

Material Safety Data Sheet

Provided by:
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SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name BORON TRIFLUORIDE

Synonyms TRIFLOROBORANE, BORON FLUORIDE

Chemical Name BORON TRIFLUORIDE

Date of Issue: 12/28/2000

Emergency phone: 281-457-4888

Reviewed / Revision Date: 3/31/2010

Chemtrec: 800-424-9300

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENTS	PERCENT	CAS NO.
BORON TRIFLUORIDE	100%	7637-07-2

SECTION 3 - HAZARDS IDENTIFICATION

Potential Health Effects

ACGIH - TLV: 3 mg/m3

Eye Contact CORROSIVE. CAUSES ITCHING, BURNING, REDNESS, AND TEARING. CAN CAUSE SEVERE DAMAGE RESULTING IN POSSIBLE BLINDNESS.

Skin Contact MAY CAUSE FROSTBITE ON CONTACT. CAN CAUSE SEVERE IRRITATION AND CORROSIVE BURNS.

Ingestion CAN CAUSE IRRITATION AND BURNS.

Inhalation HIGHLY IRRITATING TO THE RESPIRATORY TRACT. MAY CAUSE PNEUMONITIS. DAMAGE TO LUNGS AND KIDNEYS MAY OCCUR.

Carcinogenicity: NTP NO IARC NO OSHA NO

SECTION 4 - FIRST AID PROCEDURES

Eye Contact: IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES WHILE HOLDING EYELIDS OPEN. GET MEDICAL ATTENTION.

Skin Contact: IMMEDIATELY REMOVE CONTAMINATED CLOTHING OR SHOES, WIPE EXCESS FROM SKIN AND FLUSH WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. USE SOAP IF AVAILABLE OR FOLLOW BY WASHING WITH SOAP AND WATER. DO NOT REUSE CLOTHING UNTIL THOROUGHLY CLEANED. GET MEDICAL ATTENTION.

Inhalation: REMOVE VICTIM TO FRESH AIR AND PROVIDE OXYGEN IF BREATHING IS DIFFICULT. GIVE ARTIFICIAL RESPIRATION IF NOT BREATHING. GET MEDICAL ATTENTION.

Ingestion: DO NOT INDUCE VOMITING. RINSE MOUTH WITH WATER. IF CONSCIOUS, GIVE LARGE QUANTITIES OF WATER OR MILK AND GET IMMEDIATE MEDICAL ATTENTION. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON!

SECTION 5 - FIRE FIGHTING MEASURES

Flash Point (°F) NOT APPLICABLE

Extinguishing Media CARBON DIOXIDE, DRY POWDER, OR WATER SPRAY. USE MEDIA APPROPRIATE FOR SURROUNDING AREA.

**Special Firefighting
Procedures/Precautions**

WEAR SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE GEAR. STAY UPWIND AND KEEP OUT OF LOW AREAS. CONTENTS UNDER PRESSURE. CONTAINER MAY RUPTURE ON HEATING. COOL CONTAINERS EXPOSED TO FIRE WITH WATER SPRAY.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

For Spill: EVACUATE AREA AND KEEP UNAUTHORIZED PERSONNEL AWAY. PROVIDE PERSONAL PROTECTIVE EQUIPMENT. SHUT OFF LEAK IF IT CAN BE DONE IN A SAFE MANNER. USE WATER SPRAY TO WASH WALLS AND FLOOR. DO NOT ALLOW WATER TO ENTER WATERWAYS AND SEWERS.

SECTION 7 - HANDLING AND STORAGE

Keep container tightly closed when not in use. Store in a cool, dry, well-ventilated area, away from heat and incompatible materials. Protect containers from physical damage.

