

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Company Identification

Registered Company Name	Organic Bioactives Ltd, New Zealand
Address	Tasman Building, Suite B, Level 1, 16-22 Anzac Ave, Auckland 1010, New Zealand
Phone	+64 (21) 224 6992
Email	compliance@organicbioactives.com
Web	www.organicbioactives.com
Emergency Telephone Number	National Poison Information centre New Zealand: Phone 0800-764766 NZ Emergency Services: 111

Product Identification

Product Name	PlantæDerMX® Mamaku Leaf Extract
Product Code	PDMAM-G
Relevant Identified uses	Cosmetic actives, Personal care use and external use only.
Common Chemical Name	Mamaku leaf extract
Chemical Family	Botanical Extract
INCI	Glycerin & Cyathea medullaris leaf extract
REACH Restriction	Exempt from registration ex Annex V
HS Code	1302.19.90

Section 2: CAS Numbers and COMPOSITION

INCI	% [weight]	CAS No	EINECS
Glycerin	86 -92%	56-81-5	200-289-5
Cyathea medullaris leaf extract	8 - 14%	N/A	921-462-8

Section 3: PHYSICAL AND CHEMICAL PROPERTIES

Product Form	Translucent liquid
Solubility	Water soluble
Colour	Translucent clear to liquid gold
Odour	Standard to the plant
pH @24°C	6 - 8
Density @20°C	Min 1.2552@20°C
Viscosity @20°C	Not determined
Boiling Point	210°F and 554°F
Flash Point	>350°F
Melting Point	64°F / 20°F

Section 4: HAZARD IDENTIFICATION

Not considered a Hazardous Substance according to the criteria of the New Zealand Hazardous Substances New Organisms legislation. Not classified as hazardous according to criteria of Safe Work Australia; **NONHAZARDOUS SUBSTANCE.**

Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail; **NON-DANGEROUS GOODS**.

Poisons Schedule None allocated.

Section 5: POTENTIAL HEALTH EFFECTS

No specific symptoms known

Eyes	If in eyes, wash out immediately with water. Not classified to be irritant but undiluted may irritate eyes. In all cases of eye contamination it is a sensible precaution to seek medical advice.
Inhalation	Not classified to be irritant.
Skin contact	Not classified to be irritant.
Ingestion	Rinse mouth with water. If swallowed, give a glass of water to drink. If vomiting occurs give further water. Seek medical advice.

Section 6: COMPOSITION/ INFORMATION OF INGREDIENTS

Brief description of a product	Mamaku leaf extract, Glycerin based
Hazardous components	There are NO hazardous components according to EC criteria.
Prevention	Wash hands thoroughly after handling. Wear gloves and eye/face protection.
Response	If irritation occurs: seek medical attention.

Section 7: FIRST AID MEASURES

Eye contact	Wash out immediately with fresh running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. If pain persists or recurs seek medical attention. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin contact	Immediately remove all contaminated clothing, including footwear. Flush skin and hair with running water (and soap if available). Seek medical attention in event of irritation.
Ingestion	Immediately give a glass of water. First aid is not generally required. If in doubt, contact a Poison Centre (0800 764766) or a doctor.
Inhalation	If fumes or combustion products are inhaled remove from contaminated area. Other measures are usually unnecessary.

Section 8: FIRE FIGHTING MEASURES

Suitable extinguishing media In case of fire, use water spray (fog), foam, dry chemical or carbon dioxide CO₂.

Fire Fighting	<p>Alert Fire Brigade and tell them location and nature of hazard. Wear full body protective clothing with breathing apparatus. Prevent spillage from entering drains or water course. Use water delivered as a fine spray to control fire and cool adjacent area. Avoid spraying water onto liquid pools. DO NOT approach containers suspected to be hot. Cool fire exposed containers with water spray from a protected location. If safe to do so, remove containers from path of fire.</p>
Fire Explosion Hazard	<p>Combustible. Slight fire hazard when exposed to heat or flame. Heating may cause expansion or decomposition leading to violent rupture of containers. On combustion, may emit toxic fumes of carbon monoxide (CO). May emit acrid smoke. Mists containing combustible materials may be explosive. Combustion products include: carbon dioxide (CO₂), other pyrolysis products typical of burning organic material. May emit poisonous fumes of Acrolein if heated above 280°C. Acrolein appears as a colourless gas in smoke and is highly toxic. It causes severe irritation to exposed skin, eyes and the nasal passage. May emit corrosive fumes.</p>
Fire Incompatibility	<p>Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result.</p>
Personal Protective Equipment	<p>Fire fighters should wear a positive-pressure self-contained breathing apparatus (SCBA) and protective firefighting clothing (includes firefighting helmet, coat, trousers, boots and gloves).</p>

