MATERIAL SAFETY DATA SHEET

BioDunder

SECTION 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name:	**BioDunder**
Other Names:	Molasses Dunder, Dunder, Vinasse
Product Codes/Trade Names:	Suplamite, DunDust, Suplaflo, BioDunder™
Recommended Use:	BioDunder co-products are licensed by the Department of Environmental Resource Management (Queensland) for beneficial re-use as a fertiliser, animal feed and dust suppressant purposes.
Applicable In:	Australia
Supplier:	Sucrogen BioEthanol Pty Ltd (ABN 85 009 660 191)
Address:	Bruce Highway, Sarina, QLD, 4737, Australia
Telephone:	+61 7 4940 9822
Email Address:	agservices@sucrogen.com
Web Site:	www.sucrogen.com
Facsimile:	+61 7 4956 2147
Emergency Phone Number:	000 Fire Brigade and Police (available in Australia only)
Poisons Information Centre:	13 11 26 (available in Australia only)

This Material Safety Data Sheet (MSDS) is issued by the Supplier in accordance with National Standards and Guidelines from Safe Work Australia (SWA – formerly ASCC/NOHSC). The information in it must not be altered, deleted or added to. The Supplier will not accept any responsibility for any changes made to its MSDS by any other person or organization. The Supplier will issue a new MSDS when there is a change in product specifications and/or Standards, Codes, Guidelines, or Regulations.

SECTION 2: HAZARD IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE: Classified as **Non Hazardous** according to the Approved Criteria For Classifying Hazardous Substances [NOHSC:1008] 3rd Edition.

BioDunder is classified as **Non Dangerous** according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.

Risk Phrases	Safety Phrases
None Allocated	None Allocated

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name:	Synonyms	Proportion:	CAS Number:
Protein	-	5% - 35% (DWB)	-
Ash	-	11% - 65% (DWB)	-
Carbohydrates	-	5 - 25% w/v	-
Glycerol	-	1 - 6 % w/v	56-81-5
Water	-	30 - 80% w/v	7732-18-5
BioDunder is a co-product of the molasses based ethanol manufacturing process and contains vegetable matter with			

traces of potassium, sodium, nitrogen, calcium, magnesium, phosphorus and sulphur.

SECTION 4: FIRST AID MEASURES

Swallowed:	Unlikely in the industrial situation. Give water to drink to dilute stomach contents. Do not induce vomiting.
Eyes:	Flush thoroughly with flowing water for at least 15 minutes. If symptoms/irritation persist, seek medical attention.
Skin:	Wash with soap and water.
Inhaled:	Remove to fresh air.
First Aid Facilities:	No special requirements.
Advice to Doctor:	Treat symptomatically.

SECTION 5: FIRE FIGHTING MEASURES

Flammability:	Product will not burn. No specific requirements.
Suitable extinguishing media:	Product will not burn. If there is a fire in the surrounding area use suitable extinguishing media for the surrounding material.
Hazards from combustion products:	None - product will not burn.
Special protective precautions and equipment for fire fighters:	As required for fire in surrounding materials.
HAZCHEM Code:	Not applicable

SECTION 6: ACCIDENTAL RELEASE MEASURES

Emergency Procedure:	See Disposal Considerations.
Containment Procedure:	Bund and pump into suitable drum for re-use. For dust suppressant applications, refer to permit number ENBU00824808 for BioDunder issued by the Department of Environment and Resource Management in Queensland (approval of resource for beneficial use)
Clean Up Procedure:	Large spills - hose down but avoid this product getting into drains, sewers and waterways because of high BOD load and low pH. For dust suppressant applications, refer to permit number ENBU00824808 for BioDunder issued by the Department of Environment and Resource Management in Queensland (approval of resource for beneficial use)

SECTION 7: HANDLING AND STORAGE

Handling:	Transported by bulk tanker. For dust suppressant applications, refer to permit number ENBU00824808 for BioDunder issued by the Department of Environment and Resource Management in Queensland (approval of resource for beneficial use)

Storage:	For dust suppressant applications, refer to permit number ENBU00824808 for BioDunder issued by the Department of Environment and Resource Management in Queensland (approval of resource for beneficial use)
Incompatibilities:	None

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Standards:	National Occupational Exposure Standard (NES), Safe Work Australia (formerly ASCC/NOHSC).
	No exposure standard is applicable to this non-hazardous product.
Notes:	Sucrogen AgServices recommendation: Keep exposure to aerosols and mists as low as practicable and avoid skin contact.
Biological Limit Values:	No biological limit allocated.
ENGINEERING CONTROLS	
☐ **Ventilation:**	All work with BioDunder should be carried out in such a way as to minimise skin contact with the product and avoid generation of liquid aerosol (mist) where persons can inhale it. For applications where there is a risk of exposure to mists, please refer to Respiratory Protection requirements below.
☐ **Special Consideration for Repair &/or Maintenance of Contaminated Equipment:**	Recommendations on exposure control and Personal Protection should be followed.
PERSONAL PROTECTION	
☐ **Personal Hygiene**	Wash hands before eating, drinking, using the toilet or smoking.
☐ **Skin Protection:**	Wear Loose comfortable clothing. Wear PVC or rubber gloves AS 2161. Wash work clothes regularly.
☐ **Eye Protection:**	Goggles or safety glasses (AS 1336 and AS/NZS 1337) and a face shield should be worn if there is a risk of splash.
☐ **Respiratory Protection:**	If an aerosol or mist is generated, wear a respirator for acid gases conforming to AS/NZS 1715 and 1716.
☐ **Thermal Protection:**	None should be needed under normal circumstances.
☐ **Smoking & Other Dusts**	Inhalation of airborne particles from other sources, including those from cigarette smoke, may increase the risk of lung disease. Sucrogen AgServices recommends that all storage and work areas should be non-smoking zones, and other airborne contaminants be kept to a minimum.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Dark brown-black, viscous liquid
Odour:	Sharp organic odour like molasses
pH, at stated concentration:	4.0 - 4.5
Vapour Pressure:	Not applicable - does not vapourise
Vapour Density:	Not applicable - does not vapourise
Boiling Point/range (°C):	~ 100°C

