

SAFETY DATA SHEET

1 PRODUCT AND COMPANY IDENTIFICATION

Product name: Boric Acid

Product No.: 5168-05

Manufacturer:

Avantor Performance Materials, Inc.
3477 Corporate Parkway, Suite 200
Center Valley, PA 18034
U.S.A.

Telephone:

Customer Service: 855-282-6867

Contact Person: Environmental Health & Safety

e-mail: info@avantormaterials.com

Emergency telephone:

24 Hour Emergency: 908-859-2151

Chemtrec: 800-424-9300

2 HAZARDS IDENTIFICATION

Emergency Overview:

Appearance:

Color:

White

Form :

Granules or powder

Odor:

Odorless

Signal words

DANGER!

Potential Health Effects:

General

Irritating to eyes, respiratory system and skin. May cause drowsiness or dizziness. May damage fertility or the unborn child. Prolonged exposure may cause chronic effects.

Inhalation:

Irritating to respiratory system. May cause headaches and dizziness.

Skin:

Causes skin irritation.

Eye:

Causes eye irritation.

Ingestion:

May be harmful if swallowed. May cause irritation of the gastrointestinal tract.

Chronic Effects:

Can cause adverse reproductive effects - such as birth defects, miscarriages, or infertility.

Routes of Exposure:

Skin and/or eye contact., Inhalation, Ingestion

Target Organs:

Central nervous system, reproductive organs

Environment:

The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

3 COMPOSITION / INFORMATION ON INGREDIENTS

General information:

Hazardous Component(s):

Chemical name	CAS-No.	Concentration
BORIC ACID	10043-35-3	90 - 100%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4 FIRST AID MEASURES

General:	Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.
Inhalation:	Move to fresh air. Get medical attention if symptoms persist.
Skin contact:	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash contaminated clothing before reuse. Get medical attention if symptoms occur.
Eye contact:	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention if irritation persists after washing.
Ingestion:	Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.
Notes to the physician:	
Treatment:	Symptoms may be delayed.

5 FIRE-FIGHTING MEASURES

Extinguishing media:	The product is non-combustible. Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media:	None known.
Unusual Fire & Explosion Hazards:	None known.
Special Fire Fighting Procedures:	Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool.
Protective Measures:	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6 ACCIDENTAL RELEASE MEASURES

Personal precautions:	Keep unauthorized personnel away. Keep upwind. Ventilate closed spaces before entering them. See Section 8 of the MSDS for Personal Protective Equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid inhalation of dust.
Environmental precautions:	Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.

Spill Cleanup Methods: Sweep up and place in a clearly labeled container for chemical waste. Clean surface thoroughly to remove residual contamination.

Notification Procedures: Inform authorities if large amounts are involved.

7 HANDLING AND STORAGE

Handling: Wash hands thoroughly after handling. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. Avoid contact with skin. Avoid inhalation of dust.

Storage: Keep container tightly closed. Store in a dry place. Store in a well-ventilated place.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits

Chemical name	Type	Exposure Limit values	Source
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Protective Measures: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area.

Respiratory Protection: In case of inadequate ventilation use suitable respirator. Air-purifying respirator with a high efficiency particulate filter.

Eye protection: Wear safety glasses with side shields (or goggles).

Skin and Body Protection: Wear suitable protective clothing and gloves.

Hygiene measures: Provide eyewash station and safety shower. Observe good industrial hygiene practices. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Wash contaminated clothing before reuse. Avoid contact with skin. Wash hands before breaks and immediately after handling the product.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical State:	Solid
Form:	Granules or powder
Color:	White
Odor:	Odorless
Odor Threshold:	No data available.
pH:	5.1 0.1 molar solution
Melting Point:	170.9 °C
Boiling Point:	No data available.
Flash Point:	Not applicable
Evaporation Rate:	No data available.

