



SAFETY DATA SHEET

AGSPAND'S FEEDCHAR®

Infosafe No.: LQ9QF
ISSUED Date : 28/06/2022
ISSUED by: Agspand Pty Ltd

Section 1 - Identification

Product Identifier

AGSPAND'S FEEDCHAR®

Company Name

Agspand Pty Ltd

Address

60 Mayne Street (PO Box 4024) Invermay
TAS 7248 Australia

Telephone/Fax Number

Tel: 03 6333 1132

Emergency Phone Number

0477 791 030

Recommended use of the chemical and restrictions on use

Animal feed supplement.

Other Information

Disclaimer: Although the information and recommendations set forth in this SDS are presented in good faith and are believed to be correct as of the date of this SDS, Agspand Pty Ltd, makes no representations as to the completeness or accuracy thereof. Information is supplied on the conditions that the persons receiving and using it will make their own determination as to the suitability for their purpose prior to use. In no event will Agspand Pty Ltd or any affiliate thereof be responsible for damages of any nature whatsoever resulting from the use or reliance on the information set forth in the SDS.

Section 2 - Hazard(s) Identification

GHS classification of the substance/mixture

Not classified as Hazardous according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

Not classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)

Other Information

The product meets the requirements of EU Regulation 2002/32/EC of 7 May on undesirable substances in animal feed, and EU Regulation 396/2005 of 23 February 2005 on maximum residual limits of pesticides.

The product is Southern Cross Certified as an Allowed Input for Organic Farming in Australia, number 19091.

Agspand's FEEDCHAR® passes Feed Grade Biochar test requirements for heavy metals / contaminants and combustion toxins listed in ANZBIG's Code of Practice for the Sustainable Production and Use of Biochar (2021), Table 3, which follows Australian and international regulators' safe limits for feeds.

Section 3 - Composition and Information on Ingredients

Ingredients

Name	CAS	Proportion
Charcoal	16291-96-6	90-100 %
Bentonite	1302-78-9	1-10 %
Ingredients determined not to be hazardous		Balance

Information on Composition

The product does not contain:

1. Any substances prohibited from incorporation into stock foods (Table 2) defined by the Stock Feed Manufacturers' Council of Australia (SFMCA). (<http://www.sfmca.com.au>)
2. Any foreign constituents of stock food (Table 2) defined by the Stock Feed Manufacturers' Council of Australia. (<http://www.sfmca.com.au>)
3. Any Restricted Animal Materials (RAM) defined by Animal Health Australia, 'Australian Ruminant Feed Ban National Uniform Guidelines' (2016-2017). (<https://www.animalhealthaustralia.com.au>)
4. Substances NOT permitted for use on food-producing animals listed by APVMA. (<https://apvma.gov.au/node/11626>)

Section 4 - First Aid Measures

Inhalation

If inhaled, remove affected person from contaminated area. Keep at rest until recovered. If symptoms develop and/or persist seek medical attention.

Ingestion

Do not induce vomiting. Wash out mouth thoroughly with water. Seek medical attention.

Skin

Wash affected area thoroughly with soap and water. If symptoms develop seek medical attention.

Eye

If in eyes, hold eyelids apart and flush the eyes continuously with running water. Remove contact lenses. Continue flushing for several minutes until all contaminants are washed out completely. If symptoms develop and/or persist seek medical attention.

First Aid Facilities

Eyewash and normal washroom facilities.

Advice to Doctor

Treat symptomatically.

Other Information

For advice in an emergency, contact a Poisons Information Centre (Phone Australia 131 126) or a doctor at once.

Section 5 - Firefighting Measures

Suitable Extinguishing Media

Use appropriate media for surrounding fire.

Hazards from Combustion Products

May smoulder if exposed to heat over 550°C. Under fire conditions this product may emit toxic and/or irritating fumes, smoke and gases including carbon monoxide and carbon dioxide.

Specific hazards arising from the chemical

Combustible solid; will readily burn under fire conditions. The finely divided dust, in sufficient quantity, may form flammable/explosive mixtures with air. Dust clouds may present an explosion hazard in the presence of an ignition source.

