATION AND IF SWALLOWED.
R 34
CAUSES BURNS.
HIGHLY FLAMMABLE
S 7
KEEP CONTAINER TIGHTLY CLOSED.
S 16
KEEP AWAY FROM SOURCES OF IGNITION - NO SMOKING.
S 24
AVOID CONTACT WITH SKIN.
S 45
IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE IMMEDIATELY (SHOW THE LABEL WHERE POSSIBLE).

TLV AND SOURCE
FOR METHYL ALCOHOL - SKIN:
ACGIH TLV-TWA: 200 PPM (260 MG/M³); STEL: 250 PPM (310 MG/M³).
OSHA PEL: 8 H TWA 200 PPM (260 MG/M³); STEL: 250 PPM (310 MG/M³).

U.S. INFORMATION
90.0% METHANOL 67-56-1
THIS PRODUCT IS SUBJECT TO SARA SECTION 313 REPORTING REQUIREMENTS.

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. ALDRICH 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.

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NAME: BORON TRIFLUORIDE-METHANOL COMPLEX, IN EXCESS METHANOL (CA. 50 WT. % BF3)

980 SOUTH SECOND STREET
RONKONKOMA, NEW YORK 11779-7238, USA