DO NOT DROP OR BANG CYLINDERS TOGETHER. DO NOT APPLY HEAT OR CHILL CYLINDERS BELOW -20 °F. STORE OUTDOORS OR IN A WELL VENTILATED AREA. DO NOT STORE CYLINDERS IN SUNLIGHT, ON DAMP GROUND OR IN CONTACT WITH MOISTURE. PROTECT CYLINDERS FROM DAMAGE. ALWAYS REPLACE CAP AFTER USE.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

- Respiratory Protection** USE A NIOSH/MSHA APPROVED RESPIRATOR FOLLOWING MANUFACTURER'S RECOMMENDATIONS.
- Ventilation** LOCAL AND MECHANICAL RECOMMENDED.
- Protective Gloves** CHEMICAL IMPERVIOUS GLOVES.
- Eye/Face Protection** CHEMICAL SAFETY GOGGLES AND/OR FULL-FACE SHIELD.
- Other Protection** CHEMICAL RESISTANT CLOTHING SUCH AS COVERALLS/APRON, BOOTS, ETC.
- Work Practices** USE GOOD PERSONAL HYGIENE PRACTICES. WASH HANDS BEFORE EATING, DRINKING, SMOKING, OR USING TOILET FACILITIES. PROMPTLY REMOVE SOILED CLOTHING AND WASH THOROUGHLY BEFORE REUSE. SHOWER AFTER WORK USING PLENTY OF SOAP AND WATER.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point (°F): -148	Vapor Pressure (mmHg): > 38000
Freezing Point (°F): NOT ESTABLISHED	Vapor Density (Air=1): 2.34
Solubility (H2O): 77 g/l	Specific Gravity (H2O=1): SEE VAPOR DENSITY
pH NO DATA	Evaporation Rate: NOT APPLICABLE
Appearance/Odor: COLORLESS GAS WITH A PUNGENT ODOR.	

SECTION 10 - STABILITY AND REACTIVITY

- Chemical Stability:** YES
- Incompatible Material:** GLASS AND SILICATE CONTAINING MATERIALS, REACTS VIOLENTLY WITH WATER; ALKALINE EARTH MATERIALS; CALCIUM OXIDE; AND PLASTICS.
- Hazardous Polymerization:** WILL NOT OCCUR UNDER NORMAL CONDITIONS.
- Decomposition Products:** HYDROGEN FLUORIDE, FLUORBORIC ACID, BORIC ACID AND HYDROXY FLUOROBORIC ACIDS.

SECTION 11 - TOXICITY INFORMATION

LD50 ORAL (rat) = 310 mg/kg □ LC50 INHL (rat) = 1210 mg/kg □ LC50 INHL (mouse) = 3460 mg/cu m/2 hr □ SKIN (rabbit) = 0.5 ML CORROSIVE AND LETHAL.

SECTION 12 - ECOLOGICAL INFORMATION

AQUATIC TOXICITY: LC50 = 283 MG/L/96 HR/RAINBOW TROUT □ EC50 = 128 MG/L/48HR/WATER FLEA

SECTION 13 - DISPOSAL CONSIDERATIONS

DO NOT DISCHARGE INTO WATERWAYS OR SEWER SYSTEMS WITHOUT PRIOR APPROVAL.
DISPOSE OF WASTE MATERIALS ACCORDING TO ALL FEDERAL, STATE AND LOCAL REGULATIONS.

SECTION 14 - TRANSPORT INFORMATION

USA DOT Shipping Name: BORON TRIFLUORIDE, COMPRESSED
Hazard Class: 2.3 (POISON--INHALATION HAZARD, ZONE B)
UN/NA Number: UN1008
Packing Group: NOT APPLICABLE
Subsidiary Hazard:
Marine Pollutant: NO

SECTION 15 - REGULATORY INFORMATION

CERCLA RQ (lbs): 500

SARA Title III Section 312:

Acute **Chronic** **Flammable** **Sudden Release of Pressure** **Reactive**

SARA Title III Section 313: No

SARA Extremely Hazardous Substance: No

HMIS HAZARD RATING

Health: 3 **Fire:** 0 **Reactivity:** 1

0 - Least 1 - Slight 2 - Moderate 3 - High 4 - Extreme

SECTION 16 - OTHER INFORMATION

EPA Pesticide Registration Number: NOT APPLICABLE
NSF Maximum Use Level for Potable Water (Standard 60): NOT APPLICABLE
TSCA (Toxic Substance Control Act), 40 CFR 710:

Sources of the raw materials used in this mixture assure that all chemical ingredients present are in compliance with Section 8(b) Chemical Substance Inventory, or are otherwise in compliance with TSCA.

DISCLAIMER

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