Material Safety Data Sheet
Boron Trifluoride Dimethanol Complex (50-52 wt% BF3)

ACC# 62127

Section 1 - Chemical Product and Company Identification

MSDS Name: Boron Trifluoride Dimethanol Complex (50-52 wt% BF3)
Catalog Numbers: AC158900000, AC158900010, AC158900050, AC158900500, AC158902500
Synonyms: Anca 1040; Boron Fluoride.
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
7637-07-2	Boron trifluoride	50-52.0	231-569-5
67-56-1	Methyl alcohol	Balance	200-659-6
2802-68-8	Borate(1-), trifluoromethoxy-, (t-4)-, hydrogen, compound wi		220-543-9

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: clear almost colorless liquid. Flash Point: 68 deg C.
Danger! Corrosive. Causes eye and skin burns. Causes digestive and respiratory tract burns. Harmful if inhaled. May be fatal or cause blindness if swallowed. **Combustible liquid and vapor.** May be absorbed through intact skin. May cause central nervous system depression. May cause kidney damage. Moisture sensitive. May cause reproductive and fetal effects.
Target Organs: Kidneys, central nervous system, eyes.

Potential Health Effects

Eye: Causes eye burns. Vapors may cause eye irritation. May cause painful sensitization to light.
Skin: Causes skin burns. Prolonged and/or repeated contact may cause irritation and/or dermatitis. May be absorbed through the skin.
Ingestion: May be fatal or cause blindness if swallowed. Causes gastrointestinal tract burns. May cause kidney damage. May cause systemic toxicity with acidosis. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure.
Inhalation: Harmful if inhaled. Causes chemical burns to the respiratory tract. May cause visual impairment and possible permanent blindness. May cause effects similar to those described for ingestion.
Chronic: Prolonged or repeated skin contact may cause dermatitis. Chronic inhalation and ingestion may cause effects similar to those of acute inhalation and ingestion.

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 imme diately. Do NOT allow victim to rub eyes or keep eyes closed.
Skin: Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Discard contaminated clothing in a manner which limits further exposure.
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 immediately.
Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.
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. Use water spray to keep fire-exposed containers cool. Combustible liquid. Containers may explode when heated.
Extinguishing Media: Do NOT get water inside containers. Do NOT use straight streams of water. For small fires, use dry chemical, carbon dioxide, or water spray. For large fires, use dry chemical, carbon dioxide, alcohol-resistant foam, or water spray. Cool containers with flooding quantities of water until well after fire is out.
Flash Point: 68 deg C (154.40 deg F)
Autoignition Temperature: 420 deg C (788.00 deg F)
Explosion Limits, Lower:4.00 vol %
Upper: Not available.
NFPA Rating: (estimated) Health: ; Flammability: 2; 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. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. Do not get water inside containers.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Do not get in eyes, on skin, or on clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Keep away from heat, sparks and flame. Do not ingest or inhale. Use only in a chemical fume hood. Discard contaminated shoes. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.
Storage: Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Store protected from moisture.

Section 8 - Exposure Controls, 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. Use only under a chemical fume hood.
Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Boron trifluoride	2.5 mg/m3 TWA (as F) (listed under Fluorides).; 1 ppm Ceiling	2.5 mg/m3 TWA (inorganic solids, as F) (listed under Fluorides, inorganic). 25 ppm IDLH	2.5 mg/m3 TWA (as F) (listed under Fluorides).2.5 mg/m3 TWA (as F) (listed under Fluorides).; 1 ppm Ceiling; 3 mg/m3 Ceiling
Methyl alcohol	200 ppm TWA; 250 ppm STEL; Skin - potential significant contribution to overall exposure by the cutaneous r oute	200 ppm TWA; 260 mg/m3 TWA 6000 ppm IDLH	200 ppm TWA; 260 mg/m3 TWA
Borate(1-), trifluoromethoxy-, (t-4)-, hydrogen, compound wi	none listed	none listed	none listed

OSHA Vacated PELs: Boron trifluoride: No OSHA Vacated PELs are listed for this chemical. Methyl alcohol: 200 ppm TWA; 260 mg/m3 TWA Borate(1-), trifluoromethoxy-, (t-4)-, hydrogen, compound wi: 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 almost colorless
Odor: pungent odor
pH: Acidic
Vapor Pressure: 26 hPa @ 50 C
Vapor Density: 1.11 (MeOH)
Evaporation Rate: Not available.
Viscosity: 0.614mPa (MeOH)
Boiling Point: 59 deg C @ 4.00mm Hg
Freezing/Melting Point:-20 deg C
Decomposition Temperature:> 60 deg C
Solubility: hydrolysis
Specific Gravity/Density:1.2030g/cm3
Molecular Formula: Not applicable.
Molecular Weight: Not available.

