



MATERIAL SAFETY DATA SHEET

Biochar by Biochar Industries

SECTION 1 – PRODUCT IDENTIFICATION

Product Name: Biochar – Soil amendment prepared from wood,

Manufacturer: Biochar Industries
PO Box 3189 UKI NSW 2484
Misty Mountain / Mebbin Plantation
2888 Kyogle Road, Kunghur NSW 2484 Australia

Contact: info@biocharproject.org
Emergency Phone: 000 Fire Brigade, Ambulance and Police
Poisons Information: 13 11 26

Chemical Name & Synonyms: Not assigned
Chemical Family: Granular carbon (non-activated)
Dangerous Goods code: Not applicable when post production process is implemented
Poison Schedule Number: Not assigned
Recommended Use: Agricultural soil amendment, ingredient in compost, potting mix and fertiliser products.

SECTION 2 – HAZARDOUS IDENTIFICATION

Hazardous Ingredients: carbonaceous particles, natural fungal spores, bacteria.

THIS PRODUCT MAY CONTAIN MICRO-ORGANISMS

Risk Phrases:

R20/R37 Harmful by inhalation and irritating to the respiratory system
R36/R38 Irritating to eyes and skin
R42 May cause sensitisation by inhalation

Safety Phrases:

S02 Keep out of reach of children
S22 Do not breathe dust
S24/25 Avoid contact with skin and eyes
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection
S50 Do not mix with oxidising agents



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SECTION 3 – COMPOSITION / INGREDIENTS INFORMATION

Constituent	CAS Number:	Proportion:
Carbon (wood derived)	7440-44-0	85 – 95 wt% dry basis
Minerals (wood derived)	N/A	5 – 10 wt% dry basis
Other		< 5 wt%
Water		Minimum of 20% m

SECTION 4 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Black coloured mix of powder and identifiable particles of plant matter up to 60mm size.	Solubility in water:	Leaches subcomponents to a minor and variable extent.
Odour:	Low odour, may exhibit an earthy character.	Evaporation Rate:	Not applicable
pH at concentration:	7.2 – 9.8	Vapour Density:	Not volatile
Boiling Point:	Not Applicable	Per Cent volatiles:	Non-volatile to 180°C
Melting Point:	Commences decomposing at 180°C	Molecular Weight:	Not Applicable
Flash Point:	-	FP Test Method:	-
Vapour Pressure:		Autoignition Temperature:	Not determined
Specific gravity:	0.25 – 0.65	Lower Explosive Limit (LEL):	but dust explosion risk exists if allowed to dry.
		Upper Explosive Limit (UEL):	

SECTION 5 – STABILITY AND REACTIVITY DATA

Chemical Stability:	Stable unless released as a dust. Keep moist.
Hazardous Polymerisation:	Will not occur.
Incompatible Materials:	Will react with strong oxidizing agents.
Conditions to avoid	Dust formation, temperatures above 180°C.
Hazardous Decomposition products:	Carbon monoxide and hydrocarbons.



SECTION 6 – FIRST AID MEASURES

Swallowed:

If a minor amount has been accidentally swallowed, then, if conscious, give large amounts of water and then dilute stomach contents by giving large amounts of water.

Seek medical attention. Do not attempt to induce vomiting or give anything by mouth to an unconscious person. If person vomits place person on their side in recovery position.

Eye:

Flush eye with running water for a minimum of 15 minutes. Seek medical attention promptly if irritation persists or any loss of vision occurs.

Skin:

Wash contaminated skin with soap and water. Launder contaminated clothing before re-use. Seek medical attention if swelling, redness, itching, blistering or irritation persists.

Inhaled:

Remove promptly to fresh air. Seek medical attention if coughing or difficulty breathing persists. Treat unconsciousness by placing the person in the coma position. Apply artificial respiration if breathing stops.

Notes to doctor:

Treat symptomatically.

SECTION 7 – FIRE FIGHTING MEASURES

Specific Hazards:

Dusts may be an explosion hazard if mixed with air at critical proportions in the presence of an ignition source.

Product will help to sustain a fire present in nearby materials.

Extinguishing Media:

Fire Class A (combustible solids). Use water spray, dry chemical, carbon dioxide or chemical foam; unless another there is a risk of an additional class of fire risk becoming involved (eg. flammable liquids) – if so respond according to the requirements of that material.

Fire Fighting Procedures:

Use water to cool exposed containers. If safe to do so, remove containers from path of fire. For major fires or where the atmosphere is either oxygen deficient or contains unacceptable levels of combustion products, fire-fighters must wear self-contained breathing apparatus with full face-mask and protective clothing.

