

	<b>Aries GREEN™</b>	Doc No: Biochar
		Doc Type: SDS
<b>Biochar</b>		Revision Date: 06/13/2019
		Revision No. 0
Prepared: Matthew Newman      Authorized: Renus Kelfkens		Issue Date: 06/13/2019
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# SAFETY DATA SHEET

## Section 1: Identification

**Product Name:** Biochar (Aries GREEN™ All Natural Soil Conditioner)  
**Synonyms:** Char, charcoal, carbon  
**Recommended Use:** Soil Amendment, Soil Conditioner, Filtration, Dry Biofuel as Coal Substitute, Bio-based Aggregate, base material for production of Fabric, Carpet, Rubber, Plastic, Carbon Black

**Company Information:**  
 Aries GREEN™ LLC  
 4037 Rural Plans Circle, Suite 290  
 Franklin, TN 37064  
[www.ariescleanenergy.com](http://www.ariescleanenergy.com) – [info@ariescleanenergy.com](mailto:info@ariescleanenergy.com)

**Emergency Information:**  
**In event of emergency, call 911**  
**Aries GREEN™ Emergency Contact: 615-471-9424**

**For information about this SDS, use this department contact phone#:** 615-471-9424

## Section 2: Hazard(s) Identification

**Hazard Classification:**  
 Flammable Solid (Category 2)  
 Acute Toxicity, Inhalation (Category 5)  
 Serious Eye Damage/Irritation (Category 2B)  
 Aspiration Hazard (Category 2)  
 Self-reactive Substances (Type F)

**Signal Word(s):**                      Warning

**Hazard Statement(s):**

H228	Flammable Solid
H333	May be harmful if inhaled
H320	Causes eye irritation
H305	May be harmful if swallowed and enters airways
H242	Heating may cause a fire



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### Pictograms:



### Precautionary Statements:

- P210 Keep away from heat/sparks/open flames/hot surfaces - No smoking
- P261 Avoid breathing dust
- P281 Use personal protective equipment as required

### Description of other hazards:

Material may be considered pyrophoric with moisture <10% at temperatures >400°C where material may smolder.

Dry material presents dust hazard, and appropriate personal protective equipment should be utilized to mitigate irritation associated with dust.

### Section 3: Composition/ Information on Ingredients

**MAIN INGREDIENT:** Gasification of Wood Waste (recycled wood pallet waste)

INGREDIENT	PERCENT (% Wt)	ACGIH	ACGIH	OSHA
		<u>TLV-TWA</u>	<u>STEL</u>	<u>PEL</u>
Wood Chip Based Carbon	>85%	10 mg/m3	15 mg/m3	5 mg/m3
Wood Chip Based Ash	<5%	not listed		
Water	<10%	not listed		



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### Section 4: First-Aid Measures

**EFFECTS OF OVEREXPOSURE:**

Exposure to carbon should not present a health hazard. Excessive carbon dust from handling Biochar may produce allergenic responses in a few sensitive individuals. Overexposure of Biochar dust may cause skin/eye and upper respiratory tract irritation along with allergenic responses and asthma.

**MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE:**

If an allergy/ such as dermatitis, asthma, or bronchitis develops/ it may be necessary to remove a sensitive worker from further exposure to carbon dust.

**EMERGENCY AND FIRST AID PROCEDURES (wood dust only):**

**INHALATION:** Remove to fresh air. If persistent irritation, severe coughing/ breathing difficulties, or rash occur, get medical advice before returning to work with Biochar

**EYE CONTACT:** Plush with water to remove dust particles from the eye. If irritation persists, get medical attention.

**SKIN CONTACT:** If a rash, or persistent irritation or dermatitis occur, get medical advice before returning to work where Biochar is present.

**Use of appropriate personal protection equipment (PPE) can limit contact as needed – long pants, sleeves, gloves, eye shields, p100 respirator**

### Section 5: Fire-Fighting Measures

**FLAMMABILITY CLASSIFICATION:** NA-Autoignition Temperature >400°C

**EXTINGUISHING MEDIA:** Water Spray

**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. The minimum explosible concentration is 0.140 g/l.

**FIRE FIGHTING EQUIPMENT:** Full protective equipment and self-contained breathing apparatus (SCBA) with a full-face mask operated in positive pressure mode

### Section 6: Accidental Release Measures

**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:**

Sweep up or vacuum up spills for recovery or disposal. A dust respirator may be required during clean up.

