

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-Carb 700
Chemical Name: Activated Carbon impregnated with Phosphoric Acid
Chemical Family: Carbon
Formula: C
CAS Registry Number: 7440-44-0

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>
Carbon	7440-44-0	90-100	Yes
Phosphoric Acid	7764-38-2	0-10	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 black extruded pellet. Never enter a confined space containing activated carbon since it will adsorb oxygen and asphyxiation may result. Prolonged or repeated exposure to dust may cause eye and respiratory tract irritation.

3. HAZARDS IDENTIFICATION (Continued)

Potential Health Effects:

- | | |
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| Routes of Entry: | • Inhalation, ingestion, eye and skin contact |
| Medical Conditions Aggravated by Exposure: | • None documented |
| Eyes: | • May cause eye irritation |
| Skin: | • Is not a primary skin irritant, skin sensitizing, or corrosive agent |
| Ingestion: | • LD ₅₀ (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 |

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. |

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, water, and low molecular weight hydrocarbons |
| 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: | • Remove all carbon from the building. 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 |
| Flammability Limits in Air (% by volume): | • LFL: Not applicable |
| | • UFL: Not applicable |
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6. ACCIDENTAL RELEASE (SPILL MEASURES)

- 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.

7. HANDLING AND STORAGE

- 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.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- 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/m³ and for total dust the OSHA PEL is 15 mg/m³. The ACGIH threshold limit value for particulates not otherwise classified (PNOC) is 10 mg/m³ for an 8-hour TWA.
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|-----------------------------|-------|-------------------------|
| Carbon (74400-44-0) | | not established |
| Phosphoric Acid (7664-38-2) | ACGIH | 1mg/m ³ TWA |
| | | 3mg/m ³ STEL |
| | OSHA | 1mg/m ³ TWA |
| | | 3mg/m ³ STEL |
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9. PHYSICAL AND CHEMICAL PROPERTIES (TYPICAL)

Boiling Point, °C:	Not applicable	Apparent Density, gm/cc:	0.36 - 0.41
Melting Point, °C:	Not applicable	Solubility in Water:	Insoluble
Freezing Point, °C:	Not applicable	Ash, max %:	7
Vapor Pressure, mm Hg:	Not applicable	Physical State:	Solid
Surface Area (Nitrogen BET Method), m ² /g:	1100 - 1300	Appearance:	Black extruded pellet
		Odor:	Odorless

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: | • May emit oxides of phosphorous, carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. Other materials adsorbed onto the carbon may also be released during decomposition. |
| Hazardous Polymerization: | • None |

11. TOXICOLOGICAL INFORMATION

- General: No data available for this product. Overexposure to activated carbon dusts would be expected to produce mild irritation to the respiratory tract, skin, and eyes. Phosphoric acid in concentrated form is corrosive to all tissues. The phosphoric acid present in this product is bound to the carbon and would not be expected to be corrosive unless released from the carbon.
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|---------------------------------|--|
| Eyes: | • May cause eye irritation |
| Skin: | • Not a primary skin irritant, sensitizing, or corrosive agent |
| Inhalation: | • Not established |
| Ingestion: | • Oral LD ₅₀ indicates non toxic |
| Subchronic Effects: | • Not established |
| Teratology (Birth Defects): | • Not established |
| Mutagenicity (Genetic Effects): | • Not established |

12. ECOLOGICAL INFORMATION

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| Ecotoxicological Information:
LC ₅₀ (minnows):
Effect of low concentrations on aquatic life is unknown. | • Not established |
| Chemical Fate Information: | • Not established |

13. DISPOSAL CONSIDERATIONS

- Activated Carbon 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

DOT Description:

Proper Shipping Name:

Hazard Class:

- Carbon, activated
- Activated Carbon passes the test for "Self-Heating Test for Carbon" as reflected in the United Nations recommendations on the transport of Dangerous Goods, Manual of Test and Criteria (see 33.3.1.3.3) and is not considered spontaneously combustible. Therefore, the provisions for shipping activated carbon class 4.2 in the DOT, IATA, ICAO, and IMDG Code Publications do not apply to shipments of this material.

UN/NA Number:

Not applicable

15. REGULATORY INFORMATION

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, 7440-44-0.

No components subject to reporting

- The required chemical analyses and risks assessments were performed on this product. Results indicate that there are no significant risks (or observable effects) as defined by this statute, associated with this product under conditions of normal use.

International Regulations:

Canada (DSL):

Canada (NPRI):

Canada (WHMIS):

Europe (EINECS):

Japan (MITI):

Australia (AICS):

- Listed in inventory
- This product does not contain listed NPRI substances.
- Not applicable
- Listed in inventory:
- Not applicable
- Listed in inventory

16. OTHER INFORMATION

Hazard Rating:

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

Revision Summary:

- Section 1, 2, 3, 5, 8, 10, 14

Supersedes:

- 06/17/03

ABBREVIATIONS

1. ACGIH American Conference of Governmental Industrial Hygienists
2. BOD_x 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. LC₅₀ A single calculated concentration in air or water resulting in 50% mortality of a group of test animals.
12. LD₅₀ 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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