Freezing / Melting Point (°C):	Not determined
Solubility:	Partially soluble in water.
Specific Gravity (H_2O = 1):	1.15 (typical)
FLAMMABLE MATERIALS	
☐ **Flash Point:**	Not applicable
☐ **Flash Point Method:**	Not applicable
☐ **Flammable (Explosive) Limit - Upper:**	Not applicable
☐ **Flammable (Explosive) Limit - Lower:**	Not applicable
☐ **Autoignition Temperature:**	Does not auto-ignite
ADDITIONAL PROPERTIES	
☐ **Evaporation Rate:**	Not determined
☐ **Molecular Weight:**	Not determined
☐ **Volatile Organic Compounds Content (VOC):** (as specified by the Green Building Council of Australia)	Nil
☐ **% Volatiles:**	0%

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability:	Product is stable and will not polymerize.
Incompatible Materials:	None known.
Conditions to avoid:	None known.
Hazardous Decomposition Products:	None known.
Hazardous Reactions:	None known.

SECTION 11: TOXICOLOGICAL INFORMATION

Toxicological Data:

The health effects listed below are related to the acid pH of the product (3.3 - 4.0) and potential for mild irritation of skin and mucous membranes.

Health effects information is based on reported effects in use from overseas and Australian reports.

Effects: Acute

Swallowed:	Unlikely under normal conditions of use, but could cause abdominal discomfort and nausea, and throat irritation.
Eyes:	Can irritate the eyes and cause watering and redness.
Skin:	Can cause skin irritation if in repeated or prolonged contact with the skin.
Inhaled:	Can be temporarily irritating to the respiratory system if aerosol mist breathed in.

Effects: Chronic

Repeated skin contact may result in chronic dermatitis with redness and dryness of the skin.

Additional Notes

SECTION 12: ECOLOGICAL INFORMATION

Eco-toxicity:	Product has no significant ecotoxicity.
Persistence and Degradability:	Biodegradeable.
Mobility:	Biodegradeable.

SECTION 13: DISPOSAL CONSIDERATIONS

Large spills - hose down but avoid this product getting into drains, sewers and waterways because of high BOD load and low pH. Bund and pump into suitable drum for reuse.

For dust suppressant applications, refer to permit number ENBU00824808 for BioDunder issued by the Department of Environment and Resource Management in Queensland (approval of resource for beneficial use)

SECTION 14: TRANSPORT INFORMATION

Proper Shipping Name:	Not applicable
UN number:	Not applicable
DG Class:	Not applicable
Subsidiary Risk 1:	Not applicable
Packaging Group:	Not applicable
HAZCHEM code:	Not applicable
Marine Pollutant:	No
Special Precautions for User:	None

ADDITIONAL TRANSPORT REQUIREMENTS:

For dust suppressant applications, refer to permit number ENBU00824808 for BioDunder issued by the Department of Environment and Resource Management in Queensland (approval of resource for beneficial use)

SECTION 15: REGULATORY INFORMATION

Poisons Schedule:	Not scheduled
Other:	Approval for BioDunder for beneficial use by Department of Environmental Resource Management Queensland Government including as a dust suppressant, stock feed and a fertiliser. Permit Number ENBU00824808.

SECTION 16: OTHER INFORMATION

For further information on this product, please contact:
Sucrogen BioEthanol Pty Ltd (ABN 85 009 660 191)
Bruce Highway, Sarina, QLD, 4737, Australia
Phone: +61 7 4940 9822
Fax: +61 7 4956 2147

ADDITIONAL INFORMATION

Australian Standards References:

AS 1020	The Control of Undesirable Static Electricity.
AS 1076	Code of Practice for selection, installation and maintenance of electrical apparatus and associated equipment for use in explosive atmospheres (other than mining applications) – Parts 1 to 13
AS/NZS 1336	Recommended Practices for Occupational Eye Protection
AS/NZS 1715	Selection, Use and Maintenance of Respiratory Protective Devices
AS/NZS 1716	Respiratory Protective Devices
AS 1940	The Storage and Handling of Flammable and Combustible Liquids
AS 2161	Industrial Safety Gloves and Mittens (excluding electrical and medical gloves)
AS 2380	Electrical equipment for explosive atmospheres – Explosion Protection Techniques (Parts 1 to 9)
AS 3000	Electrical installations (known as the Australian/New Zealand Wiring Rules).

Other References:

NOHSC:2011(2003)	National Code of Practice for the Preparation of Material Safety Data Sheets 2nd Edition, April 2003, National Occupational Health and Safety Commission.
NOHSC; 2012 (1994)	National Code of Practice for the Labelling of Workplace Substances, March 1994, Australian Government Publishing Service, Canberra.
NES	National Occupational Exposure Standards for Workplace Atmospheric Contaminants (NES), Safe Work Australia (formerly ASCC/NOHSC) 1995 as amended.
ADG Code	Australian Dangerous Goods Code 7th Edition.
Permit ENBU00824808	Approval of resource for beneficial use for BioDunder issued by the Department of Environment and Resource Management in Queensland. A copy of this permit can be obtained by contacting Sucrogen BioEthanol.

AUTHORISATION

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END OF MSDS