

# MATERIAL SAFETY DATA SHEET

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Revision Date: 10/11/05

Revision No.: 2

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Bio-Sorb 700  
Chemical Name: Hydrated Zeolite impregnated with Phosphoric Acid  
Chemical Family: Aluminosilicate  
CAS Registry Number: Mixture

Distributor: **Bioclimatic Air Systems, LLC**  
600 Delran Parkway  
Delran NJ 08075  
(856) 764-4300

Telephone Numbers:  
Transportation Emergencies:  
CHEMTREC (U.S.A.): (800) 424-9300 (24 hours)  
CHEMTREC (International): (202) 483-7616 (24 hours, call collect)  
Product Information: (856) 764-4300 (EST, 8:00 a.m.-5:00 p.m., M-F)

## 2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Components</u>	<u>CAS #</u>	<u>% by Wt.</u>	<u>Hazardous*</u>
Hydrated Zeolite (Clinoptilolite)	1318-02-01	87.5	No
Phosphoric Acid	7764-38-2	12.5	Yes

\* By OSHA definition, 29 CFR 1910.1200 (See Section 3 for Hazards Identification, Section 8 for exposure Guideline, and Section 16 for other information).

## 3. HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

**This product is an odorless white granular solid. Prolonged or repeated exposure to dust may cause eye and respiratory tract irritation. May stain skin.**

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### 3. HAZARDS IDENTIFICATION (Continued)

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#### Potential Health Effects:

- Routes of Entry:
  - Inhalation, ingestion, eye and skin contact
- Medical Conditions Aggravated by Exposure:
  - None documented
- Eyes:
  - May be considered an eye irritant
- Skin:
  - May be a skin irritant, skin sensitizing, or corrosive agent
- Ingestion:
  - LD<sub>50</sub> (rats) indicates that it is not toxic.
- Inhalation:
  - Possible irritation of upper respiratory tract
- Target Organ Effects:
  - None established
- Chronic Effects (Cancer Information):
  - NTP: Not listed
  - IARC: Not listed
  - OSHA: Not regulated

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### 4. FIRST AID MEASURES

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- Eyes:
  - Promptly flush eyes with running water for 15 minutes, including water under eyelids. Consult a physician if irritation develops.
- Skin:
  - Wash affected area well with soap and water. Get medical help if irritation develops.
- Ingestion:
  - Give 2-3 glasses of milk or water to dilute. Contact physician or poison control center promptly for instructions. If vomiting occurs, give more fluids.
- Inhalation:
  - Remove to fresh air. Get medical help if irritation develops.

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### 5. FIRE FIGHTING MEASURES

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- Flammable Properties:
  - Hazardous Combustion Products:
    - Material will burn in a fire, releasing combustion products of carbon monoxide, carbon dioxide, and water.
  - General Hazards:
    - Other materials adsorbed onto the carbon may also be released.
- Extinguishing Media:
  - Water fog, fire fighting foam, dry chemical, or carbon dioxide
- Fire Fighting Instructions:
  - Fire fighters should wear full protective gear and use self-contained breathing apparatus with a full facepiece. (MSHA/NIOSH approved or equivalent)
- Other Information:
  - Flashpoint:
    - Not applicable
  - ASTM Ignition Temperature, D4366:
    - Not established
  - Flammability Limits in Air (% by volume):
    - LFL: Not applicable
    - UFL: Not applicable

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## 6. ACCIDENTAL RELEASE (SPILL MEASURES)

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- Notify safety personnel for large spills. Avoid generation of airborne dust. Scoop up solid for recovery or disposal. Those involved in clean-up need protection against skin and eye contact and inhalation of dust or mist.

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## 7. HANDLING AND STORAGE

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- Handling:
- Follow good handling and housekeeping procedures, avoiding spills, accumulation of dust, and generation of airborne dust.
  - Avoid prolonged contact with skin and eyes.
  - Avoid inhalation of dust.
  - Wear rubber gloves and safety glasses or goggles.
  - Use with adequate ventilation.
  - Wash thoroughly after handling.
- Storage:
- Store in a sealed container in a clean, dry, well-ventilated area away from strong oxidizers, ignition sources, combustible materials, and heat.

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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- Engineering Controls:
- Use general and local exhaust ventilation for nuisance dust and to prevent irritating concentrations of dust or mist in the workplace. Ventilation requirements will depend on the process and should be adequate to avoid exceeding the recommended TLV's.
- Eye Protection:
- Wear safety glasses with side shields, safety goggles, or a face shield, especially in dusty conditions. Provide an eye wash station nearby.
- Skin Protection:
- Wear work or disposable gloves and long sleeve shirts to prevent long term exposure.
- Respiratory Protection:
- Wear a NIOSH approved dust mask to limit exposure. An approved self-contained breathing apparatus with full facepiece is recommended for nonroutine or emergency conditions for inhalation protection.
- Other Protective Equipment:
- Wear clothing to limit skin contact, i.e., aprons, coveralls, long sleeve shirts, etc.
- Exposure Guidelines
- OSHA and ACGIH suggest that exposure to any dust or mist be kept below the level of a nuisance particulate. For particulates not otherwise regulated, the OSHA PEL for the respirable fraction is 5 mg/m<sup>3</sup> and for total dust the OSHA PEL is 15 mg/m<sup>3</sup>. The ACGIH threshold limit value for particulates not otherwise classified (PNOC) is 10 mg/m<sup>3</sup> for an 8-hour TWA.  
Phosphoric Acid (7664-38-2) ACGIH 1mg/m<sup>3</sup> TWA  
3mg/m<sup>3</sup> STEL  
OSHA 1mg/m<sup>3</sup> TWA  
3mg/m<sup>3</sup> STEL
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# BIO-SORB 700