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: High temperatures, incompatible materials, ignition sources, excess heat, exposure to moist air or water.
Incompatibilities with Other Materials: Acids (mineral, non-oxidizing, e.g. hydrochloric acid, hydrofluoric acid, muriatic acid, phosphoric acid), acids (mineral, oxidizing, e.g. chromic acid, hypochlorous acid, nitric acid, sulfuric acid), acids (organic, e.g. acetic acid, benzoic acid, formic acid, methanoic acid, oxalic acid), azo, diazo, and hydrazines (e.g. dimethyl hydrazine, hydrazine, methyl hydrazine), isocyanates (e.g. methyl isocyanate), metals (alkali and alkaline, e.g. cesium, potassium, sodium), nitrides (e.g. potassium nitride, sodium nitride), peroxides and hydroperoxides (organic, e.g. acetyl peroxide, benzoyl peroxide, butyl peroxide, methyl ethyl ketone peroxide), epoxides (e.g. butyl glycidyl ether), oxidizing agents (strong, e.g. bromine, hydrogen peroxide, nitrogen dioxide, potassium nitrate), reducing agents (strong, e.g. aluminum carbide, chlorosilane, hydrogen phosphide, lithium hydride), water reactive substances (e.g. acetic anyhdride, alkyl aluminum chloride, calcium carbide, ethyl dichlorosilane), aldehydes (e.g. acetaldehyde, acrolein, chloral hydrate, formaldehyde), carbamates (e.g. carbanolate, carbofuran), esters (e.g. butyl acetate, ethyl acetate, propyl formate), halogenated

organics (e.g. dibromoethane, hexachlorobenzene, methyl chloride, trichloroethylene), ketones (e.g. acetone, acetophenone, MEK, MIBK), metals as powders (e.g. hafnium, raney nickel), metals and metal compounds (toxic, e.g. beryllium, lead acetate, nickel carbonyl, tetraethyl lead), nitriles (e.g. acetonitrile, methyl cyanide), nitro compounds (organic, e.g. nitrobenzene, nitroglycerine, picric acid, trinitrotoluene), organophosphates, phosphothioates (e.g. methylparathion, parathion, phorate, thionazin), explosives (e.g. ammonium nitrate, hydrazoic acid, sodium azide), polymerizable compounds (e.g. butadiene, methyl acrylate, styrene, vinyl chloride), alkaline earth metals, alkyl nitrates.
Hazardous Decomposition Products: Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide, hydrogen fluoride gas, boron trifluoride, formaldehyde.
Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:
CAS# 7637-07-2: ED2275000
CAS# 67-56-1: PC1400000
CAS# 2802-68-8 unlisted.
LD50/LC50:
CAS# 7637-07-2:
Inhalation, mouse: LC50 = 3460 mg/m3/2H;
Inhalation, mouse: LC50 = 3460 mg/m3;
Inhalation, rat: LC50 = 1180 mg/m3/4H;
Inhalation, rat: LC50 = 1180 mg/m3;
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CAS# 67-56-1:
Draize test, rabbit, eye: 40 mg Moderate;
Draize test, rabbit, eye: 100 mg/24H Moderate;
Draize test, rabbit, skin: 20 mg/24H Moderate;
Inhalation, rabbit: LC50 = 81000 mg/m3/14H;
Inhalation, rat: LC50 = 64000 ppm/4H;
Oral, mouse: LD50 = 7300 mg/kg;
Oral, rabbit: LD50 = 14200 mg/kg;
Oral, rat: LD50 = 5600 mg/kg;
Skin, rabbit: LD50 = 15800 mg/kg;
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CAS# 2802-68-8:
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Carcinogenicity:
CAS# 7637-07-2: Not listed by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 67-56-1: Not listed by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 2802-68-8: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: Methanol has been shown to produce fetotoxicity in the embryo or fetus of laboratory animals. Specific developmental abnormalities include cardiovascular, musculoskeletal, and urogenital systems.
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:
CAS# 67-56-1: waste number U154 (Ignitable waste).

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.	CORROSIVE LIQUID BASIC ORGANIC (BORON TRIFLUORIDE DIMETHANOL
Hazard Class:	8	8
UN Number:	UN3267	UN3267
Packing Group:	II	II
Additional Info:		NOS (BORON TRIFLUORIDE DIMETHANOL

Section 15 - Regulatory Information

US FEDERAL

TSCA
CAS# 7637-07-2 is listed on the TSCA inventory.
CAS# 67-56-1 is listed on the TSCA inventory.
CAS# 2802-68-8 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
CAS# 67-56-1: 5000 lb final RQ; 2270 kg final RQ
SARA Section 302 Extremely Hazardous Substances
CAS# 7637-07-2: 500 lb TPQ
SARA Codes
CAS # 7637-07-2: immediate, delayed, fire.
CAS # 67-56-1: immediate, fire.
Section 313
This material contains Boron trifluoride (CAS# 7637-07-2, 50-52.0%),which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR
This material contains Methyl alcohol (CAS# 67-56-1, Balance%),which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.
Clean Air Act:
CAS# 67-56-1 is listed as a hazardous air pollutant (HAP).

This material does not contain any Class 1 Ozone depletors.
This material does not contain any Class 2 Ozone depletors.
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:
CAS# 7637-07-2 is considered highly hazardous by OSHA.
STATE
CAS# 7637-07-2 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.
CAS# 67-56-1 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.
CAS# 2802-68-8 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

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:
T F
Risk Phrases:
R 11 Highly flammable.
R 23/25 Toxic by inhalation and if swallowed.
R 34 Causes burns.

Safety Phrases:
S 16 Keep away from sources of ignition - No smoking.
S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S 36 Wear suitable protective clothing.

WGK (Water Danger/Protection)
CAS# 7637-07-2: 1
CAS# 67-56-1: 1
CAS# 2802-68-8: No information available.
Canada - DSL/NDSL
CAS# 7637-07-2 is listed on Canada's DSL List.
CAS# 67-56-1 is listed on Canada's DSL List.
CAS# 2802-68-8 is listed on Canada's NDSL List.
Canada - WHMIS
This product has a WHMIS classification of E, D1A.
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# 7637-07-2 is listed on the Canadian Ingredient Disclosure List.
CAS# 67-56-1 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 4/21/1998

Revision #5 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.