



AgriTec Sorbents, LLC
Powder Activated Carbon

MATERIAL SAFETY DATA SHEET

ATS MSDS PAC

Revision Date: July 18, 2004

Revision No. 3

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: **AgriCarb™** Powdered Activated Carbon (All Grades)
Chemical Name: Activated Carbon
Chemical Family: Carbon
Formula: C
Product Use: Liquid and vapor applications (purification, decolorization, separation and deodorization)

Manufacturer: **AgriTec Sorbents, LLC**
1304 East Hartz Seed Road
P. O. Box 1108
Stuttgart, AR 72160

Transportation Emergencies:
CHEMTREC (USA): (800) 424-9300 (24 hours)
Product Information: (870) 673-4460 (CST, 8:00 a.m. – 5:00 p.m., M-F)

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Components</u>	<u>CAS No.</u>	<u>% by Wt.</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
Activated Carbon	7440-44-0	100	Not Established	Not Established

3. HAZARDS IDENTIFICATION

Emergency Overview:

Odorless black powder. This product, especially when wet, can deplete oxygen from air in enclosed spaces and dangerously low levels of oxygen may result. When workers enter a vessel or confined space containing activated carbon, the vessel's oxygen content should be monitored and work procedures for potentially low oxygen areas should be followed. Prolonged or repeated exposure to dust may cause eye and respiratory tract irritation.

Potential Health Effects:

Medical Conditions Aggravated by Exposure: None documented.

Routes of Entry: Inhalation, ingestion, eye and skin contact.

Inhalation: Possible mild irritation of respiratory tract due to drying and abrasive action of dust.

Ingestion: No known deleterious effects. LD₅₀ (rats) indicates that material is not toxic.

Eyes: Not considered an eye irritant, but like most particulate material, may cause mild physical irritation.

Skin: Not a primary skin irritant, skin sensitizing or corrosive agent.

Chronic Effects: No known chronic hazards. Not listed by NTP, IARC or OSHA as a carcinogen.

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4. FIRST AID MEASURES

- Eyes:** Promptly flush eyes with copious amounts of water, including water under eyelids. Seek medical attention if irritation develops.
- Ingestion:** Give two-three glasses of water to dilute. Seek medical attention if gastrointestinal Symptoms develop. If vomiting occurs, give more fluids.
- Inhalation:** Remove to fresh air. Seek medical attention if cough or respiratory symptoms develop.
- Skin:** Wash affected area with soap and water. Seek medical attention if irritation develops.

5. FIRE FIGHTING MEASURES

Flammable Properties:

Flashpoint: Not Applicable
Not Spontaneously Combustible (DOT Method 49CFR Part 173)
Non-Flammable (OSHA Method 16CFR1500.44)
ASTM Ignition Temperature, D4366: 460^oC (860^oF)
Flammability Limits in Air: LFL and UFL: Not Applicable

General Hazards:

Activated carbon is difficult to ignite and tends to burn slowly (smolder) without producing smoke or flame. Toxic gases will form upon combustion. Other materials adsorbed onto the carbon may also be released (OSHA Hazard Information Bulletin, July 30, 1997 and EPA 550-F-97-002-e, May 1997; “Alert-Fire Hazard From Carbon Adsorption Deodorizing Systems”).

Fire Fighting Instructions:

Remove all carbon from the building to a non-hazardous area, preferably out of doors. Extinguish fire using water fog, fine water spray, dry chemical, foam or carbon dioxide. Avoid stirring up dust clouds.

Fire Fighting Equipment:

Fire fighters should wear full protective gear and use self-contained breathing apparatus with a full facepiece (MSHA/NIOSH approved or equivalent) for all indoor fires and any large outdoor fires.

Hazardous Combustion Products:

Combustion products may include smoke, oxides of carbon (carbon monoxide, carbon dioxide) and other materials adsorbed onto the carbon may be released. Carbon smoldering for long periods in enclosed spaces, may produce carbon monoxide amounts which reach the lower explosive limit (carbon monoxide LEL = 12.5% in air). Airborne dust may be an explosion hazard, under certain conditions.

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6. ACCIDENTAL RELEASE MEASURES

Spill or Leak Action:

Notify safety personnel for large spills and clean up spills in a manner that does not generate airborne dust. Vacuum or pick-up and place in a suitable container for reuse or disposal. Handle in accordance with good industrial hygiene and safety practices. Personnel involved in clean up need protection against skin and eye contact and inhalation of dust.

Disposal Method:

Dispose of unused carbon spillage in a facility permitted for non-hazardous wastes. Spent carbon used in waste treatment, must be disposed of in accordance with standards applicable to generators of hazardous waste.

7. HANDLING AND STORAGE

Handling:

Follow good handling and housekeeping practices to avoid spills, generation of airborne dusts, and accumulation of dust on exposed surfaces. Use adequate ventilation and avoid inhalation of dust. Wear appropriate protective equipment, such as rubber gloves, safety glasses or goggles, and respirators to prevent or minimize exposures to dust. Wash exposed skin areas thoroughly with soap and water after handling.

Storage:

Store in a closed dry container in a cool, dry, well ventilated area. Maintain good housekeeping procedures. Protect against physical damage and isolate from strong oxidizers (ozone, liquid oxygen, chlorine, permanganate, etc.), ignition sources, combustible materials, and heat.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls:

Use general and local exhaust ventilation to control nuisance dust emissions near the source. Ventilation systems should be sized and configured to avoid exceeding the recommended or regulated exposure limits (TLV, PEL).

