

Safety Data Sheet



BioDunder® Products

Section 1: Identification of the material and supplier

Product name:	BioDunder® Products
Other names:	Dunder, Molasses Dunder, Molasses Alcohol Dunder, Vinasse
Product Codes/Trade Names:	BioDunder®, BioDunder® OG, Dundust®
Recommended use:	BioDunder co-products are licensed by the Queensland Department of Environment and Science for use as a fertiliser, colouring agent in soil fertilisers and as a coal dust suppressant. Not suitable for use as a stockfeed.
Supplier:	Wilmar Sugar Australia Ltd
Address:	Bruce Highway, Sarina, QLD, 4737, Australia
Telephone:	+61 7 4940 9822
Email address:	agservices@wilmar.com.au
Web site:	www.wilmar-international.com
Facsimile:	+61 7 4956 2147
Emergency phone number:	1800 774 557 Transpacific Emergency Response (available in Australia only)

This Safety Data Sheet (SDS) 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 SDS by any other person or organization. The Supplier will issue a new SDS when there is a change in product specifications and/or Standards, Codes, Guidelines, or Regulations.

Section 2: Hazard identification

AUSTRALIA CLASSIFICATION

Based on available information, this material is not classified as hazardous according to criteria of Safe Work Australia.

Poisons Schedule (Aust): Not applicable

NEW ZEALAND CLASSIFICATION

Based on available information, this material is not classified as hazardous according to criteria of ERMA New Zealand.

DANGEROUS GOODS CLASSIFICATION

Not classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".

Section 3: Composition / Information on ingredients

Chemical Name:	CAS No:	Proportion:
Dunder*	91082-90-5	94 - 100%
MOP (Muriate of Potash) (Potassium Chloride)	7447-40-7	0 - 6%
		100%

* Dunder Contains the following:

- Protein	-	5-35%
- Ash	-	11-65%
- Carbohydrates	-	5-25%
- Glycerol	56-81-5	1-6%
- Water	7732-18-5	30-80%

BioDunder® (dunder) 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, all being non-hazardous according to published criteria.

Section 4: First aid measures

If poisoning occurs, contact a doctor or Poisons Information Centre (Phone Australia 131 126, New Zealand 0800 764 766).

Swallowed: No adverse health effects expected; however, if an adverse health effect occurs, rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water to drink. Never give anything by the mouth to an unconscious patient. If vomiting occurs give further water. Seek medical advice.

Eye: If in eyes wash out immediately with water. In all cases of eye contamination it is a sensible precaution to seek medical advice.

Skin: No adverse health effects expected; however, if an adverse health effect occurs, remove contaminated clothing and flush skin and hair with running water. If swelling, redness, blistering or irritation occurs seek medical assistance.

Inhalation: No adverse health effects expected; however, if an adverse health effect occurs, remove victim from exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. Seek medical advice if effects persist.

PPE for First Aiders: Wear overalls, safety glasses and impervious gloves. Available information suggests that gloves made from nitrile rubber should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

If risk of inhalation of exists, wear organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

Advice to Doctor: Treat symptomatically.

Section 5: Fire fighting measures

Hazchem Code: Not applicable.

Suitable extinguishing media: Not combustible, however, if material is involved in a fire use water fog (or if unavailable fine water spray), foam, dry agent (carbon dioxide, dry chemical powder).

Specific hazards: Non-combustible material.

Special protective precautions and equipment for fire fighters: Not combustible, however following evaporation of aqueous component residual material can burn if ignited. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion. Fermentation activity may occur which can yield carbon dioxide with possible traces of ethanol or volatile fatty acids. Fermentation may also occur on dilute surface layers formed by condensation from the headspace above the liquid. The addition of water may initiate bacterial growth which can produce methane and further carbon dioxide. This may create an explosive atmosphere in the presence of a spark or flame. Insufficient oxygen may also be present. If entry into vessels or storage tanks is required then confined space entry requirements should be implemented.

Section 6: Accidental release measures

Emergency Procedure: Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contamination. Work up wind or increase ventilation.

Containment Procedure: Contain - prevent run off into drains and waterways. If contamination of sewers or waterways has occurred advise local emergency services.