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## 9. PHYSICAL AND CHEMICAL PROPERTIES (TYPICAL)

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Boiling Point, °C:	Not established	Bulk Density,:	60 lb/ft <sup>3</sup>
Melting Point, °C:	Not established	Solubility in Water:	no
Freezing Point, °C:	Not applicable	Physical State:	Solid
Vapor Pressure, mm Hg:	Not applicable	Appearance:	white
		Odor:	Odorless

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## 10. STABILITY AND REACTIVITY

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Chemical Stability:	• Stable
Conditions to Avoid:	• Heat and ignition sources, strong oxidizers, and combustible materials
Hazardous Decomposition Products:	• Clinoptilolite will dissolve in hydrofluoric acid and produce a corrosive gas- silicon tetrafluoride
Hazardous Polymerization:	• None

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## 11. TOXICOLOGICAL INFORMATION

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Eyes:	• May cause eye irritation
Skin:	• Not a primary skin irritant, sensitizing, or corrosive agent
Inhalation:	• Not established
Ingestion:	• Not established
Subchronic Effects:	• Not established
Teratology (Birth Defects):	• Not established
Mutagenicity (Genetic Effects):	• Not established

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## 12. ECOLOGICAL INFORMATION

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### Ecotoxicological Information:

LC<sub>50</sub> (minnows): • Not established

Effect of low concentrations on aquatic life is unknown.

Chemical Fate Information: • Not established

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### 13. DISPOSAL CONSIDERATIONS

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- Material is not classified as a hazardous waste. Follow federal, state, and local regulations for industrial waste disposal. Incineration or landfilling in permitted facilities is recommended.

### 14. TRANSPORT INFORMATION

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DOT Description:

Proper Shipping Name:

Hazard Class:

UN/NA Number:

• Not regulated

• Not classified.

Not applicable

### 15. REGULATORY INFORMATION

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U.S. Federal Regulations:

OSHA (29 CFR 1910.1200):

CERCLA (40 CFR 302.4):

RCRA (40 CFR 261.33, 261.20-24):

SARA Section 312 (40 CFR 355)

Hazard Category:

SARA Section 313:

Toxic Substance Control Act:

State Right to Know Acts (MA, NJ, PA):

California Proposition 65:

• Air contaminate, Table Z-1-A

• Contains no CERCLA hazardous substance

• Listed Hazardous Waste: No

• Exhibits characteristics of hazardous waste: No

• Physical Hazards: None known

• Health Hazards: Nuisance particulate

• This product contains no toxic chemical subject to the reporting requirements of SARA Title III, Section 313.

• Listed in the TSCA inventory of chemicals,

• No components subject to reporting

- In accordance with the warning requirements of the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65), the product contains trace amounts of crystalline silica, a chemical known to the State of California to be a carcinogen (or reproductive toxicant).

International Regulations:

Canada (DSL):

Canada (NPRI):

Canada (WHMIS):

Europe (EINECS):

• Listed in inventory:

• This product does not contain listed NPRI substances.

• Not applicable

• Listed in inventory

# BIO-SORB 700

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## 16. OTHER INFORMATION

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Hazard Rating:

HMIS:

- Health - 1
- Flammability - 1
- Reactivity - 0
- Protective Equipment - To be set by user

Revision Summary:

- Sections 1,2,3,5,8,10,13,15

Supersedes:

- 05/21/03
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### ABBREVIATIONS

- |     |                  |  |
|-----|------------------|--|
| 1.  | ACGIH            | American Conference of Governmental Industrial Hygienists  |
| 2.  | BOD <sub>x</sub> | Biochemical Oxygen Demand (After x Days)   |
| 3.  | CERCLA           | Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA)                   |
| 4.  | CFR              | Code of Federal Regulations  |
| 5.  | COD              | Chemical Oxygen Demand   |
| 6.  | cps              | Centipoise   |
| 7.  | DOT              | Department of Transportation   |
| 8.  | EPA              | Environmental Protection Agency  |
| 9.  | HMIS             | Hazardous Material Information System  |
| 10. | IARC             | International Agency for Research on Cancer  |
| 11. | LC <sub>50</sub> | A single calculated concentration in air or water resulting in 50% mortality of a group of test animals. |
| 12. | LD <sub>50</sub> | A single calculated dose of a material expected to kill 50% of a group of test animals.                  |
| 13. | LEL              | Lower Explosive Limit in air   |
| 14. | MSHA             | Mine Safety and Health Administration  |
| 15. | NIOSH            | National Institute for Occupational Safety and Health  |
| 16. | NTP              | National Toxicology Programs   |
| 17. | OSHA             | Occupational Safety and Health Administration  |
| 18. | PEL              | Permissible Exposure Limit established by OSHA   |
| 19. | SARA             | Superfund Amendments and Reauthorization Act   |
| 20. | TLV              | Threshold Limit Value  |
| 21. | TSCA             | Toxic Substances Control Act   |
| 22. | TOC              | Total Organic Carbon   |
| 23. | UEL              | Upper Explosive Limit in air   |

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