Decomposition Temperature

Not available

Precautions in connection with Fire

Wear appropriate protective equipment and self-contained breathing apparatus (SCBA). Do not enter fire area without proper protective equipment, including respiratory protection. Risk of dust explosion.

Section 6 - Accidental Release Measures

Emergency Procedures

Remove all sources of ignition. Increase ventilation. Evacuate all unprotected personnel. Do not generate or breathe dust. Wear respiratory protection and full protective clothing to minimise exposure. Sweep up material avoiding dust generation - dampen spilled material with water if suitable to avoid airborne dust, OR where possible use dustless methods such as vacuum to collect the material; then transfer material in to suitable vapour tight labelled containers for subsequent recycling or disposal. Do not touch or walk through spilt material. Use only non-sparking tools. Dispose of waste according to applicable local and national regulations. If contamination of sewers or waterways occurs, inform the local water and waste management authorities in accordance with local regulations.

Section 7 - Handling and Storage

Precautions for Safe Handling

Avoid inhalation of dust, and skin or eye contact. Use only in a well ventilated area. Keep containers sealed when not in use. Prevent the build up of dust in the work atmosphere. Establish good housekeeping practices. Remove dust accumulations on a regular basis by vacuuming or gentle sweeping to avoid creating dust clouds. Maintain high standards of personal hygiene i.e. washing hands prior to eating, drinking, smoking or using toilet facilities.

Conditions for safe storage, including any incompatibilities

Store in a well ventilated area away from heat and sources of ignition, out of direct sunlight and moisture. Storage area should be separated from handling area. Take precautions against static electricity discharges. Use proper grounding procedures. Store away from incompatible materials such as strong acids, oxidizing agents, combustible materials and halogenated hydrocarbons. Store in suitable, labelled containers. Keep container tightly closed and sealed until ready for use. Inspect periodically for deficiencies such as damage or leaks. Have appropriate fire extinguishers available in and near the storage area. Ensure that storage conditions comply with applicable local and national regulations. For information on the handling of Combustible dusts and grounding procedure reference should be made to Australian Standard AS/NZS 4745 - 'Code of Practice for Handling Combustible Dusts'

Unsuitable Materials

Do not store in metal containers. May be corrosive.

Section 8 - Exposure Controls and Personal Protection

Occupational exposure limit values

No exposure standards have been established for this material, however, the TWA exposure standards for dust not otherwise specified is 10 mg/m³. As with all chemicals, exposure should be kept to the lowest possible levels. TWA (Time Weighted Average): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day week.

Source: Safe Work Australia

Biological Monitoring

No biological limits allocated.

Control Banding

Not available

Engineering Controls

Use with good general ventilation. If dusts are produced, local exhaust ventilation should be used.

Respiratory Protection

If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable dust/particulate filter should be used. Refer to relevant regulations for further information concerning respiratory protective requirements.

Reference should be made to Australian Standards AS/NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

Eye and Face Protection

Safety glasses with side shields, chemical goggles or full-face shield as appropriate should be used. Final choice of appropriate eye/

face protection will vary according to individual circumstances. Eye protection devices should conform to relevant regulations. Eye protection should conform with Australian/New Zealand Standard AS/NZS 1337 (series) - Eye Protectors for Industrial Applications.

Hand Protection

Wear gloves of impervious material. Final choice of appropriate gloves will vary according to individual circumstances. i.e. methods of handling or according to risk assessments undertaken. Occupational protective gloves should conform to relevant regulations. Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.

Thermal Hazards

No further relevant information available.

Body Protection

Suitable protective workwear, e.g. cotton overalls buttoned at neck and wrist is recommended. Chemical resistant apron is recommended where large quantities are handled.

Section 9 - Physical and Chemical Properties

Properties	Description	Properties	Description
Form	Powder	Appearance	Granulated black powder, 1 - 5 mm
Colour	Black	Odour	Odourless
Melting Point	Not available	Boiling Point	Not available
Decomposition Temperature	Not available	Solubility in Water	Insoluble
pH	8.2-9.0	Vapour Pressure	Not applicable
Relative Vapour Density (Air=1)	Not applicable	Evaporation Rate	Not applicable
Odour Threshold	Not available	Viscosity	Not applicable
Volatile Component	Not available	Partition Coefficient: n-octanol/water (log value)	Not applicable
Density	226 kg/cubic metre (approximate)	Flash Point	Not available
Flammability	Non-flammable	Auto-Ignition Temperature	Not applicable
Explosion Limit - Upper	Not available	Explosion Limit - Lower	Not available
Explosion Properties	Dust clouds may form explosive mixtures with air.	Oxidising Properties	Not expected
Particle Characteristics	Not available		

Section 10 - Stability and Reactivity

Reactivity

Reacts with incompatible materials.