Section 9: ACCIDENTAL RELEASE MEASURES

Emergency procedures	<p>Shut off all possible sources of ignition. If contamination of sewers or waterways has occurred advise local emergency services.</p>
Minor Spills	<p>Slippery when spilt. Remove all ignition sources. Contain and clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. Control personal contact by using protective equipment. Contain and absorb spill with sand, earth, inert material or vermiculite. Wipe up. Place in a suitable labelled container for waste disposal.</p>

Major Spills	<p>Slippery when spilt. Wear breathing apparatus plus protective gloves. Prevent spillage from entering drains or water courses. No smoking, naked lights or ignition sources. Increase ventilation. Stop leak if safe to do so. Contain spill with sand, earth or vermiculite. Collect recoverable product into labelled containers for recycling. Absorb remaining product with sand, earth or vermiculite. Collect solid residues and seal in labelled drums for disposal. Wash area with plenty of water and detergent. Personal Protective Equipment advice is contained in Section 11 of the SDS</p>												
Protective Action Criteria (PAC) – SCAPA, 2015	<table border="1"> <thead> <tr> <th>Chemical (CAS Number)</th> <th>PAC-1</th> <th>45</th> <th>PAC-2</th> <th>PAC-3</th> <th>Units</th> </tr> </thead> <tbody> <tr> <td>Glycerine - mist (56-81-5)</td> <td></td> <td></td> <td>180</td> <td>1100</td> <td>mg/m³</td> </tr> </tbody> </table> <p>PAC-1: Mild, transient health effects. PAC-2: Irreversible or other serious health effects that could impair the ability to take protective action. PAC-3: Life threatening health effects.</p>	Chemical (CAS Number)	PAC-1	45	PAC-2	PAC-3	Units	Glycerine - mist (56-81-5)			180	1100	mg/m ³
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Section 10: HANDLING AND STORAGE

Handling	Wear protective clothing when risk of exposure occurs. Avoid contact with incompatible materials. Keep containers securely sealed when not in use. Avoid physical damage to containers. Always wash hands with soap and water after handling. Use good occupational work practice. Observe manufacturer's storing and handling recommendations. Do not allow clothing wet with material to stay in contact with skin.
Suitable Container	Original packaging. Metal can or drum. Check all containers are clearly labelled and free from leaks.
Storage Incompatibility	Avoid reaction with oxidising agents. Avoid reaction with strong oxidising agents such as chromium trioxide, acetic anhydride, chromium oxides, calcium oxychloride, alkali metal hydrides, potassium chlorate and potassium permanganate as an explosive or violent reaction may occur.
Storage Requirements	Keep containers securely sealed. No smoking, naked lights or ignition sources. Store in a cool, dry, well-ventilated area. Store away from incompatible materials and foodstuff containers. Protect containers against physical damage and check regularly for leaks. Observe manufacturer's storing and handling recommendations.
Precautions for safe handling	Use PPE all the time and always follow GMP when handling and decanting.

Section 11: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Controls	<table border="1"> <thead> <tr> <th>Source</th> <th>Material</th> <th>TWA ppm</th> <th>TWA mg/m³</th> <th>STEL ppm</th> <th>STEL mg/m³</th> <th>Peak ppm</th> <th>Peak mg/m³</th> <th>TWA F/CC</th> </tr> </thead> <tbody> <tr> <td>New Zealand Workplace Exposure Standards (WES 2013)</td> <td>glycerol (Glycerin mist)</td> <td></td> <td>10</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Source	Material	TWA ppm	TWA mg/m ³	STEL ppm	STEL mg/m ³	Peak ppm	Peak mg/m ³	TWA F/CC	New Zealand Workplace Exposure Standards (WES 2013)	glycerol (Glycerin mist)		10					
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Material Data	The mist is considered to be a nuisance particulate which appears to have little adverse effect on the lung and does not produce significant organic disease or toxic effects.																		

