

MATERIAL SAFETY DATA SHEET

1. PRODUCT

STEAM ACTIVATED COCONUT SHELL CARBON

2. HAZARDS

- Non-impregnated steam activated carbon is inert and non-toxic.
- Combustible but not easily ignitable below 200°C. Self ignition in air is above 350°C.
- Wet activated carbon selectively depletes oxygen from air. When entering even partially enclosed area containing activated carbon, the oxygen level must be determined, adequate precautions exercised and appropriate protective equipment used if necessary.

Routes of Exposure:

Eyes : Not Corrosive, but like most particulate materials, may cause mild physical irritation.
Skin : Not a primary skin irritant. Mild irritation is possible due to abrasive action.
Ingestion : No known deleterious effects.
Inhalation : Possible mild irritation of respiratory tract due to drying and abrasive actions.

3. HANDLING

- Steam activated carbon is non-hazardous and is excluded from IATA 395, IMCO CI. 4.2, UN 1362 and is in accordance with carriage of goods and explosives. Activated carbon can therefore be acceptable for carriage by sea, road or air.
- Follow good handling and housekeeping practices to minimize spills, generation of airborne dusts, and accumulation of dusts on exposed surfaces.
- Use with adequate exhaust ventilation to draw dust away from workers' breathing zones.
- Prevent or minimize exposures to dusts by using appropriate personal protection equipment.

4. STORAGE

- Ambient storage temperature, atmospheric storage pressure
- Store product in a closed dry container. Maintain good housekeeping. Store away from strong oxidizers such as ozone, liquid oxygen, chlorine, permanganate, etc.

5. FIRST AID MEASURES

Skin : Wash material off the skin with soap and water. Medical attention if irritation occurs.
Eyes : Flush with copious amounts of water. Medical attention if irritation occurs.
Ingestion : Consume two glasses of water to drink. Medical attention if gastrointestinal symptoms develop.
Inhalation : Remove to fresh air. Medical attention if cough or respiratory symptoms develop

6. FIRE FIGHTING MEASURES

General Hazard:

- Activated carbon is difficult to ignite and tends to burn slowly (smolder) without producing smoke or flame. Toxic gases will form upon combustion.
- Activated carbon is an electrical conductor and should therefore not be allowed to accumulate as dust on open electrical circuits. Electrical outlets, lights and motors in dry carbon feed and storage areas should be of such construction as to preclude the entrance of carbon dust.

Instructions:

- If possible to do safely, move smoldering activated carbon to a non-hazardous area, preferably outdoors. Extinguish using water fog, fine water spray, carbon dioxide or foam. Avoid stirring up dust clouds.
- Use dry chemicals, CO₂, water spray or foam. Avoid direct stream at pressure on the carbon to prevent dispersal of smoldering particles which could spread the fire.

Equipment:

- Fire fighting personnel should wear full protective equipment, including self-contained breathing apparatus (SCBA) for all inside fires and large outdoor fires.

Hazardous Combustion Products:

- Combustion products may include smoke and oxides of carbon (i.e. carbon monoxide). Materials allowed to smolder for long periods in enclosed spaces, may produce amounts of carbon monoxide which can reach explosive limit (carbon monoxide LEL = 12.5% in air). Under certain conditions, any airborne dust may be explosion hazard. Used activated carbon may produce additional combustion products.

7. ACCIDENTAL RELEASE MEASURES

In Event of: A Spill or Leakage:

Clean up spills in a manner that does not disperse dust into the air. Handle in accordance with good industrial hygiene and safety practices. These practices include avoiding unnecessary exposure and removal of material from eyes, skin and clothing.

Disposal:

Spent granular activated carbon may be recyclable. Dispose of virgin (unused) carbon (waste or spillage) in a facility permitted for non-hazardous wastes. Spent (used) carbon should be disposed of in accordance with applicable laws.

Container Disposal:

Do not re-use empty bags. Dispose of in facility permitted for non-hazardous wastes.

8. STABILITY AND REACTIVITY DATA

- 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, etc. May result in rapid combustion. Avoid contact with strong acids.
- Hazardous Decomposition Products : Oxides of carbon.
- Hazardous Polymerization : Does not occur.

9. TOXICOLOGICAL INFORMATION

This material is non toxic in its original state. Used activated carbon may exhibit characteristics of the absorbed material.

10. ECOLOGICAL INFORMATION

This material, in its original state, is not harmful to the environment. Used activated carbon may exhibit characteristics of the absorb material.

11. DISPOSAL INFORMATION

Coconut shell based activated carbon; in its original state is not a hazardous material or hazardous waste. Follow applicable waste disposal procedures. Used activated carbon may become classified as a hazardous waste depending on what application. Again follow applicable regulations for disposal. Recycling (reactivation) may be a viable alternative to disposal.

12. OTHER INFORMATION

Activated carbon can be safely stored in any normal storage area but away from sources of direct heat.