Eye Protection:

Wear safety glasses with side shields, safety goggles, or a face shield for protection where eye contact or dusty conditions may be likely. Have an eye wash station nearby.

Skin Protection:

Wear appropriate clothing, such as aprons, coveralls, long sleeve shirts and gloves to limit contact with the skin and prevent long term exposure. Wash skin thoroughly after handling. Wash contaminated clothing and clean protective equipment before reuse.

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION (Continued)

Respiratory Protection:

Use NIOSH/MSHA approved respiratory protection equipment to limit exposure where airborne exposure is likely. Observe respirator use limitations specified by NIOSH/MSHA or the manufacturer. An approved self-contained breathing apparatus with full facepiece is recommended for nonroutine or emergency conditions for inhalation protection.

Airborne Exposure Guidelines:

OSHA and ACGIH have not established specific occupational exposure limits for this material. Limits for nuisance dusts which are the least stringent exposure limits applicable to dusts, have been established. 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 is 10 mg/m³ total dust for an 8-hour TWA. These limits are stated only to indicate the least stringent airborne dust exposure levels applicable to nuisance dusts. The product may contain up to 1.5% crystalline silica. The control measures specified previously should be used to minimize exposure.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance & Odor:	Odorless, black, amorphous powder or granules		
Boiling Point, °C:	Not applicable	Apparent Density, gm/cc:	0.35 – 0.45
Melting Point, °C:	3652	Freezing Point, °C:	Not applicable
Physical State:	Solid	Solubility in Water:	Insoluble
Volatility, %:	Not applicable	Vapor Pressure, mm Hg:	Not applicable

10. STABILITY AND REACTIVITY

Chemical Stability: This product is stable under the specified conditions of storage, shipment and use.

Incompatibility: Contact with strong oxidizers such as ozone, liquid oxygen, chlorine, permanganate and ignition sources.

Hazardous Decomposition Products: Oxides of carbon (CO, CO₂).

Hazardous Polymerization: Does not occur.

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11. TOXICOLOGICAL INFORMATION

Eyes:	Not an eye irritant.
Skin:	Not a primary skin irritant, sensitizing, or corrosive agent.
Inhalation:	Not established.
Ingestion:	Oral LD ₅₀ > 5g/kg (rats).
Subchronic Effects:	Not established.
Teratology (Birth Defects):	Not established.
Mutagenicity (Genetic Effects):	Not established.

12. ECOLOGICAL INFORMATION

This material in its original state (unused) is not harmful to the environment.

13. DISPOSAL CONSIDERATIONS

Activated carbon is not a hazardous material or hazardous waste. Follow federal, state and local regulations for industrial waste disposal. Used activated carbon may become classified as a hazardous waste depending upon the application. Follow applicable regulations for disposal.

14. TRANSPORT INFORMATION

DOT (Department of Transportation) Description:	
Proper Shipping Name:	Carbon, activated (Not DOT Regulated).
Hazard Class:	Not applicable.
UN/NA Number:	Not applicable.
Packing Group:	Not applicable.
Freight Classification:	STCC Code - #2899643 NMFC Class – 70

15. REGULATORY INFORMATION

U.S. Federal Regulations:

OSHA (29 CFR 1910.1200):	“Particulates not otherwise regulated”, Table Z-1.
CERCLA (40 CFR 302.4):	Contains no CERCLA hazardous substance. Notification of spills of this material is not required.
RCRA (40 CFR 261.33, 261.20-24):	Listed Hazardous Waste: No Exhibits characteristics of hazardous waste: No
SARA Section 312 (40 CFR 355) Hazard Category:	Physical Hazards: None known Health Hazards: Nuisance particulate.
SARA Section 313	This product contains no toxic chemical subject to the reporting requirements of SARA Title III, Section 313.
Toxic Substance Control Act:	Listed in the TSCA inventory of chemicals, 7440-44-0.

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15. REGULATORY INFORMATION (Continued)

U.S. State Regulations:

California Occupational Safety and Health:	Not listed.
Massachusetts Substance List:	Not listed.
New Jersey Right-To-Know	Not listed.
Pennsylvania Right-To-Know	Not listed.

HMIS Hazard Ratings:

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

International Regulations: Consult the regulations of the importing country.

16. OTHER INFORMATION

For additional non-emergency health, safety or environmental information telephone (870) 673-4460 or write to:

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1304 East Hartz Seed Road
P. O. Box 1108
Stuttgart, AR 72160

MSDS ABBREVIATIONS:

- ACGIH American Conference of Governmental Industrial Hygienists
- BOD Biochemical Oxygen Demand (after x days)
- CAS Chemical Abstracts Service Registry Number
- CERCLA Comprehensive Environmental Response, Compensation and Liability Act of 1980
- CFR Code of Federal Regulations
- COD Chemical Oxygen Demand
- DOT Department of Transportation
- EPA Environmental Protection Agency
- HMIS Hazardous Material Information System
- IARC International Agency for Research on Cancer
- LD₅₀ A single calculated dose of a material expected to kill 50% of a group of test animals.
- LEL Lower Explosive Limit in air
- MSHA Mine Safety and Health Administration
- NIOSH National Institute for Occupational Safety and Health
- NTP National Toxicology Programs
- OSHA Occupational Safety and Health Administration
- PEL Permissible Exposure Limit established by OSHA
- SARA Superfund Amendments and Reauthorization Act
- TLV Threshold Limit Value

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16. OTHER INFORMATION (Continued)

MSDS ABBREVIATIONS (Continued):

- TSCA Toxic Substances Control Act
- TWA Time Weighted Average (8 hours)
- UEL Upper Explosive Limit in air

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