Chemical Stability

Stable under normal conditions of storage and handling.

Possibility of hazardous reactions

Not available

Conditions to Avoid

Static electricity, heat or ignition source, formation of dust cloud.

Incompatible Materials

Strong oxidizing agents.

Hazardous Decomposition Products

Thermal decomposition may result in the release of toxic and/or irritating fumes, smoke and gases including: carbon dioxide and carbon monoxide.

Section 11 - Toxicological Information

Toxicology Information

No toxicity data available for this material.

Ingestion

Ingestion of this product may irritate the gastric tract causing nausea and vomiting.

Inhalation

Inhalation of dusts may irritate the respiratory system.

Chronic exposure to this material may aggravate existing respiratory disorders and lung disorders such as bronchitis, emphysema and asthma. Onset and progression are related to dust concentrations and duration of exposure.

Skin

May be irritating to skin. The symptoms may include redness, itching and swelling.

Eye

Eye contact may cause mechanical irritation. May result in mild abrasion.

Respiratory Sensitisation

Not expected to be a respiratory sensitiser.

Skin Sensitisation

Not expected to be a skin sensitiser.

Germ Cell Mutagenicity

Not considered to be a mutagenic hazard.

Carcinogenicity

Not considered to be a carcinogenic hazard.

Reproductive Toxicity

Not considered to be toxic to reproduction.

STOT - Single Exposure

Not expected to cause toxicity to a specific target organ.

STOT - Repeated Exposure

Not expected to cause toxicity to a specific target organ.

Aspiration Hazard

Not expected to be an aspiration hazard.

Section 12 - Ecological Information

Ecotoxicity

No ecological data available for this material.

Persistence and degradability

Not available

Mobility

Not available

Bioaccumulative Potential

Not available

Other Adverse Effects

No known significant effects or critical hazards.

Environmental Protection

Prevent this material entering waterways, drains and sewers.

Hazardous to the Ozone Layer

This product is not expected to deplete the ozone layer.

Section 13 - Disposal Considerations

Disposal Considerations

The disposal of the spilled or waste material must be done in accordance with applicable local and national regulations. To minimise personal exposure, refer to Section 8 - Exposure Controls and Personal Protection.

Section 14 - Transport Information

Transport Information

Not classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)

Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

ADG U.N. Number

None Allocated

ADG Transport Hazard Class

None Allocated

Special Precautions for User

Not available

IMDG Marine pollutant

No

Transport in Bulk

Not available

Section 15 - Regulatory Information

Regulatory Information

Not classified as Hazardous according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) including Work, Health and Safety Regulations, Australia.

Not classified as a Scheduled Poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Poisons Schedule

Not Scheduled

Montreal Protocol

Not listed

Stockholm Convention

Not listed

Rotterdam Convention

Not listed

International Convention for the Prevention of Pollution from Ships (MARPOL)

Not available

Agricultural and Veterinary Chemicals Act 1994

Not available

Basel Convention

Not available

Section 16 - Any Other Relevant Information

Date of Preparation

SDS Reviewed: June 2022

Supersedes: October 2019

Version Number

2.0

Literature References

Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice.

Standard for the Uniform Scheduling of Medicines and Poisons.

Australian Code for the Transport of Dangerous Goods by Road & Rail.

Work Health and Safety Regulations, Schedule 10: Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.

Code of Practice for Supply Diversion into Illicit Drug Manufacture.

National Code of Practice for Chemicals of Security Concern.

Agricultural Compounds and Veterinary Chemicals Act.

International Agency for Research on Cancer (IARC) Monographs.

Montreal Protocol on Substances that Deplete the Ozone Layer.

Stockholm Convention on Persistent Organic Pollutants (POPs).

Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade.

Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal.

International Air Transport Association (IATA) Dangerous Goods Regulations.