Risk of re-ignition for up to 72 hours after extinguishing, due to ability to retain heat.

Hazardous Decomposition products:

Carbon monoxide, toxic hydrocarbons, nitrous oxides and sulphur oxides.

SECTION 8 – HANDLING AND STORAGE

Handling:

Avoid dust release during storage and handling, by dampening as necessary. Handle away from oxidising agents (Class 5 materials).

Storage:

Store below 80°C and cover to limit dust release. Not to be stored with oxidizing agents.



SECTION 9 – EXPOSURE CONTROL AND PERSONAL PROTECTION

Exposure Standards:

The dust and mist (bioaerosols) from this product are classified as a “Hazardous Substance Non-Dangerous Goods”.

Recommend TWA 2 mg/m³ (respirable dust), based on NOHSCA limits for related dust materials and carbon black.

Ventilation:

Local exhaust ventilation and/or mechanical (general) exhaust are recommended where airborne concentrations are expected to exceed exposure limits;

Personal Hygiene:

Protective clothing (gloves, coveralls, boots, etc.) should be worn to prevent excessive skin contact. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

Eye Protection:

Avoid eye contact by wearing safety glasses with side shields or a face shield (AS/NZS 1336) whenever there is a risk of dust or product getting into the eyes. Potable water and/or eye-wash facilities should be provided in all areas where product is handled.

Skin Protection:

Avoid chronic skin contact by the use of gloves and full length clothing.

Respiratory Protection:

If engineering controls are not practical then respiratory devices may need to be worn. Avoid breathing dust released from the product. Wear a P2 respirator suitable for particulate and conforming with Australian Standards AS/NZS 1715 and AS/NZS 1716 when exposed to the dust. These standards should be followed in the selection, fit-testing, use, storage and maintenance of the respirators.

SECTION 10 – TOXICOLOGICAL AND EPIDEMIOLOGICAL DATA

Swallowed:

Unlikely under normal conditions of use, but could cause abdominal discomfort and nausea, and throat irritation.

Eye:

Can irritate the eyes and cause watering and redness.

Skin:

Prolonged contact with skin may result in slight irritation and redness.

Inhaled:

Inhalation of dust and/or liquid mists (bioaerosols) may irritate, inflame or sensitise the nose, throat and lungs, and may aggravate pre-existing conditions such as asthma and bronchitis.

Chronic exposure: Repeated inhalation of dust and/or liquid mists (bioaerosols) from this product Effects: may result in respiratory irritation, inflammation or sensitisation resulting in illnesses ranging from hay fever and asthma to pneumonia (eg Legionnaires disease) and pneumonia like illnesses. The elderly, with pre-existing respiratory diseases and the immunocompromised are at particular risk from these illnesses. All people working with these and other landscaping and horticultural products should ensure that they are adequately protected from tetanus.



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SECTION 11 – ECOLOGICAL INFORMATION

Ecotoxicity:

No ecotoxicity data available. Considered low risk.

SECTION 12 – DISPOSAL CONSIDERATIONS

No special disposal requirements; dispose in accordance with local waste and environmental authority requirements.

SECTION 13 – TRANSPORT INFORMATION

Transport Requirements:

UN number:	None assigned
Proper Shipping Name:	Not applicable
Class:	None assigned
Subsidiary Risk 1:	Nil
Hazchem code:	1[Z]
Incompatibilities:	Oxidising agents

SECTION 15 – SPILL OR LEAK PROCEDURES

Containment Procedures:

Ensure area is well ventilated. Vacuum or sweep material and place into a suitable disposable container. Wash area down with water to remove traces of the material.

Disposal:

No special requirements; dispose of waste in accordance with local waste and environmental authority guidelines.

SECTION 14 – REGULATORY INFORMATION

Regulatory Information:

Classification: The dust and mist (bioaerosols) from this product are classified as a “Hazardous Substance Non-Dangerous Goods”.

SECTION 16 – MSDS PREPARATION DETAILS

Prepared by:	James Joyce, PhD, Registered Professional Engineer Qld # 9281
Email:	james@blackisgreen.net
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REFERENCES

Hazardous Substances Information System (HSIS) Internet resource – <http://hsis.ascc.gov.au>
Exposure Standards for Atmospheric Contaminants in the Occupational Environment, Worksafe Australia, May 1995
ADI List, Commonwealth Department of Health and Family Services. 05/98
Australian Dangerous Goods Code 7, National Transport Commission, 2009