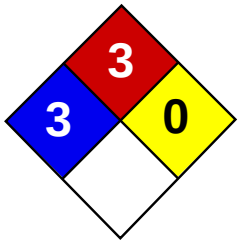

Material Safety Data Sheet
Boron Trifluoride 10-15% in MeOH MSDS

Section 1: Chemical Product and Company Identification

Product Name: Boron Trifluoride 10-15% in MeOH

Catalog Codes: SLB3979

CAS#: Mixture.

RTECS: Not applicable.

TSCA: TSCA 8(b) inventory: Boron Trifluoride; Methyl alcohol

CI#: Not applicable.

Synonym:

Chemical Name: Boron Trifluoride 10-15% in MeOH

Chemical Formula: Not applicable.

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call: 1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Boron Trifluoride	7637-07-2	10-15
Methyl alcohol	67-56-1	85-90

Toxicological Data on Ingredients: Boron Trifluoride: VAPOR (LC50): Acute: 1180 mg/m 4 hours [Guinea pig]. 3460 mg/m 2 hours [Mouse]. Methyl alcohol: ORAL (LD50): Acute: 5628 mg/kg [Rat.]. DERMAL (LD50): Acute: 15800 mg/kg [Rabbit.].

Section 3: Hazards Identification

Potential Acute Health Effects:
Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator). Corrosive to skin and eyes on contact. Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. Skin contact may produce burns. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Severe over-exposure can result in death.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Classified 4 (No evidence.) by NTP, None. by OSHA, None. by NIOSH [Boron Trifluoride]. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female, Reproductive system/toxin/male [PROVEN] [Boron Trifluoride 10-15% in MeOH]. The

substance is toxic to blood, the reproductive system, upper respiratory tract, central nervous system (CNS), eye, lens or cornea. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Get medical attention immediately.

Skin Contact:
In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used.Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: The lowest known value is 463.89°C (867°F) (Methyl alcohol).

Flash Points: The lowest known value is CLOSED CUP: 12°C (53.6°F). (Methyl alcohol)

Flammable Limits: The greatest known range is LOWER: 6% UPPER: 36.5% (Methyl alcohol)

Products of Combustion: These products are carbon oxides (CO, CO2).

Fire Hazards in Presence of Various Substances:
Highly flammable in presence of open flames and sparks, of heat, of combustible materials. Non-flammable in presence of shocks, of oxidizing materials, of reducing materials, of organic materials, of metals, of acids, of alkalis, of moisture.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
Flammable liquid, soluble or dispersed in water. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use alcohol foam, water spray or fog.

Special Remarks on Fire Hazards:

Explosive in the form of vapor when exposed to heat or flame. Vapor may travel considerable distance to source of ignition and flash back. When heated to decomposition, it emits acrid smoke and irritating fumes. CAUTION: MAY BURN WITH NEAR INVISIBLE FLAME (Methyl alcohol)

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill:
Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

Large Spill:
Flammable liquid. Corrosive liquid. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Use water spray curtain to divert vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep locked up.. Keep under inert atmosphere. Keep container dry. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Never add water to this product. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, moisture.

Storage:
Keep container tightly closed. Keep container in a cool, well-ventilated area. Keep from any possible contact with water. Do not allow water to get into container because of violent reaction. Store between 8°C (46.4°F).

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:
Face shield. Full suit. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves. Boots.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
Boron Trifluoride CEIL: 2.8 (mg/m3) from ACGIH (TLV) [United States] [1998] STEL: 3 from NIOSH Methyl alcohol TWA: 200 STEL: 250 from ACGIH (TLV) [United States] [1995] TWA: 262 STEL: 328 from ACGIH (TLV) [United States] [1995] Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Odorless.

Taste: Not available.

Molecular Weight: Not applicable.

Color: Not available.

pH (1% soln/water): Neutral.

Boiling Point: The lowest known value is 64.5°C (148.1°F) (Methyl alcohol).

Melting Point: May start to solidify at -97.8°C (-144°F) based on data for: Methyl alcohol.

Critical Temperature: Not available.

Specific Gravity: Weighted average: 0.87 (Water = 1)

Vapor Pressure: The highest known value is 13 kPa (@ 20°C) (Methyl alcohol).

Vapor Density: The highest known value is 1.11 (Air = 1) (Methyl alcohol).

Volatility: Not available.

Odor Threshold: The highest known value is 160 ppm (Methyl alcohol)

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties:
Is not dispersed in methanol, diethyl ether. See solubility in water, methanol, diethyl ether.

Solubility:
Easily soluble in methanol, diethyl ether. Partially soluble in cold water, hot water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances:
Highly reactive with oxidizing agents. Reactive with moisture. The product reacts violently with water to emit flammable but non toxic gases.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Boron Trifluoride will attack some forms of plastics, rubber, and coating (Boron Trifluoride)

Polymerization: Yes.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Eye contact. Inhalation. Ingestion.

Toxicity to Animals:
Acute oral toxicity (LD50): 5628 mg/kg [Rat.]. (Methyl alcohol). Acute dermal toxicity (LD50): 15800 mg/kg [Rabbit.]. (Methyl alcohol).

Chronic Effects on Humans:
CARCINOGENIC EFFECTS: Classified 4 (No evidence.) by NTP, None. by OSHA, None. by NIOSH [Boron Trifluoride]. DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female, Reproductive system/toxin/male [PROVEN] [Boron Trifluoride 10-15% in MeOH]. Causes damage to the following organs: blood, the reproductive system, upper respiratory tract, central nervous system (CNS), eye, lens or cornea.

Other Toxic Effects on Humans:
Extremely hazardous in case of skin contact (corrosive), of eye contact (corrosive), of inhalation (lung corrosive). Hazardous in case of ingestion, .

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans:
0040 Passes through the placental barrier. May be fatal or cause blindness if swallowed. (Methyl alcohol)

Special Remarks on other Toxic Effects on Humans: Narcotic. (Methyl alcohol)

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification: CLASS 3: Flammable liquid.

Identification:
: Flammable Liquid, Corrosive, n.o.s(Boron Trifluoride; Methanol, Solution) (Methyl alcohol) UNNA: UN2924 PG: II

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:
Rhode Island RTK hazardous substances: Boron Trifluoride Pennsylvania RTK: Methyl alcohol Florida: Boron Trifluoride Massachusetts RTK: Boron Trifluoride; Methyl alcohol Massachusetts spill list: Boron Trifluoride TSCA 8(b) inventory: Boron Trifluoride; Methyl alcohol TSCA 8(d) H and S data reporting: Boron Trifluoride SARA 302/304/311/312 extremely hazardous substances: Boron Trifluoride SARA 313 toxic chemical notification and release reporting: Boron Trifluoride 12.5%; Methyl alcohol 87.5% CERCLA: Hazardous substances.: Boron Trifluoride: 1 lbs. (0.4536 kg); Methyl alcohol;

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada):
CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC). CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC):
R11- Highly flammable. R14- Reacts violently with water. R26- Very toxic by inhalation. R35- Causes severe burns. R60- May impair fertility.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 3

Reactivity: 1

Personal Protection:

National Fire Protection Association (U.S.A.):

Health: 3

Flammability: 3

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves. Full suit. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Face shield.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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