International Maritime Dangerous Goods (IMDG) Code.

Workplace exposure standards for airborne contaminants.

Adopted biological exposure determinants, American Conference of Industrial Hygienists (ACGIH).

Globally Harmonised System of Classification and Labelling of Chemicals (7th revised edition).

Code of Practice: Managing Noise and Preventing Hearing Loss at Work.

END OF SDS

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BIOCHAR TEST SAMPLE CHARACTERISTICS and DATA SHEET

BIOCHAR 'TOTALS' ANALYSIS REPORT

1 biochar sample supplied by AGSPAND Pty Ltd
21 January 2022. Lab Job No. M5275.

	Sample 1 Product Name: Agspand 130122MVKS Product Type: Biochar Manufacturing Site: AGSPAND Pty Ltd Manufactured Date: 11/01/2022
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Parameter	Method Reference	M5275/1
Wet Bulk Density (g/cm ³)	AS4454:2012 Appendix J	0.41
Dry Bulk Density (g/cm ³)	AS4454:2012 Appendix J	0.37
Moisture Content (%)	**Inhouse S2 (105°C)	9.1
Volatile Matter (%)	Inhouse 750°C	97.7
Ash Content (% ash)		2.3
Particle Size Analysis		
>2mm	** Dry Sieving Analysis method was used for this grain size determination (Method of: Lewis and McConchie, 1994. Analytical Sedimentology. Chapman and Hall, USA.)	2.4%
1-2mm		6.8%
500µm-1mm		9.8%
250µm-500µm		13.9%
125µm-250µm		21.6%
63µm-125µm		23.4%
<63µm		22.1%
Surface Area		
Single Point Surface Area P/PO (m ² /g)	Subcontract- PsS Report M5275/1	268.4615
BET Surface Area (m ² /g)		264.8288
Langmuir Surface Area (m ² /g)		305.3374

Parameter	Method Reference	M5275/1
pH	Rayment & Lyons 2011 - 4A1 (1:10 Water)	8.97
Electrical Conductivity (dS/m)	Rayment & Lyons 2011 - 3A1 (1:10 Water)	0.38
Total Sulfur (%S)	Rayment & Lyons 2011 - 17C1 Aqua Regia	<0.01
Total Hydrogen (%)	Subcontract SGS Report SE217178 (ASTM D5291)	1.92
Total Oxygen (%)	**Calculation	4.62
Hydrogen/Organic Carbon Ratio	Calculation - Hydrogen/ Total Organic Carbon	0.02
Total Organic Carbon (%)	LECO Trumac Analyser - Inhouse S15b	91.0
Total Carbon (%)	Inhouse S4a (LECO Trumac Analyser)	91.0
Total Nitrogen (%)		0.2
Carbon/Nitrogen Ratio	**Calculation - Total Organic Carbon/Total Nitrogen	502
Acid Neutralising Capacity (% CaCO ₃)	AS4454:2012 Appendix H	1.33
METALS		
Total Calcium (%)		0.17
Total Magnesium (%)		0.05
Total Potassium (%)	Rayment & Lyons 2011 - 17C1 Aqua Regia	0.06
Total Sodium (%)		0.04
Total Sulphur (%)		<0.01
Total Phosphorus (%)	Rayment & Lyons 2011 - 17C1 Aqua Regia	<0.01
Total Zinc (mg/kg)		122
Total Manganese (mg/kg)		52.9
Total Iron (mg/kg)		2,208
Total Copper (mg/kg)		1.65
Total Boron (mg/kg)		2.74
Silicon (mg/kg)		355
Total Aluminium (mg/kg)	Rayment & Lyons 2011 - 17C1 Aqua Regia	524
Total Molybdenum (mg/kg)		0.12
Total Cobalt (mg/kg)		0.31
Total Selenium (mg/kg)		0.20
Total Cadmium (mg/kg)		<0.01
Total Lead (mg/kg)		0.16
Total Arsenic (mg/kg)		<0.01
Total Chromium (mg/kg)		5.10

