Material Safety Data Sheet

May be used to comply with
OSHA's Hazard Communication Standard,
29 CFR 1910.1200. This Standard must be
consulted for specific requirements.

U.S. Department of Labor

Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

IDENTITY *(As Used on Label and List)* *Biochar* *Other may label as: Charcoal; Activated Carbon; Semi-Activated Carbon; Agrichar*	

Section I

Manufacturer's Name Biochar Solutions, DBA Western Biochar	Emergency Telephone Number In an emergency call 911 – 303.279.9400
Address *(Number, Street, City, State, and ZIP Code)*	Telephone Number for Information 303.279.9400
PO BOX 160, Golden, CO, 80402	Date Prepared April 15, 2011
	Signature of Preparer *(optional)*

Section II - Hazard Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% *(optional)*
wood chip based carbon [no paint or stain]				>85%
Wood chip based [soluble and non-soluble] ash				<15%
Water				<5%

Section III - Physical/Chemical Characteristics

Boiling Point	Sublimates 4827 C	Specific Gravity (H_2O = 1)	1.8 -2.1 note that bulk density differs and biochar will float for some hours prior to taking on water and sinking
Vapor Pressure (mm Hg.)	1@ 3586 C	Melting Point	3500 C
Vapor Density (AIR = 1)	0.4	Evaporation Rate	No information

		(Butyl Acetate = 1)	found
Solubility in Water Insoluble in Water			
Appearance and Odor Color is gray to black, predominantly black, Odorless			

Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used) No Temperature Found	Flammable Limits No Data Found	LEL No Data Found	UEL No Data Found
Extinguishing Media Water spray, dry chemical, alcohol foam, or carbon dioxide.			
Special Fire Fighting Procedures			
Unusual Fire and Explosion Hazards Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Minimum explosible concentration 0.140 g/l			
A document titled "Coal dust explosion hasards" by CLETE R. STEPHAN P.E can be accessed online at http://www.msha.gov/s&hinfo/techrpt/p&t/coaldust.pdf			

Section V - Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable X	Stable under ordinary conditions of use and storage	Strong oxidizers such as ozone, liquid oxygen, chlorine, permanganate, etc. may result in rapid combustion. Avoid contact with strong acids.
Incompatibility *(Materials to Avoid)*			
Hazardous Decomposition or Byproducts Fire will produce CO and CO2			
Hazardous Polymerization			Conditions to Avoid
	Will Not Occur X		Avoid high temperatures and O2 Also avoid listed conditions to avoid above

Section VI - Health Hazard Data

Route(s) of Entry:	Inhalation - avoid inhalation by use of P100 respirator or P100 + VOC control	Skin , use of long sleeves, pants, close toed shoes, and eye protection is recommended	Ingestion, use reparatory filters to not ingest, do not ingest.
Health Hazards *(Acute and Chronic)*			
Prolonged inhalation of excessive dust may produce pulmonary disorders.			
Low amounts of char contact should only produce mild irritation which can be corrected with rinsing with water.			
Carcinogenicity: Not known	NTP- does not address activated carbon or biochar	IARC Monographs no monograph is available on activated carbon or biochar. Monographs are available on carbon black a product with more volatile product then is contained in biochar	OSHA Regulated OSHA does not regulate activated carbon or biochar. OSHA does report that after activated carbon is used to adsorb vapors that carbon may pose a fire risk
Signs and Symptoms of Exposure			
Redness, irritation			
Medical Conditions Generally Aggravated by Exposure			
Emergency and First Aid Procedures			
Remove person from contact, rinse with warm, use of soap and wash cloth will remove char from skin. Avoid contact with eyes and lungs with eye and respiratory protection if contacted rinse and/or flush with water			

Section VII - Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled
If dust is airborne remove sources of ignition, ventilate area, wear appropriate personal protective equipment including long pants and sleeves, eye protection and respirator (P100 type). Reduce airborne dust with water. Use non sparking tools and equipment. Spent product may absorb other products in that environment.
Waste Disposal Method
Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may

change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.
Precautions to Be taken in Handling and Storing
Avoid sending product airborne in a confined environment. Wet carbon can deplete oxygen from the air avoid confined or non-ventilated spaces.
Other Precautions

Section VIII - Control Measures

Respiratory Protection *(Specify Type)* P100 Filters with or without VOC Control		
Ventilation YES	Local Exhaust	Special
A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area	Mechanical *(General)*	Other

Protective Gloves YES	Eye Protection YES (goggle or side shield types)
Other Protective Clothing or Equipment long sleeves, pants, closed toed shoe	
Work/Hygienic Practices	

Section IX - Special Precautions

Precautions to be taken in Handling and Storing
Other Precautions

Each MSDS must be reviewed for correctness and completeness every three years.

Reviewed by ___Jonah G Levine_____ Reviewed by _____May 16th 2011_____

Revision date _____ Revision date _____