Refer to the Queensland Department of Environment and Science EOW Code Dunder (ENEW07503118)

Clean Up Procedure: Cover with damp absorbent (inert material, sand or soil). Sweep or vacuum up, but avoid generating dust. Collect and seal in properly labelled containers or drums for disposal.

Dangerous Goods – Initial Emergency Response Guide No: Not applicable.

Section 7: Handling and storage

Refer to the 'Fertilizer User Guide' which can be obtained at www.wilmaragservices.com.au

Product may contain added MOP for quality purposes and should not be used as a stockfeed.

Handling: Avoid skin and eye contact.

Fermentation activity may occur which can yield carbon dioxide with possible traces of ethanol or volatile fatty acids. Fermentation may also occur on dilute surface layers formed by condensation from the headspace above the liquid. The addition of water may initiate bacterial growth which can produce methane and further carbon dioxide. This may create an explosive atmosphere in the presence of a spark or flame.

Insufficient oxygen may also be present. If entry into vessels or storage tanks is required then confined space entry requirements should be implemented.

Prevent build-up of dust, mists or vapours in the work atmosphere. Maintain high standards of personal hygiene.

Storage: Store in a cool, dry, well-ventilated place and out of direct sunlight. Keep containers closed when not in use - check regularly for leaks.

Refer to the Queensland Department of Environment and Science EOW Code Dunder (ENEW07503118)

Incompatibilities: Store away from incompatible materials described in Section 10.

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Section 8: Exposure controls / Personal protection

National occupational exposure limits: No value assigned for this specific material by Safe Work Australia or Department of Labour New Zealand.

Biological Limit Values: As per the "National Model Regulations for the Control of Workplace Hazardous Substances (Safe Work Australia)" the ingredients in this material do not have a Biological Limit Allocated.

Engineering measures: Natural ventilation should be adequate under normal use conditions. Keep containers closed when not in use.

Personal protection equipment: OVERALLS, SAFETY SHOES, SAFETY GLASSES, GLOVES.

Wear overalls, safety glasses and impervious gloves. Available information suggests that gloves made from polyvinyl chloride (PVC) should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using. If risk of inhalation of exists, wear organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

If entry into vessels or storage tanks is required then confined space entry requirements should be implemented.

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 @20° C:	Not applicable
Vapour Density (air=1):	Not applicable
Boiling Point/range (°C):	100
Freezing/Melting Point (°C):	Not available
Solubility @ 20 °C:	Partially soluble in water
Specific Gravity (20°C):	1.12 – 1.14
FLAMMABLE MATERIALS	
☐ Flash Point (°C):	Not applicable
☐ Flash Point Method:	Not applicable
☐ Flammable (Explosive) Limit - Upper:	Not applicable
☐ Flammable (Explosive) Limit - Lower:	Not applicable
☐ Autoignition Temperature (°C):	Not applicable
ADDITIONAL PROPERTIES	
☐ Evaporation Rate:	Not available
☐ Molecular Weight:	Not available
☐ Volatile Organic Compounds Content (VOC): (as specified by the Green Building Council of Australia)	Not available
☐ % Volatiles:	Not available

Section 10: Stability and reactivity

Chemical stability: This material is thermally stable when stored and used as directed. Fermentation activity may occur which can yield carbon dioxide with possible traces of ethanol or volatile fatty acids. Fermentation may also occur on dilute surface layers formed by condensation from the headspace above the liquid. The addition of water may initiate bacterial growth which can produce methane and further carbon dioxide.

Conditions to avoid: No known conditions to avoid.

Incompatible Materials: No information available.

Hazardous decomposition products: Oxides of carbon and nitrogen, smoke and other toxic fumes.

Hazardous reactions: No known hazardous reactions.

Section 11: Toxicological information

Product may contain added MOP for quality purposes and should not be used as a stockfeed.

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Effects: Acute

Swallowed: No adverse health effects expected; however, large amounts may result in nausea, vomiting and irritation of the gastrointestinal tract.

Eyes: May cause watering of eyes and blurred vision.

Skin: No adverse health effects expected; however, contact with skin may result in irritation for sensitive individuals.

Inhalation: Material may be irritant to mucous membranes and respiratory tract.

