



## MATERIAL SAFETY DATA SHEET

CONTACT : **LEONID CHEMICALS**  
62/A-2 2nd Stage, Industrial Suburb  
Ashokpuram School Road, Yeshwanthpur  
Bangalore-560 022, INDIA  
Ph: +91-80-2337 8354, Fax: +91-80-2357

Boric Acid

### SECTION 1- CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS Name:

Barium chloride dihydrate, p.a.

Catalog Numbers:

B/3750, B/3760, B/3800, B/3820, B/P560, BP/B190, BPE168-1, BPE168-500

Synonyms:

Boracic acid, hydrogen borate, orthoboric acid.

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 #	:	10043-35-3
Chemical Name	:	Boric acid (H3BO3)
%	:	>99%
EINECS#	:	233-139-2
Hazard Symbols	:	Unlisted.
Risk Phrases	:	Unlisted.

### SECTION 3- HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

No information available.

Potential Health Effects

Eye:

May cause eye irritation.

Skin:

Causes skin irritation. May be absorbed through damaged or abraded skin in harmful amounts.



#### Ingestion:

Symptoms may include: headache, excitement, fatigue, nausea, vomiting, stupor, and coma. May cause circulatory system failure. 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. May cause digestive tract disturbances.

#### Inhalation:

May cause respiratory tract irritation.

#### Chronic:

Prolonged or repeated skin contact may cause dermatitis. Prolonged or repeated exposure may cause gastrointestinal irritation and kidney damage.

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### SECTION 4 - FIRST AID MEASURES

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#### Eyes:

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

#### Skin:

Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.

#### Ingestion:

Induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Get medical aid immediately.

#### 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.

#### Notes to Physician:

No information available.

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### SECTION 5 - FIRE FIGHTING MEASURES

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#### General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

#### Extinguishing Media:

Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.

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## SECTION 6 - ACCIDENTAL RELEASE MEASURES

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### General Information:

Use proper personal protective equipment as indicated in Section 8.

### Spills/Leaks:

Vacuum or sweep up material and place into a suitable disposal container. Avoid generating dusty conditions.

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## SECTION 7 - HANDLING AND STORAGE

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### Handling:

Wash thoroughly after handling. Use with adequate ventilation. Do not get on skin or in eyes. Avoid ingestion and inhalation.

### Storage:

Store in a cool, dry, well-ventilated area away from incompatible substances.

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## SECTION 8 - Exposure Controls, Personal Protection

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### Engineering Controls:

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

### 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.

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## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

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Physical State	:	Solid
Color	:	Fine granular white powder.
Odor	:	None.
PH	:	5.2 (1% sol. at 20C)
Vapor Pressure	:	No information available.
Viscosity	:	Not applicable.
Boiling Point	:	No information available.
Freezing/Melting Point	:	339 deg F
Autoignition Temperature	:	No information available.
Flash Point	:	No information available.
Explosion Limits, lower	:	No information available.
Explosion Limits, upper	:	No information available.
Decomposition Temperature	:	No information available.
Solubility in water	:	4.9g/100g water at 20C.
Specific Gravity/Density	:	1.44 (Water=1)
Molecular Formula	:	H3BO3
Molecular Weight	:	61.8292

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## SECTION 10 - STABILITY AND REACTIVITY

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### Chemical Stability:

Stable at room temperature in closed containers under normal storage and handling conditions.

### Conditions to Avoid:

High temperatures.

### Incompatibilities with Other Materials:

Incompatible with acetic anhydride and potassium. Reacts with basic materials to form borate salts.

### Hazardous Decomposition Products:

None.

### Hazardous Polymerization:

Has not been reported.

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SECTION 11 - TOXICOLOGICAL INFORMATION  
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RTECS#:

CAS# 10043-35-3: ED4550000 ED4560000

LD50/LC50:

CAS# 10043-35-3: Oral, mouse: LD50 = 3450 mg/kg; Oral, rat: LD50 = 2660 mg/kg;  
Oral, rat: LD50 = 2500 mg/kg.

Carcinogenicity:

Boric acid (H3BO3) - Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

Other:

See actual entry in RTECS for complete information.

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SECTION 12 - ECOLOGICAL INFORMATION  
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Ecotoxicity:

Mosquito fish (fresh water) TLm=1800 ppm/24H Mosquito fish (fresh water) TLm=1800 ppm/24H

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SECTION 13 - DISPOSAL CONSIDERATIONS  
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Products which are considered hazardous for supply are classified as Special Waste and the disposal of such chemicals is covered by regulations which may vary according to location. Contact a specialist disposal company or the local waste regulator for advice. Empty containers must be decontaminated before returning for recycling.

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SECTION 14 - TRANSPORT INFORMATION  
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IATA

Shipping Name : BORON TRIFLUORIDE ACETIC ACID COMPLEX  
Hazard Class : 8  
UN Number : 1742  
Packing Group : II

IMO

Shipping Name : BORON TRIFLUORIDE ACETIC ACID COMPLEX  
Hazard Class : 8  
UN Number : 1742  
Packing Group : II

RID/ADR

Shipping Name : BORON TRIFLUORIDE ACETIC ACID COMPLEX  
Hazard Class : 8  
UN Number : 1742  
Packing Group : II

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## SECTION 15 - REGULATORY INFORMATION

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European/International Regulations  
European Labeling in Accordance with EC Directives

Hazard Symbols:  
No Information available.

Risk Phrases:  
No Information available.

Safety Phrases:  
No Information available.

WGK (Water Danger/Protection)  
CAS# 10043-35-3: 1  
United Kingdom Occupational Exposure Limits

United Kingdom Maximum Exposure Limits  
No Information available.

Canada  
CAS# 10043-35-3 is listed on Canada's DSL List.  
CAS# 10043-35-3 is listed on Canada's Ingredient Disclosure List.

Exposure Limits  
CAS# 10043-35-3: OEL-RUSSIA:STEL 10 mg/m<sup>3</sup>

US FEDERAL  
TSCA  
CAS# 10043-35-3 is listed on the TSCA inventory. rous form is on the inventory (40CFR720.3(u)(2)).

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## SECTION 16 - ADDITIONAL INFORMATION

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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.

