

# MATERIAL SAFETY DATA SHEET

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Revision Date: 10/11/05

Revision No.: 1

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Bio-Sorb 100  
Chemical Name: Activated Alumina impregnated with Potassium Permanganate  
Chemical Family: Alumina  
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>
Alumina Oxide	1344-28-1	88-90	No
Potassium Permanganate	7722-64-7	6-8	Yes
Sodium Carbonate	144-55-8	0-2	No
Sodium Bicarbonate	497-19-8	0-2	No

\* 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 purple 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:
  - This product is not flammable
- Extinguishing Media:
  - If the product is part of a fire event wash with water only. Do not use dry chemicals, CO<sub>2</sub>, Halons or foams.
- 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.
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## 9. PHYSICAL AND CHEMICAL PROPERTIES (TYPICAL)

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Boiling Point, °C:	Not established	Bulk Density,:	800 kg/m <sup>3</sup>
Melting Point, °C:	2050 C	Odor:	Odorless
Freezing Point, °C:	Not applicable	Physical State:	Solid
Vapor Pressure, mm Hg:	Not applicable	Appearance:	Purple
Solubility in Water:			
	Potassium Permanganate- yes		
	Alumina- no		

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## 10. STABILITY AND REACTIVITY

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Chemical Stability:	• Stable
Conditions to Avoid:	• The product should be stored a minimum of 10-meters away from organic peroxides, poison, corrosives, explosives, flammable gases, liquids, and solids. This product is incompatible with strong reducing agents and easily oxidizing agents.
Hazardous Polymerization:	• None

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## 11. TOXICOLOGICAL INFORMATION

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Eyes:	• Not established
Skin:	• Not established
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
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Effect of low concentrations on aquatic life is unknown.

Chemical Fate Information:	• Not established
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# BIO-SORB 100

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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:

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Supersedes:

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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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