



Material Safety Data Sheet

Section 1: Identification of the substance and of the supplier

1.1. Product identifier

Product name: **Biochar**

1.2. Recommended uses of the substance and restrictions on use

Soil amendment and filtration media.

1.3. Details of the supplier

Seneca Farms Biochar LLC
4760 Cotton Hanlon Rd
Odessa, NY 14869, USA
+1 607-923-8038

1.4. Emergency telephone number

+1 607-923-8038

Section 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Eye irritation 2A H319
Combustible Dust

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US)



GHS07

Signal word (GHS-US)

Warning

Hazard statements (GHS-US)

May form combustible dust concentrations in air
H319 - Causes serious eye irritation

Precautionary statements (GHS-US)

P264 - Wash hands, forearms and face thoroughly after handling

P280 - Wear eye protection, protective gloves, protective clothing

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P337+P313 - If eye irritation persists, get medical advice/attention.

2.3. Other hazards

No additional information available

Section 3: Composition/information on ingredients

Name	Product identifier	%
Charcoal (biochar)	(CAS No) 16291-96-6	>60

Biochar (charcoal) is produced from organic matter using anaerobic thermal decomposition. Hence it also contains varying amounts of hydrogen and oxygen in its molecular structure, depending on the feedstock from which it was produced and the temperature and length of thermal treatment, plus trace amounts of various minerals typically found in biomass.

Section 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	If exposed or concerned, get medical attention/ advice. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before re-use. Never give anything to an unconscious person.
First-aid measures after inhalation	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if breathing is affected. If breathing is difficult, supply oxygen.
First-aid measures after skin contact	IF ON SKIN (or clothing): Remove affected clothing and if irritation develops, wash all exposed skin with water for at least 15 minutes. If irritation persists, get medical attention.
First-aid measures after eye contact	IF IN EYES: Immediately flush with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do so. Continue rinsing and get medical attention if pain, blinking, or irritation develops or persists.

First-aid measures after ingestion	IF SWALLOWED: rinse mouth thoroughly. Do not induce vomiting without advice from poison control center. Get medical attention if you feel unwell.
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4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries	Causes serious eye irritation.
Symptoms/injuries after inhalation	May cause respiratory irritation.
Symptoms/injuries after skin contact	May cause skin irritation.
Symptoms/injuries after eye contact	Causes serious eye irritation.
Symptoms/injuries after ingestion	May cause gastrointestinal irritation.

4.3. Indication of any immediate medical attention and special treatment needed

None known.

Section 5: Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media	Water spray. Carbon dioxide. Dry chemical. Foam. Sand.
Unsuitable extinguishing media	None known.

5.2. Special hazards arising from the substance or mixture

Fire hazard	Dust may be combustible under specific conditions. Contact with incompatible materials may result in rapid combustion.
Explosion hazard	Dust may form explosive mixture in air.
Reactivity	No dangerous reactions known under normal conditions of use. Carbon monoxide may be emitted upon combustion of material.

5.3. Advice for firefighters

Firefighting instructions	Use water spray or fog for cooling exposed containers. Wear NIOSH-approved self-contained breathing apparatus suitable for the surrounding fire. Evacuate area.
Protection during firefighting	Wear a self-contained breathing apparatus and appropriate personal protective equipment (PPE).

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Evacuate area. Keep upwind. Ventilate area.

6.1.1. For non-emergency personnel

Protective equipment : Wear protective equipment as described in section 8.

6.1.2. For emergency responders

Protective equipment : Use personal protective equipment as required.

6.2. Environmental precautions

No additional information available

6.3. Methods and material for containment and cleaning up

For containment

Sweep up dry powder and dispose properly.
Minimize generation of dust.

Methods for cleaning up

Sweep or shovel spills into appropriate container for disposal. This material and its container must be disposed of in a safe way, as per local legislation.

6.4. Reference to other sections

No additional information available

Section 7: Handling and storage

7.1. Precautions for safe handling

Do not handle until all safety precautions have been read and understood. Avoid dust formation. Avoid contact with eyes. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Keep away from sources of ignition.

7.2. Conditions for safe storage, including any incompatibilities

Material must be stored in containers with a volume less than 3 cubic meters. Storage of this material in quantities greater than 3 cubic meters will require reclassification of the product as Self-Heating – Category 2 and will require adequate labelling. Avoid contact with incompatible materials. Keep from ignition sources, such as sparks and flames. NO SMOKING.

Section 8: Exposure controls / personal protection

8.1. Control parameters

Exposure Limits		
OSHA PEL (a)	ACGIH TLV (b)	NIOSH REL (c)
Total dust - 15mg/m ³ (d) TWA(e) Respirable dust(f) - 5mg/m ³ TWA	Inhalable dust(f) - 10mg/m ³ TWA Respirable dust - 3mg/ m ³ TWA	None established

a) U.S. Department of Labor, Occupational Safety and Health Administration, permissible exposure limit (PEL); b) American Conference of Governmental Industrial Hygienists, threshold limit value (TLV); c) National Institute for Occupational Safety and Health recommended exposure limits (REL); d) milligrams per cubic meter; e) time-weighted average over an 8 hour day, 40 hour work week for OSHA PELs and ACGIH TLVs, or up to a 10 hour day, during a 40 hour week for NIOSH RELs; f) particles in the size range that are hazardous when deposited in the gas-change region of the lungs.

