

# Material Safety Data Sheet

## Boron trifluoride - acetic acid complex, c a. 33% bf3

ACC# 41878

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Boron trifluoride - acetic acid complex, c a. 33% bf3

**Catalog Numbers:** AC277220000, AC277220250, AC277225000

**Synonyms:** Trifluoroborane compound with acetic acid (1:2)

**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
373-61-5	Boron trifluoride - acetic acid complex, ca. 33% BF3	100 %	206-768-5

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Appearance: Clear liquid. Flash Point: 84 deg C.

**Danger!** Corrosive. Harmful if swallowed. Causes eye and skin irritation. **Combustible liquid and vapor.** Causes digestive and respiratory tract irritation. Moisture sensitive.

**Target Organs:** None.

#### Potential Health Effects

**Eye:** Causes eye burns.

**Skin:** Causes skin burns.

**Ingestion:** Harmful if swallowed. Causes gastrointestinal tract burns.

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

**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:** 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. Can burn in a fire, releasing toxic vapors.

**Extinguishing Media:** Use foam, dry chemical, or carbon dioxide.

**Flash Point:** 84 deg C ( 183.20 deg F)

**Autoignition Temperature:** Not available.

**Explosion Limits, Lower:**Not available.

**Upper:** Not available.

**NFPA Rating:** Not published.

### 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. Scoop up with a nonsparking tool, then place into a suitable container for disposal.

### Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Wash hands before eating. Use with adequate ventilation. Use spark-proof tools and explosion proof equipment. Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale.  
**Storage:** Keep away from sources of ignition. Store in a cool, dry place. Store in a tightly closed container. Keep under a nitrogen blanket.

## Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Use adequate general or local explosion-proof ventilation to keep airborne levels to acceptable levels.

### Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Boron trifluoride - acetic acid complex, ca. 33% BF <sub>3</sub>	none listed	none listed	2.5 mg/m <sup>3</sup> TWA (as F) (listed under Fluorides).

**OSHA Vacated PELs:** Boron trifluoride - acetic acid complex, ca. 33% BF<sub>3</sub>: No OSHA Vacated PELs are listed for this chemical.

### 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. 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

**Odor:** Not available.

**pH:** Not available.

**Vapor Pressure:** 9 hPa @ 20 C

**Vapor Density:** Not available.

**Evaporation Rate:** Not available.

**Viscosity:** Not available.

**Boiling Point:** 140 - 148 deg C @ 760.00mm Hg

**Freezing/Melting Point:** -47 deg C

**Decomposition Temperature:** Not available.

**Solubility:** reacts

**Specific Gravity/Density:** 1.3500g/cm<sup>3</sup>

**Molecular Formula:** BF<sub>3</sub>.C<sub>4</sub>H<sub>8</sub>O<sub>4</sub>

**Molecular Weight:** 187.92

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures.

**Conditions to Avoid:** High temperatures, incompatible materials, ignition sources, exposure to moist air or water, temperatures above 75°C (167°F).

**Incompatibilities with Other Materials:** Strong oxidizing agents and metals.

**Hazardous Decomposition Products:** Carbon monoxide, carbon dioxide, hydrogen fluoride gas, oxides of boron.

**Hazardous Polymerization:** Has not been reported.

## Section 11 - Toxicological Information

**RTECS#:**

**CAS#** 373-61-5 unlisted.

**LD50/LC50:**

Not available.

**Carcinogenicity:**

CAS# 373-61-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**Epidemiology:** No information available.

**Teratogenicity:** No information available.

**Reproductive Effects:** No information available.

**Mutagenicity:** No information available.

**Neurotoxicity:** No information available.

**Other Studies:**

## Section 12 - Ecological Information

**Ecotoxicity:** No data available. Harmful to fish and plankton on account of Ph-shift.

**Environmental:** No information available.

**Physical:** No information available.

**Other:** 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
<b>Shipping Name:</b>	BORON TRIFLUORIDE ACETIC ACID COMPLEX	BORON TRIFLUORIDE ACETIC ACID
<b>Hazard Class:</b>	8	8
<b>UN Number:</b>	UN1742	UN1742
<b>Packing Group:</b>	II	II
<b>Additional Info:</b>		COMPLEX

## Section 15 - Regulatory Information

### US FEDERAL

#### TSCA

CAS# 373-61-5 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.

#### 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# 373-61-5 can be found on the following state right to know lists: California, (listed as Fluorides), Pennsylvania, (listed as Fluorides), Minnesota, (listed as Fluorides).

#### 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:

C

#### Risk Phrases:

R 22 Harmful if swallowed.

R 35 Causes severe 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).

#### WGK (Water Danger/Protection)

CAS# 373-61-5: No information available.

#### Canada - DSL/NDSL

CAS# 373-61-5 is listed on Canada's NDSL 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# 373-61-5 is not listed on the Canadian Ingredient Disclosure List.

**Section 16 - Additional Information**

**MSDS Creation Date:** 9/02/1997

**Revision #3 Date:** 10/03/2005

*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.*