Parameter	Method Reference	M5275/1
Total Nickel (mg/kg)		3.44
Total Mercury (mg/kg)		<0.01
Total Silver (mg/kg)		<0.01
Hexavalent Chromium, Cr6+	Subcontract- SGS Report SE228249	<LOR
PAH (Polynuclear Aromatic Hydrocarbons)		
Naphthalene (mg/kg)		<LOR
2-methylnaphthalene (mg/kg)		<LOR
1-methylnaphthalene (mg/kg)		<LOR
Acenaphthylene (mg/kg)		<LOR
Acenaphthene (mg/kg)		<LOR
Fluorene (mg/kg)		<LOR
Phenanthrene (mg/kg)		<LOR
Anthracene (mg/kg)		<LOR
Fluoranthene (mg/kg)		<LOR
Pyrene (mg/kg)		<LOR
Benzo(a)anthracene (mg/kg)	Subcontract- SGS Report SE228249	<LOR
Chrysene (mg/kg)		<LOR
Benzo(b&j)fluoranthene (mg/kg)		<LOR
Benzo(k)fluoranthene (mg/kg)		<LOR
Benzo(a)pyrene (mg/kg)		<LOR
Indeno(1,2,3-cd)pyrene (mg/kg)		<LOR
Dibenzo(ah)anthracene (mg/kg)		<LOR
Benzo(ghi)perylene (mg/kg)		<LOR
Carcinogenic PAHs, BaP TEQ <LOR=0 (mg/kg)		<LOR
Carcinogenic PAHs, BaP TEQ <LOR=LOR (mg/kg)		<LOR
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2 (mg/kg)		<LOR
Total PAH (18) (mg/kg)		<LOR
PCB's		
Arochlor 1016 (mg/kg)		<LOR
Arochlor 1221 (mg/kg)	Subcontract- SGS Report SE228249	<LOR
Arochlor 1232 (mg/kg)		<LOR
Arochlor 1242 (mg/kg)		<LOR

Parameter	Method Reference	M5275/1
Arochlor 1248 (mg/kg)		<LOR
Arochlor 1254 (mg/kg)		<LOR
Arochlor 1260 (mg/kg)		<LOR
Arochlor 1262 (mg/kg)		<LOR
Arochlor 1268 (mg/kg)		<LOR
Total PCBs (Arochlors) (mg/kg)		<LOR
Dioxins and Furans		
2,3,7,8-TCDF (ng/kg)		0.96
2,3,7,8-TCDD (ng/kg)		<LOR
1,2,3,7,8-PeCDF (ng/kg)		<LOR
2,3,4,7,8-PeCDF (ng/kg)		<LOR
1,2,3,7,8-PeCDD (ng/kg)		<LOR
1,2,3,4,7,8-HxCDF (ng/kg)		<LOR
1,2,3,6,7,8-HxCDF (ng/kg)		<LOR
2,3,4,6,7,8-HxCDF (ng/kg)		<LOR
1,2,3,7,8,9-HxCDF (ng/kg)	Subcontract- SGS Report SE228249-A	<LOR
1,2,3,4,7,8-HxCDD (ng/kg)		<LOR
1,2,3,6,7,8-HxCDD (ng/kg)		<LOR
1,2,3,7,8,9-HxCDD (ng/kg)		<LOR
1,2,3,4,6,7,8-HpCDF (ng/kg)		<LOR
1,2,3,4,7,8,9-HpCDF (ng/kg)		<LOR
1,2,3,4,6,7,8-HpCDD (ng/kg)		<LOR
OCDF (ng/kg)		<LOR
OCDD (ng/kg)		<LOR
Total		0.96-11

* < LOR Less than limit of reporting. *ND* Not detected. *NA* Not applicable. *NR* Not required.

Notes:

1. All analysis is dry weight – Samples reported on an oven dried basis at 105°C (testing conducted on finely ground sample dried at 40°C).
2. Methods from Rayment and Lyons, 2011. *Soil Chemical Methods - Australasia*.CSIRO Publishing: Collingwood.
3. Total Acid Extractable Nutrients indicate a store of nutrients.
4. Conversions for 1 mg/kg = 1 ppm; 1 % = 10,000 ppm
5. Testing completed in a NATA accredited laboratory.
6. Analysis conducted between sample arrival date and reporting date.
7. This report is not to be reproduced except in full. Results only relate to the item tested.
9. This report was issued on 23/02/2022.