



MATERIAL SAFETY DATA SHEET

CONTACT : **LEONID CHEMICALS**
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Boron trifluoride etherate, ca. 48% BF₃

SECTION 1- CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS Name:

Boron trifluoride etherate, ca. 48% BF₃

Catalog Numbers:

17456-0000, 17456-0010, 17456-0025, 17456-0250, 17456-1000

Synonyms:

Boron trifluoride ethyl ether

Company Information:

LEONID CHEMICALS

62/A-2 1st Stage, Yeshwanthpur Industrial Suburb

Ashokpuram School Road

Bangalore-560 022, Karnataka, INDIA

Ph: +91-80-2337 8354, Fax: +91-80-2357 4827

SECTION 2- COMPOSITION, INFORMATION ON INGREDIENTS

CAS #	:	109-63-7
Chemical Name	:	Boron trifluoride etherate
%	:	Unlisted.
EINECS#	:	203-689-8
Hazard Symbols	:	F C
Risk Phrases	:	15 34

SECTION 3- HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Contact with water liberates extremely flammable gases. Causes burns. Moisture sensitive.

Potential Health Effects

Eye:

May cause irreversible eye injury.

Skin:

Causes skin burns.



Ingestion:

Causes severe pain, nausea, vomiting, diarrhea, and shock. The toxicological properties of this substance have not been fully investigated.

Inhalation:

May cause irritation of the respiratory tract with burning pain in the nose and throat, coughing, wheezing, shortness of breath and pulmonary edema. May cause abdominal pain, nausea, vomiting, and inflammation of the gums and mouth. The toxicological properties of this substance have not been fully investigated.

Chronic:

No information available.

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.

Skin:

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

Ingestion:

Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

Inhalation:

Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician:

No information available.

SECTION 5 - FIRE FIGHTING MEASURES

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. Combustible liquid.

Extinguishing Media:

Use carbon dioxide or dry chemical

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. Remove all sources of ignition. Use a spark-proof tool.

SECTION 7 - HANDLING AND STORAGE

Handling:

Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Take precautionary measures against static discharges. 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.

SECTION 8 - Exposure Controls, Personal Protection

Engineering Controls:

Use adequate ventilation to keep airborne concentrations low.

Personal Protective Equipment

Eyes:

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard En166.

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. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State	:	Clear liquid
Color	:	Colorless to pale yellow
Odor	:	No information available.
PH	:	No information available.
Vapor Pressure	:	60 mbar @ 20 deg C
Viscosity	:	10.5 deg C
Boiling Point	:	126 deg C @ 760.00mm Hg
Freezing/Melting Point	:	-60 deg C
Autoignition Temperature	:	185 deg C (365.00 deg F)
Flash Point	:	59 deg C (138.20 deg F)
Explosion Limits, lower	:	5.10 vol %
Explosion Limits, upper	:	18.20 vol %
Decomposition Temperature	:	110 deg C
Solubility in water	:	Reacts.

Specific Gravity/Density : 1.1280g/cm³
Molecular Formula : (C₂H₅)₂O.BF₃
Molecular Weight : 141.93

SECTION 10 - STABILITY AND REACTIVITY

Chemical Stability:
Stable under normal temperatures and pressures.

Conditions to Avoid:
Temperatures above recommended temperatures, incompatible materials, exposure to moist air or water.

Incompatibilities with Other Materials:
Water, metals, 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 unlisted.

LD50/LC50:
No information. available.

Carcinogenicity:
Boron trifluoride etherate - Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA. See actual entry in RTECS for complete information.

SECTION 12 - ECOLOGICAL INFORMATION

No information available.

SECTION 13 - DISPOSAL CONSIDERATIONS

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

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

SECTION 14 -TRANSPORT INFORMATION

IATA

Shipping Name : BORON TRIFLUORIDE DIETHYL ETHERATE
Hazard Class : 8
UN Number : 2604
Packing Group : II

IMO

Shipping Name : BORON TRIFLUORIDE DIETHYL ETHERATE
Hazard Class : 8
UN Number : 2604
Packing Group : II

RID/ADR

Shipping Name : BORON TRIFLUORIDE DIETHYL ETHERATE
Hazard Class : 8
UN Number : 2604
Packing group : II

SECTION 15 - REGULATORY INFORMATION

European/International Regulations
European Labeling in Accordance with EC Directives

Hazard Symbols:
F C

Risk Phrases:
R 15 Contact with water liberates extremely flammable gases. R 34 Causes burns.

Safety Phrases:
S 7/8 Keep container tightly closed and dry. S 25 Avoid contact with eyes. 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: No information available.

United Kingdom Occupational Exposure Limits
No information available.

United Kingdom Maximum Exposure Limits

No Information available.

Canada

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

Exposure Limits

No Information available.

US FEDERAL

TSCA

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

SECTION 16 - ADDITIONAL INFORMATION

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.

