



## Section 1 - Chemical Product and Company Identification

**Product Name** Boron Trifluoride Diethyl Etherate pure, 45-50% BF<sub>3</sub>  
**Product Code** 52519  
**CAS No** 109-63-7  
**Use for** Laboratory Chemicals.  
**Company Name** Sisco Research Laboratories Pvt. Ltd.  
**Address** 608, B Wing, Satellite Gazebo, Andheri Ghatkopar Link Road,  
Andheri (E), Mumbai - 400 099, India

## Section 2 - Composition/Information on Ingredients

CAS#	Chemical Name:	%	EINECS#
109-63-7	Boron trifluoride etherate	48-50%	203-689-8

## Section 3 - Hazards Identification

### EMERGENCY OVERVIEW

Flammable. Reacts violently with water. Harmful by inhalation and if swallowed. Causes severe burns.

Toxic : danger of serious damage to health by prolonged exposure through inhalation.

### Potential Health Effects

**Eye:** Causes eye burns. May cause irreversible eye injury.

**Skin:** Causes skin burns.

**Ingestion:** Harmful if swallowed. Causes gastrointestinal tract burns. Causes severe pain, nausea, vomiting, diarrhea, and shock.

**Inhalation:** Harmful if inhaled. Causes chemical burns to the respiratory tract. May cause abdominal pain, nausea, vomiting, and inflammation of the gums and mouth.

**Chronic:**

## Section 4 - First Aid Measures

**Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

**Skin:** Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

**Ingestion:** Get medical aid immediately. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

**Inhalation:** Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

**Notes to Physician:** Treat symptomatically and supportively.

## Section 5 - Fire Fighting Measures



**Product Code** 52519

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors can travel to a source of ignition and flash back. Can burn in a fire, releasing toxic vapors. Will burn if involved in a fire. Water Reactive. Material will react with water and may release a flammable and/or toxic gas. Flammable liquid and vapor.

**Extinguishing Media:** Use foam, dry chemical, or carbon dioxide. Use carbon dioxide or dry chemical. DO NOT USE WATER!

## Section 6 - Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Wear a self contained breathing apparatus and appropriate personal protection. (See Exposure Controls, Personal Protection section). Remove all sources of ignition. Use a spark-proof tool. Do not expose spill to water. Do not let this chemical enter the environment.

## Section 7 - Handling and Storage

**Handling:** Do not allow water to get into the container because of violent reaction. Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Take precautionary measures against static discharges. Do not ingest or inhale. Use and store under nitrogen. Use only in a chemical fume hood. This product may be under pressure; cool before opening.

**Storage:** Keep away from heat and flame. Store in a cool, dry place. Store in a tightly closed container. Flammables-area. Store protected from moisture. Store under an inert atmosphere.

## Section 8 - Exposure Control / Personal Protection

**Engineering Controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

**Exposure Limits** CAS# 109-63-7  
United States OSHA: 2.5 mg/m<sup>3</sup> TWA (as F) (Fluorides).

### Personal Protective Equipment

**Eyes:** Wear chemical splash goggles.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

## Section 9 - Physical and Chemical Properties



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**Product Code** 52519  
**Physical State:** Clear liquid  
**Color:** colorless to pale yellow  
**Boiling Point:** 126 - 127 deg C  
**Molecular Formula:** C<sub>4</sub>H<sub>10</sub>BF<sub>3</sub>O  
**Molecular Weight:** 141.93

## Section 10 - Stability and Reactivity

**Chemical Stability:** Moisture sensitive.  
**Conditions to Avoid:** Incompatible materials, ignition sources, exposure to moist air or water.  
**Incompatibilities with Other Materials :** Water, metals, strong oxidizing agents, acids, bases, alkali metals, steel.  
**Hazardous Decomposition Products :** Carbon monoxide, carbon dioxide, boron trifluoride, diethyl ether, hydrogen fluoride gas, oxides of boron.  
**Hazardous Polymerization :** Has not been reported.

## Section 11 - Toxicological Information

**RTECS#:** CAS# 109-63-7: None listed  
**LD50/LC50:** RTECS: Not available. Other: Oral, rat: LD50 = 496 mg/kg  
**Carcinogenicity:** Boron trifluoride etherate - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.  
**Other:** The toxicological properties have not been fully investigated.

## Section 12 - Ecological Information

**Ecotoxicity:** Fish: *Leuciscus idus*: LC50: 22-46 mg/l; 96h; .  
Daphnia: *Daphnia*: EC50: 31.69 mg/l; 48h; .

**Other:** Do not empty into drains.

## Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

## Section 14 - Transport Information

	IATA	IMO	RID/ADR
<b>Shipping Name:</b>	Boron Trifluoride Diethyl Etherate	Boron Trifluoride Diethyl Etherate	Boron Trifluoride Diethyl Etherate
<b>Hazard Class:</b>	8 (3)	8 (3)	8 (3)
<b>UN Number:</b>	2604	2604	2604
<b>Packing Group:</b>	I	I	I

## Section 15 - Regulatory Information



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**Product Code** 52519

## European/International Regulations

### European Labeling in Accordance with EC Directives

Hazard Symbols: T

Risk Phrases: R 10 Flammable.R 14 Reacts violently with water.  
R 20/22 Harmful by inhalation and if swallowed.R 35 Causes severe burns.R  
48/23 Toxic : danger of serious damage to health by prolonged exposure  
through inhalation.

Safety Phrases: S 8 Keep container dry.S 23 Do not inhale gas/fumes/vapour/spray.S 26 In case of  
contact with eyes, rinse immediately with plenty of water and seek medical  
advice.S 28A After contact with skin, wash immediately with plenty of  
water.S 36/37/39 Wear suitable protective clothing, gloves and eye/face  
protection.S 45 In case of accident or if you feel unwell, seek medical advice  
immediately (show the label where possible).

WGK (Water Danger/Protection)CAS# 109-63-7: Not available

Canada CAS# 109-63-7 is listed on Canada's DSL List

### US Federal

TSCA CAS# 109-63-7 is listed on the TSCA Inventory.

## Section 16 - Other Information

Sisco Research Laboratories Pvt. Ltd. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.