

Material Safety Data Sheet

Boron trifluoride etherate, ca. 48% BF3

ACC# 18827

Section 1 - Chemical Product and Company Identification

MSDS Name: Boron trifluoride etherate, ca. 48% BF3

Catalog Numbers: AC174560010, AC174560025, AC174560250, AC174561000

Synonyms: Boron trifluoride ethyl ether.

Company Identification:

Acros Organics N.V.

One Reagent Lane

Fair Lawn, NJ 07410

For information in North America, call: 800-ACROS-01

For emergencies in the US, call CHEMTREC: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
109-63-7	Boron trifluoride etherate	100	203-689-8

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: clear straw colored liquid.

Danger! Causes eye and skin burns. Causes digestive and respiratory tract burns. **Flammable liquid and vapor.** Harmful if swallowed. Moisture sensitive.

Target Organs: Eyes, skin, mucous membranes.

Potential Health Effects

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

Skin: Causes skin burns.

Ingestion: Harmful if swallowed. Causes digestive tract burns with immediate pain, swelling of the throat, convulsions, and possible coma.

Inhalation: Causes severe irritation of upper respiratory tract with coughing, burns, breathing difficulty, and possible coma.

Chronic: No information found.

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

Ingestion: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.

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. Get medical aid.

Notes to Physician: Treat symptomatically and supportively.

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.

Extinguishing Media: Use carbon dioxide or dry chemical.

Flash Point: 110 deg C (230.00 deg F)

Autoignition Temperature: 185 deg C (365.00 deg F)

Explosion Limits, Lower: 5.10 vol %

Upper: 18.20 vol %

NFPA Rating: (estimated) Health: ; Flammability: ; Instability:

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. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Use a spark-proof tool.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Wash hands before eating. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. 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.

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 process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Boron trifluoride etherate	none listed	none listed	2.5 mg/m3 TWA (as F) (listed under Fluorides).

OSHA Vacated PELs: Boron trifluoride etherate: No OSHA Vacated PELs are listed for this chemical.

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

Physical State: Liquid

Appearance: clear straw colored

Odor: Not available.

pH: Not available.

Vapor Pressure: 60 mbar @ 20 C

Vapor Density: 4.9

Evaporation Rate: Not available.

Viscosity: 10.5 deg C

Boiling Point: 126 deg C @ 760 mm Hg

Freezing/Melting Point: -60 deg C

Decomposition Temperature: 110 deg C

Solubility: reacts with water

Specific Gravity/Density: 1.1280g/cm3

Molecular Formula: C4H10BF3O

Molecular Weight: 141.93

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Mechanical shock, ignition sources, temperatures above 50°C (122°F), exposure to moist air or water.

Incompatibilities with Other Materials: Acids, bases, alcohols, alkali metals, steel, water, and metals.

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:

Not available.

Carcinogenicity:

CAS# 109-63-7: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No data available.

Teratogenicity: No data available.

Reproductive Effects: No data available.

Mutagenicity: No data available.

Neurotoxicity: No data available.

Other Studies:

Section 12 - Ecological Information

No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	BORON TRIFLUORIDE DIETHYL ETHERATE	BORON TRIFLUORIDE DIETHYL ETHERAT
Hazard Class:	8	8(3)
UN Number:	UN2604	UN2604
Packing Group:	I	I

Section 15 - Regulatory Information

US FEDERAL

TSCA

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

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 109-63-7: immediate, delayed, fire, reactive.

Section 313

No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 109-63-7 can be found on the following state right to know lists: California, (listed as Fluorides), New Jersey, Pennsylvania, Minnesota, (listed as Fluorides), Massachusetts.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

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 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).

S 7/8 Keep container tightly closed and dry.

WGK (Water Danger/Protection)

CAS# 109-63-7: No information available.

Canada - DSL/NDSL

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

Canada - WHMIS

not available.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 109-63-7 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 9/02/1997

Revision #4 Date: 10/26/2005

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 event shall Fisher 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 Fisher has been advised of the possibility of such damages.