

# Material Safety Data Sheet

## Boric acid, reagent acs (crystals)

ACC# 95423

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Boric acid, reagent acs (crystals)

**Catalog Numbers:** AC423480000, AC423480020, AC423485000

**Synonyms:** Boracic Acid; Hydrogen Borate; Orthoboric Acid.

**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
10043-35-3	Boric acid	99.0	233-139-2

**Hazard Symbols:** None listed.

**Risk Phrases:** None listed.

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Appearance: white solid. **Caution!** May cause eye and skin irritation. May cause central nervous system effects. May cause respiratory tract irritation. Causes severe digestive tract irritation with pain, nausea, vomiting and diarrhea. May corrode the digestive tract with hemorrhaging and possible shock. Can cause adverse reproductive effects. May cause cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood).

**Target Organs:** Kidneys, central nervous system, cardiovascular system.

#### Potential Health Effects

**Eye:** May cause eye irritation.

**Skin:** May cause skin irritation. May be absorbed through damaged or abraded skin in harmful amounts.

**Ingestion:** Causes gastrointestinal irritation with nausea, vomiting and diarrhea. 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 tissue anoxia, characterized by weakness, headache, dizziness, confusion, cyanosis (bluish skin due to deficient oxygenation of the blood), weak and irregular heart beat, collapse, unconsciousness, convulsions, coma and death.

**Inhalation:** May cause respiratory tract irritation.

**Chronic:** Prolonged or repeated skin contact may cause dermatitis. Chronic poisoning by boron compounds, borism, may be little more than dry skin and mucous membranes, followed by appearance of a red tongue, patchy alopecia (hair loss), cracked lips, and conjunctivitis. Infants and young children are more susceptible to boric acid poisoning than adults.

### Section 4 - First Aid Measures

**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. Wash clothing before reuse.

**Ingestion:** Call a poison control center. If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

**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:** Treat symptomatically and supportively.

**Antidote:** None reported.

### 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.

**Extinguishing Media:** Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.

**Flash Point:** Not available.

**Autoignition Temperature:** Not available.

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

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 1; Flammability: 0; Instability: 0

### Section 6 - Accidental Release Measures

**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. Provide ventilation.

## Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Use only in a well-ventilated area. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.

**Storage:** Store in a cool, dry, well-ventilated area away from incompatible substances. Keep containers tightly closed.

## Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Use adequate ventilation to keep airborne concentrations low.

### Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Boric acid	none listed	none listed	none listed

**OSHA Vacated PELs:** Boric acid: 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. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

## Section 9 - Physical and Chemical Properties

**Physical State:** Solid

**Appearance:** white

**Odor:** odorless

**pH:** 5.2 (1% sol. at 20C)

**Vapor Pressure:** Not available.

**Vapor Density:** Not available.

**Evaporation Rate:** Negligible.

**Viscosity:** Not applicable.

**Boiling Point:** Not available.

**Freezing/Melting Point:** 339 deg F

**Decomposition Temperature:** Not available.

**Solubility:** 4.9g/100g water at 20C.

**Specific Gravity/Density:** 1.44 (Water=1)

**Molecular Formula:** H3BO3

**Molecular Weight:** 61.8292

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable at room temperature in closed containers under normal storage and handling conditions.

**Conditions to Avoid:** High temperatures, dust generation.

**Incompatibilities with Other Materials:** Incompatible with acetic anhydride and potassium. Reacts with basic materials to form borate salts.

**Hazardous Decomposition Products:** Oxides of boron.

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

## Section 11 - Toxicological Information

### 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:

CAS# 10043-35-3: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

**Epidemiology:** No information available.

**Teratogenicity:** No information available.

**Reproductive Effects:** No information available.

**Neurotoxicity:** No information available.

**Mutagenicity:** No information available.

**Other Studies:** None.

## Section 12 - Ecological Information

**Ecotoxicity:** Water flea Daphnia: LC50 = 115.0-153.0 mg/L; 48 Hr.; Static Condition Mosquito fish (fresh water) TLm=1800 ppm/24H  
Mosquito fish (fresh water) TLm=1800 ppm/24H

**Environmental:** No information reported.

**Physical:** No information available.

**Other:** None.

## 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	IATA	RID/ADR	IMO	Canada TDG
<b>Shipping Name:</b>	No information available.				No information available.
<b>Hazard Class:</b>					
<b>UN Number:</b>					
<b>Packing Group:</b>					

## Section 15 - Regulatory Information

### US FEDERAL

#### TSCA

CAS# 10043-35-3 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.

#### SARA

#### 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.

#### SARA Codes

CAS # 10043-35-3: acute, chronic.

#### 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# 10043-35-3 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

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:

Not available.

#### Risk Phrases:

#### Safety Phrases:

#### WGK (Water Danger/Protection)

CAS# 10043-35-3: 1

#### Canada - DSL/NDSL

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

#### Canada - WHMIS

This product has a WHMIS classification of D2B.

**Canadian Ingredient Disclosure List**

CAS# 10043-35-3 is listed on the Canadian Ingredient Disclosure List.

**Exposure Limits**

CAS# 10043-35-3: OEL-RUSSIA:STEL 10 mg/m3

Section 16 - Additional Information

**MSDS Creation Date:** 5/03/1999

**Revision #2 Date:** 12/03/2002

*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.*