Flammability (solid, gas):	No data available.
Flammability Limit - Upper (%)-:	No data available.
Flammability Limit - Lower (%)-:	No data available.
Vapor pressure:	No data available.
Vapor density (air=1):	No data available.
Relative density:	1.435 (15 °C)
Solubility(ies)	
Solubility in Water:	Slightly Soluble
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Autoignition Temperature:	No data available.
Decomposition Temperature:	No data available.
Viscosity:	No data available.
Explosive properties:	No data available.
Oxidizing properties:	No data available.

10 STABILITY AND REACTIVITY

Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	Hazardous polymerization does not occur.
Conditions to avoid:	Water, moisture.
Incompatible materials:	Strong oxidizing agents. Alkalies. Potassium
Hazardous decomposition products:	None known.

11 TOXICOLOGICAL INFORMATION

Product:

Acute Toxicity (Oral):	LD 50 (Rat): 2,660 mg/kg
Acute Toxicity (Dermal):	LD 50 (Rabbit): > 2,000 mg/kg
Acute Toxicity (Inhalation):	LC 50 (Rat, 4 h): > 0.002 mg/l
Inhalation:	Dust may irritate respiratory system.
Ingestion:	May be harmful if swallowed.
Skin corrosion/irritation:	Causes skin irritation.
Serious eye damage/eye irritation:	Causes eye irritation.
Respiratory sensitizer/Skin sensitizer:	Not a skin sensitizer.
Carcinogenicity:	This substance has no evidence of carcinogenic properties.
Mutagenesis:	No mutagenic components identified

Reproductive toxicity: May damage fertility or the unborn child.

Other Effects: None known.

12 ECOLOGICAL INFORMATION

Ecotoxicity: The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Product:

Acute toxicity(Fish): LC 50 (Colorado squawfish (*Ptychocheilus lucius*), 96 h): 216 - 360 mg/l Mortality

Chronic Toxicity(Fish): No data available.

Acute toxicity(Aquatic invertebrates): EC 50 (Water flea (*Daphnia magna*), 24 h): 264,300 - 496,700 mg/l Intoxication
LC 50 (Opossum shrimp (*Americamysis bahia*), 96 h): 52.8 - 148 mg/l Mortality

Chronic Toxicity(Aquatic invertebrates): No data available.

Acute toxicity(Aquatic plants): LC 50 (Waterweed (*Elodea canadensis*), 21 d): 5 mg/l Mortality

Persistence and degradability: The product is not readily biodegradable.

Bioaccumulative potential: No data available on bioaccumulation.

Mobility: No data available.

13 DISPOSAL CONSIDERATIONS

Disposal Methods: Discharge, treatment, or disposal may be subject to national, state, or local laws.

Since emptied containers retain product residue, follow label warnings even after container is emptied.

14 TRANSPORT INFORMATION

TDG

Not regulated.

IMDG - International Maritime Dangerous Goods Code

Not regulated.

IATA

Not regulated.

15 REGULATORY INFORMATION

Canadian Controlled Products Regulations: This product has been classified according to the hazard criteria of the Canadian Controlled Products Regulations, Section 33, and the MSDS contains all required information.

WHMIS Classification:

D2A

Inventory Status:

Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
EU EINECS List:	On or in compliance with the inventory
EU ELINCS List:	Not in compliance with the inventory.
Japan (ENCS) List:	On or in compliance with the inventory
EU No Longer Polymers List:	Not in compliance with the inventory.
China Inv. Existing Chemical Substances:	On or in compliance with the inventory
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Canada NDSL Inventory:	Not in compliance with the inventory.
Philippines PICCS:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory
Switzerland Consolidated Inventory:	Not in compliance with the inventory.
Japan ISHL Listing:	On or in compliance with the inventory
Japan Pharmacopoeia Listing:	Not in compliance with the inventory.

16 OTHER INFORMATION

Revision Information:

Issue Date: 01-08-2013

SDS No:

Disclaimer:

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