



JAN 20 1999

SIGMA-ALDRICH

ALDRICH CHEMICAL COMPANY, INC.
P.O. BOX 355
MILWAUKEE, WISCONSIN 53201, USA

ATTN: SAFETY DIRECTOR
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UNIVERSITY OF WISCONSIN WHITEWATER
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WHITEWATER WI 53190

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DATE 01/11/99
CUST#: 523216
PO#: CC/ONSRUD

M A T E R I A L S A F E T Y D A T A S H E E T PAGE 1

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 - - - - -

EXTINGUISHING MEDIA

CONTINUED ON NEXT PAGE

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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

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

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:
FLASHPOINT

59 C/4MM.
52 F
11C

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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 3

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

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
REDUCING 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.

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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 4

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

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

BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER 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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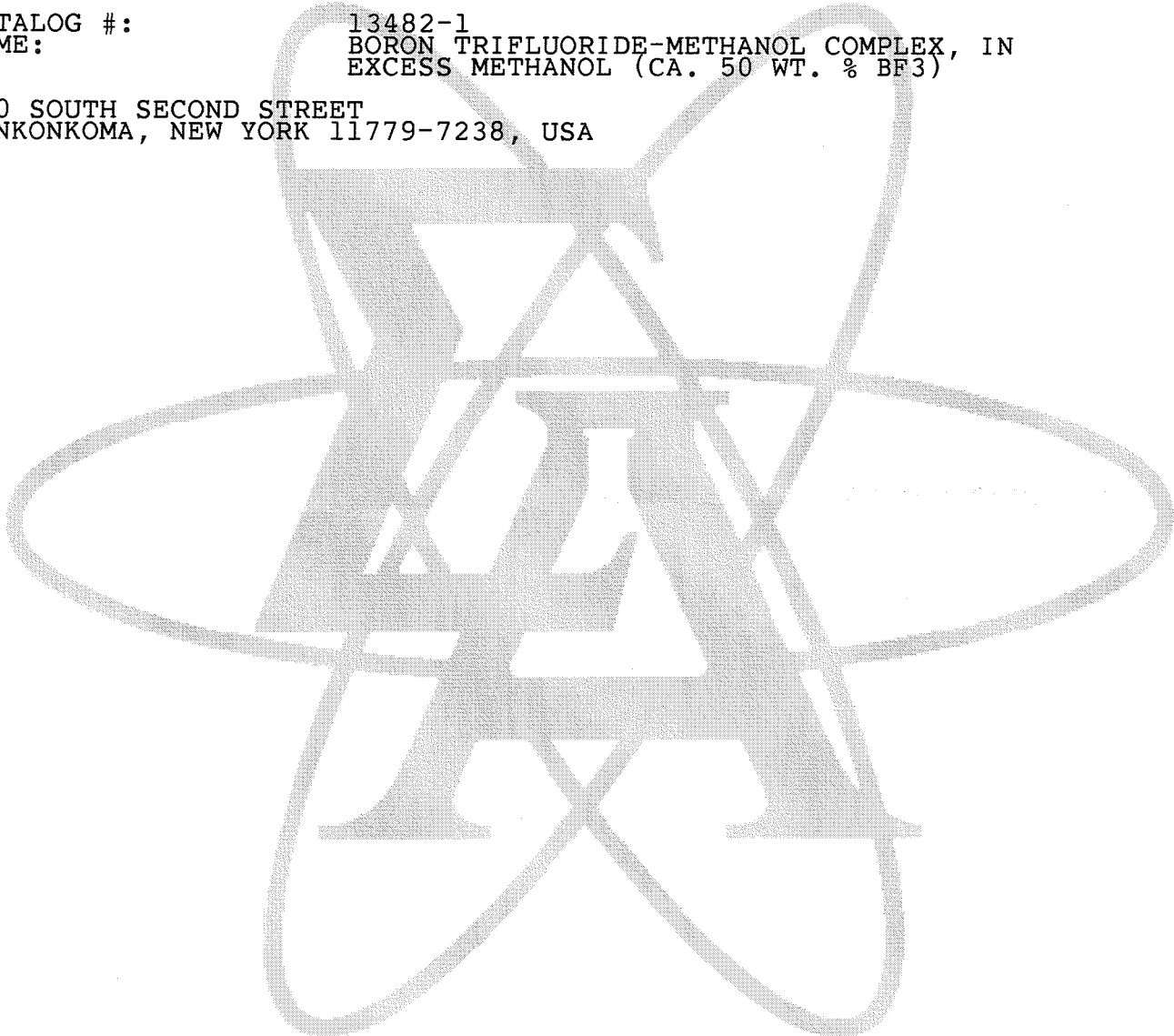
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M A T E R I A L S A F E T Y D A T A S H E E T P A G E 5

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EXCESS METHANOL (CA. 50 WT. % BF₃)

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