Acute toxicity

Inhalation: This material has been classified as non-hazardous.
Acute toxicity estimate (based on ingredients): >20 mg/L

Skin contact: This material has been classified as non-hazardous.
Acute toxicity estimate (based on ingredients): >2,000 mg/Kg

Ingestion: This material has been classified as non-hazardous.
Acute toxicity estimate (based on ingredients): >2,000 mg/Kg

Corrosion/Irritancy: Eye: this material has been classified as not corrosive or irritating to eyes.
Skin: this material has been classified as not corrosive or irritating to skin.

Sensitisation: Inhalation: this material has been classified as not a respiratory sensitiser.
Skin: this material has been classified as not a skin sensitiser.

Aspiration hazard: This material has been classified as non-hazardous.

Specific target organ toxicity (single exposure): This material has been classified as non-hazardous.

Chronic Toxicity

Mutagenicity: This material has been classified as non-hazardous.

Carcinogenicity: This material has been classified as non-hazardous.

Reproductive toxicity (including via lactation): This material has been classified as non-hazardous.

Specific target organ toxicity (repeat exposure): This material has been classified as non-hazardous.

Section 12: Ecological information

Avoid contaminating waterways.

Acute aquatic hazard: This material has been classified as non-hazardous.
Acute toxicity estimate (based on ingredients): >100 mg/L

Long-term aquatic hazard: This material has been classified as non-hazardous.
Acute toxicity estimate (based on ingredients): >100 mg/L

Ecotoxicity: No information available.

Persistence and degradability: The product is readily biodegradable.

Bioaccumulative potential: No information available.

Mobility: No information available.

Section 13: Disposal considerations

Persons conducting disposal, recycling or reclamation activities should ensure that appropriate personal protection equipment is used, see "Section 8. Exposure Controls and Personal Protection" of this SDS.

If possible material and its container should be recycled. If material or container cannot be recycled, dispose in accordance with local, regional, national and international Regulations.

Refer to the Queensland Department of Environment and Science EOW Code Dunder (ENEW07503118)

Section 14: Transport information

ROAD AND RAIL TRANSPORT

Not classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".

MARINE TRANSPORT

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

AIR TRANSPORT

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

Section 15: Regulatory information

HSNO Approval Number and/or Group Standard: Not Applicable

This material is not subject to the following international agreements:

Montreal Protocol (Ozone depleting substances)
The Stockholm Convention (Persistent Organic Pollutants)
The Rotterdam Convention (Prior Informed Consent)
Basel Convention (Hazardous Waste)
International Convention for the Prevention of Pollution from Ships (MARPOL)

Product meets the requirements of Biosecurity Regulation 2016

This material/constituent(s) is covered by the following requirements:

- All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS).

Section 16: Other information

For further information on this product, please contact:

Wilmar Sugar Australia Ltd
Bruce Highway, Sarina, QLD, 4737, Australia

Phone: +617 4940 9822

Fax: +617 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:

Wilmar	Fertilizer User Guide (which can be obtained at www.wilmaragsservices.com.au)
Queensland Department of Environment and Science	EOW Code Dunder (ENEW07503118)
Queensland Government	Biosecurity Regulations 2016
Safe Work Australia. 10 August 2011.	Preparation of Safety Data Sheets for Hazardous Material, Code of Practice.
Safe Work Australia. 10 August 2011.	Labelling of Workplace Hazardous Chemicals, Code of Practice.
WES	Workplace Exposure Standards for Airborne Contaminants, December 2011, Safe Work Australia.
ADG Code	Australian Code for the Transport of Dangerous Goods by Road and Rail, 7th edition, National Transport Commission.
European Chemicals Agency	http://echa.europa.eu/web/guest/information-on-chemicals/registered-substances

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Authorisation

Reason for Issue: 16/12/15 – Major review & format change (V2.0).
21/08/18 – Major review. Renamed SDS, updated product, other & trade names, composition, firefighting, handling & storage, exposure controls, pH & SG, stability & reactivity and references (V3.0).
07/09/18 – Updated recommended use in section 1 and sections 3, 7 & 11 due to MOP addition (V4.0).
30/09/19 – Updated to address changes due to introduction of EOW Code Dunder (V5.0)

Authorised by: Chemical Data Services Pty Ltd

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END OF SDS