

MATERIAL SAFETY DATA SHEETS

Dated: 01.09.2010

1.0 MATERIAL IDENTIFICATION

Activated Carbon Description:

Relatively **pure carbon** obtained by the destructive distillation of wood, coconut shells, animal bones, or other carbonaceous material. It is activated by heating to 1472 to 1652 °F (800 to 900 °C) with steam (Steam Activated Carbon). Activation results in a porous internal structure (honeycomb-like) with an internal surface area of approximately 1000m²/g.

Other Designations: Activated Carbon (DOT); Activated Charcoal, Steam Activated Carbon, Granular Activated Carbon.

2.0 COMPONENT/INFORMATION ON INGREDIENTS

Component: Carbon

CAS No. : 7440-44-0

3.0 HAZARDS IDENTIFICATION

Emergency Overview

Appearance and Odor: Porous, Hard, Black granules or powder, odorless.

NO SIGNIFICANT HAZARDS ASSOCIATED WITH THIS MATERIAL

Carcinogenicity: In 1990 reports, the IARC, NTP, and OSHA do not list activated charcoal as a carcinogen.

Summary of Risk: Carbon itself is not toxic.

Medical Conditions aggravated by Long-Term Exposure: None reported.

Chronic Effects: None reported.

Potential Health Effects

Target Organs: Respiratory tract.

Primary Entry Routes: Inhalation

Acute Effects: Eye contact irritating and may cause conjunctivitis. Dust inhalation can cause respiratory tract irritation.

Chronic Effects: None reported.

4.0 FIRST AID MEASURES

If in Eyes and Skin: Immediate first aid is not likely to be required. However, this material can wash heavily contaminated clothing before reuse.

If Inhaled: Immediate first aid is not likely to be required. However, if symptoms occur, remove the material from eye, skin and clothing.

If Swallowed: Immediate first aid is not likely to be required.

5.0 FIRE FIGHTING MEASURES

Flash Point: Not applicable – solid

Hazardous Products of Combustion: None Known

Extinguishing Media: Use water spray or other Class A extinguishing agent

Unusual Fire or Explosion Hazards: None Known

Fire Fighting Equipment: Fire fighters and others exposed to products of combustion should wear Apparatus. Equipment should be thoroughly decontaminated after use.

6.0 ACCIDENTAL RELEASE MEASURES

In case of spill, sweep, scoop or vacuum and remove.

Refer to section 13 for disposal information

7.0 STORAGE & HANDLING

Storage: Activated Carbon is packed in woven bag with PE inner liner. Hence, it can be stored for very long period without quality deterioration.

Handling: Steam activated carbon is non- hazardous and is Excluded from IATA 395, IMCO CI 4.2, UN 1362 And in accordance with carriage of goods and explosives. Activated Carbon can therefore be Acceptable for carriage by sea, road and air.

EPA Designations

RCRA Hazardous Waste (40 CFR 261.33) : Not listed

CERCLA Hazardous Substance (40 CFR 302.4) : Not Listed

SARA Extremely Hazardous Substance (40 CFR 355) : Not Listed

SARA Toxic Chemical (40 CFR 372.65) : Not Listed

OSHA Designations

Air Contaminant (29 CFR 1910 1000. Subpart Z) : Not Listed

8.0 SPECIAL PROTECTION DATA

Goggles: Wear protective eyeglasses or chemical safety goggles, per OSHA eye-and face-protection Regulations (29 CFR 1910.133). Since contact lens use in industry is controversial, establish your own Policy.

Respirator : Seek professional advice prior to respirator selection and use. Follow OSHA respirator Regulations (29 CFR 1910.34) and. If necessary, wear a NIOSH- approved respirator. For emergency Or non- routine operations (cleaning spills, reactor vessels, or storage tanks), wear SCBA. Warning! Air- Purifying respirators do not protect workers in oxygen-deficient atmosphere.

Other : Wear impervious gloves to prevent prolonged or repeated skin contact.

Ventilation : Provide general and local exhaust ventilation systems to maintain airborne concentrations that Promote worker safety and productivity. Local Exhaust Ventilation is preferred since it prevents contaminant Dispersion into the work area by controlling it at its source.

Safety Stations : Make available in the work area emergency eyewash stations, safety/quick-drench Showers, and washing facilities

Contaminated Equipment : Remove this material from your shoes and equipment launder contaminated Clothing before wearing.

Comments : Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

9.0 PHYSICAL AND CHEMICAL PROPERTIES

Melting point (carbon) : 6332 F(3500 C)

Volatiles at 302 F(150C), % wt: < 0.5*

Water Solubility :Insoluble

Specific Gravity : 0.40 to 0.52

Appearance and Odor : Porous, hard, black, granules or powder, odorless

*pertains to coconut shell Activated Carbon

10.0 STABILITY AND REACTIVITY

Stability : This material is stable under normal conditions of storage and handling

Materials to Avoid : None Known

Hazardous Decomposition Products : None Known

Hazardous Polymerization : Does Not occur

11.0 TOXICOLOGICAL INFORMATION

Not conducted toxicity on this material, however, data is available on activated carbon material.

Single dose (acute) animal studies indicate:

Oral – practically Nontoxic (Rat LD50-7940mg/kg)

Dermal – Practically Nontoxic (Rabbit LD50 – 7940mg/kg)

Eye irritation – Nonirritating (Rabbit, 0.0/110.0)

Skin Irritation – Nonirritating (Rabbit 0.0/8.0)

12.0 ECOLOGICAL INFORMATION

Not conducted environmental toxicity or biodegradation studies with this material

13.0 DISPOSAL PROCEDURES

Disposal : Contact your supplier or a licensed contractor for detailed recommendations. Follow Applicable Federal, state and local regulations.

EPA Designations

RCRA Hazardous Waste (40 CFR 261.33) : Not listed

CERCLA Hazardous Substance (40 CFR 302.4) : Not listed

SARA Extremely hazardous Substance (40 CFR 355) : Not listed

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OSHA Designations*

Air Contaminant (29 1910 1000. Subpart Z) : Not listed

14.0 TRANSPORT INFORMATION

The data provided in this section is for information only. Please apply the appropriate regulations

Transport shipment for transportation

This material is not hazardous under applicable DOT, ICAO/IATA, or IMDG regulations.

15.0 REGULATORY INFORMATION

TSCA Inventory : Listed

SARA Hazard Notification

Hazard categories Under Title III Rules (40 CFR 370) : None

Section 302 Extremely hazardous Substance : Not Applicable

Section 313 Toxic Chemical(s) : Not Applicable

CERCLA reportable Quantity : Not Applicable

California Proposition 65 : Not Applicable

Refer to Section 11 for OSHA Hazardous Chemical(s) and Section 13 for RCRA classification

16.0 OTHER INFORMATION

Reason for revision : Conversion to the 16 section format

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