**WASTE DISPOSAL:**

Dispose in accordance with federal, state and/or local regulations



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### Section 7: Handling and Storage

Storage should consider end-use of product for quality concerns. Proper personal protective equipment to prevent inhalation, skin, and eye contact should be utilized when handling material in storage. Store away from heat sources and prevent smoking or open flame near stored materials.

### Section 8: Exposure Controls/Personal Protection

#### RESPIRATORY PROTECTION:

No protection required for handling biochar unless there is excessive dust associated. Use approved dust respirator.

P100 type ¼ face

#### Eye shields

Appropriate eye protection should be utilized

#### PROTECTIVE GLOVES:

Recommended to reduce skin contact.

#### OTHER PROTECTIVE EQUIPMENT:

No special clothing required unless excessive dust is associated with handling. Use clean body-covering work clothing.

#### VENTILATION:

Whenever possible/ local exhaust ventilation should be used to meet TLV requirements.

#### HYGIENIC PRACTICES:

Follow good hygienic practices.



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### Section 9: Physical and Chemical Properties

**Form:** Typically black in color with particle sizes varying dependent upon handling and processing

**Odor:** Minimal odor that is of earthy and/or charcoal nature

**Odor threshold:** N/A

**pH:** 8-10

**Melting point/melting range:** N/A

**Boiling point/boiling range:** N/A

**Flash point:** N/A

**Evaporation rate:** N/A

**Auto ignition temperature:** >400°C

**Danger of explosion:** N/A

**Vapor pressure:** N/A

**Vapor density:** N/A

**Relative density:** 10-15lbs/ft<sup>3</sup>

**Solubility in/Miscibility with water:** Not Soluble



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#### Section 10: Stability and Reactivity

**Reactivity:** Contact with strong oxidizers may result in fire

**Chemical stability:** This product is stable in closed containers at room temperature.

**Conditions to avoid:** Incompatible Materials, Combustible Materials

**Incompatible materials:** Strong Oxidizers, Sparks, Heat, Flame

**Hazardous decomposition products:** Carbon Oxides (CO, CO<sub>2</sub>)

#### Section 11: Toxicological Information

**Acute toxicity:** Not classified

**Potential routes of exposure/potential health effects**

**Skin:** Not classified

**Eye:** causes eye irritation

**Inhalation:** not classified

**Ingestion:** not classified

**Carcinogenic effects:** not classified

**Mutagenic effects:** not classified

**Reproductive toxicity:** not classified

**Sensitization:** not classified

**Target organs:** May cause respiratory irritation (single exposure)

#### Section 12: Ecological Information (non-mandatory)

**Ecotoxicity:** No additional information available

**Mobility:** No additional information available

**Biodegradation:** No additional information available

**Bioaccumulation:** No additional information available

#### Section 13: Disposal Considerations (non-mandatory)

Dispose of contents/container in accordance with local, regional, national, international regulations



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## Section 14: Transport Information (non-mandatory)

**DOT regulations:** Charcoal/Activated Carbon/Carbon

- **Hazard class:** 4.2, as with activated carbon, this product is not considered self-heating
- **Land transport ADR/RID (cross-border):** N/A
- **ADR/RID class:** N/A
- **Maritime transport IMDG:** N/A, not a marine pollutant

**Air transport ICAO-TI and IATA-DGR:** N/A

- **ICAO/IATA Class:** N/A

## Section 15: Regulatory Information (non-mandatory)

### US Federal Regulations

**SARA Section 355 (extremely hazardous substances):** No TPQ or RQ associated with this product

**SARA Sec 311/312: Acute (yes); Chronic (no); Fire (no); Release of Pressure (no); Reactivity (no)**

**SARA Section 313 (specific toxic chemical listings):** Not reportable under Sec 313 Title III and 40 CFR Part 372

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs):** Not considered an air pollutant with no ozone depleting substances

**TSCA (Toxic Substances Control Act):** All components of this product are listed on the TSCA Inventory

**OSHA:** None of the chemicals in this product are considered Highly Hazardous by OSHA

## Section 16: Other Information

The information contained herein is accurate to the best of our knowledge. Aries GREEN™ makes no warranty with respect hereto said information and disclaims all liability from reliance therein.

**SDS date of preparation/update:** 6/13/2019