8.2. Exposure controls

Appropriate engineering controls	Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. In situations of high dust release from product, the use of explosion-proof equipment is highly recommended. Ensure adequate ventilation, especially in confined areas.
Personal protective equipment	Gloves. Safety glasses.
Hand protection	Use gloves chemically resistant to this material when prolonged or repeated contact could occur. Gloves should be classified under Standard EN 374 or ASTM F1296. Suggested glove materials are: Neoprene, Nitrile/butadiene rubber, Polyethylene, Ethyl vinyl alcohol laminate, PVC or vinyl. Suitable gloves for this specific application can be recommended by the glove supplier.
Eye protection	Use eye protection suitable to the environment. Avoid direct contact with eyes.
Skin and body protection	Wear long sleeves, coveralls and closed-toed shoes to minimize bodily exposure.
Respiratory protection	Respiratory protection necessary if dust formation occurs. Use NIOSH (or other equivalent national standard) -approved dust/particulate respirator. Where vapor, mist, or dust exceed PELs or other applicable OELs, use NIOSH-approved respiratory protective equipment.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid
Color	Black / dark grey
Odor	Nearly odorless
Melting point/freezing point	3,550 °C (6,422 °F)
Boiling point	No data available

Flammability	Flammable. May form combustible dust concentrations in air
Lower explosion limit of dust clouds	20 g/m ³
Flash point	Not applicable
Auto-ignition temperature	349° C
Decomposition temperature	>500° C
pH	~ 7 - 9 (depending on process conditions)
Kinematic viscosity	Not relevant
Solubility	Insoluble
Partition coefficient: n-octanol/water (log value)	No data available
Vapour pressure	1 hPa at 25 °C (77 °F)
Relative density	1.8 - 2.1 g/cm ³
Relative vapour density	No data available
Particle characteristics	Generally irregular particle shapes of varying size, from powder to several centimetres in width, depending on application

9.2. Other information

No additional information available

Section 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use. Risk of ignition. Dust is explosive under the right conditions.

10.2. Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure. (see section 7).

10.3. Possibility of hazardous reactions

Reaction possible with a strong oxidizer.

10.4. Conditions to avoid

Avoid exposure to heat, flames, sparks, and other ignition sources. Avoid contact with incompatible materials. Avoid dust generation. Improper storage of material (see Section 7) or storing the material at elevated temperatures or in larger volumes may increase the risk of self-heating. Avoid storing material in confined or non-ventilated areas as wet carbon can deplete oxygen from the air.

10.5. Incompatible materials

Strong oxidizers and strong acids.

10.6. Hazardous decomposition products

Carbon monoxide (CO), carbon dioxide (CO₂).

Section 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Not classified as acutely toxic

Acute effects of overexposure

Contact with material may cause mechanical irritation of the eyes, skin, and respiratory tract.

Chronic effects of overexposure

Prolonged overexposures to dust may lead to pulmonary disorders.

Target Organs

No information available in sources utilized.

Carcinogenicity

Not listed as a carcinogen by NTP, IARC, ACGIH, OSHA or NIOSH.

Mutagenicity

No information available in sources utilized.

Reproductive Toxicity

No information available in sources utilized.

Aspiration hazard

No information available in sources utilized.

Toxicity Data

Rat-oral lethal dose >5 g/kg

Rat-subcutaneous lethal dose > 5g/kg

Rat-intraperitoneal lethal dose > 5g/kg

Section 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

Section 13: Disposal considerations

13.1. Waste treatment methods

Obtain the consent of pollution control authorities before discharging to wastewater treatment plants. Follow all applicable local, national, provincial, territorial, and international regulations. As supplied, this material is not regulated as a hazardous waste under the US EPA Resource Conservation and Recovery Act (RCRA).

Section 14: Transport information

The product, when handled and packaged in accordance with this safety data sheet, is not regulated by US DOT, ICAO/IATA, or IMDG.

Under Provision 223 of the IMDG code, this product has been tested and shown not to meet established IMDG class or division criteria, and is not subject to IMDG regulations.

When individual packages are in a volume of greater than 3 cubic meters, the material must be transported under the following classification:

US DOT, ICAO/IATA, IMDG

Shipping name: Carbon activated

Label/Placard: Spontaneously combustible

Hazard Class: 4.2

UN Number: UN1362

Packing Group: III

Section 15: Regulatory information

EPA TOXIC SUBSTANCES CONTROL ACT (TSCA) STATUS: All of the components of this product are listed on the TSCA inventory, 9005-25-8 is not regulated.

CALIFORNIA PROPOSITION 65: None of the components of this product are specifically listed.

Section 16: Other information

Effective date: January 26, 2021

Last updated: January 26, 2021

DISCLAIMER:

The information contained in this MSDS is limited to the product's application as specifically described in Section 1. The information contained in this MSDS may not be valid if the product is used in combination with other products or materials, or if it is used in any process not specified in this document. The information is accurate to the best of our knowledge, but does not purport to be all inclusive and should only be

used as a general guide. It is the user's responsibility to ensure that the product will be suitable for a particular usage. The user assumes all responsibility for compliance with applicable Federal, State, and Local Regulations. We do not accept liability for damage or loss that may occur from this information.