Engineering Controls	<p>VENTILATION SYSTEM</p> <p>A system of local and/or general exhaust is recommended to keep employee exposures as low as possible.</p> <p>Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.</p>
Personal Protection Equipment (PPE)	<p>Personal Respirator: For conditions of use where exposure to dust or mist is apparent and engineering controls are not feasible, a particulate respirator (NIOSH type N95 or better filters) may be worn. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator.</p> <p>WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.</p> <p>For more information see Australian/New Zealand Standard, AS/NZS 1715:2009 and AS/NZS 1716:2003.</p> <p>Skin Protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact. Refer to AS/NZS 2161.1:2000 Occupational Protective Gloves – Selection, use and maintenance.</p> <p>Eye Protection: Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.</p>

Section 12: STABILITY AND REACTIVITY

Chemical stability	Product is stable under normal conditions of use, storage and temperature.
Conditions to avoid	Avoid excessive heat, direct sunlight, static discharges, moisture and freezing and high temperatures.
Hazardous decomposition	Avoid reaction with strong oxidising agents, alkali metal hydrides, potassium chlorate and potassium permanganate as an explosive or violent reaction may occur. Keep containers dry and tightly closed to avoid moisture absorption and contamination.
Hazardous Polymerization	Thermal decomposition can lead to release of Acrolein if heated above 280°C.
Hazardous Reaction	Hazardous polymerization will not occur.

Section 13: TOXICOLOGICAL INFORMATION

Potential Health Effects	<p>ACUTE HEALTH EFFECTS:</p> <p>Swallowed: Ingestion of insignificant quantities may produce nausea and vomiting.</p> <p>Eye: Prolonged eye contact may cause inflammation characterised by a temporary redness of the conjunctiva (similar to windburn).</p> <p>Skin: Skin contact is not expected to have harmful health effects.</p> <p>Inhaled: The material is not thought to produce adverse health effects or irritation of the respiratory tract.</p>
Chronic Health Effects	No data available.

Toxicity and Irritation Data	Toxicity: Acute Oral Toxicity, Rat, LD50: 12600 mg/kg. Acute Dermal Toxicity, LD50: >4000 mg/kg.
Inhalation	No data available.
Irritation	The material may be irritating to the eye, with prolonged contact causing inflammation. The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (non-allergic).
Sensitisation (respiratory/contact)	No evidence for skin sensitization.
Carcinogenic effects	Not classified or listed by IARC, NTP, or Cal Prop65.
Mutagenic effects	Not expected to be mutagenic.
Reproductive or developmental effects	Not expected to cause adverse reproductive effects.
Aspiration hazard	No information available.
Specific target organ toxicity	No information available.

Section 14: ECOLOGICAL INFORMATION

Ecotoxicity	Non-hazardous in the aquatic environment
Toxicity Data	Fish, (<i>Carassius auratus</i>), 24hr LC50: >5000 mg/L. Crustacean, (<i>Daphnia magna</i>), 24hr EC50: >10000 mg/L. Algae IC50: >2900 mg/l Bacteria EC50: >10000 mg/l (<i>Pseudomonas putida</i>)
Persistence and Biodegradability	DOD5: 82% of ThOD and 86% of COD. Readily biodegradable: Readily biodegradable under aerobic conditions.
Environmental Fate (Exposure)	100% of glycerin is expected to end up in the water phase.
Bioaccumulative Potential	Log Kow: -1.76. Glycerin is expected to have a low potential for sorption to soil and is not expected to bioaccumulate. Calculated bioconcentration factor: 3.162. DO NOT discharge into sewer or waterways.

Section 15: DISPOSAL CONSIDERATIONS

Recycle wherever possible.

Consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.

Dispose of by: Burial in a licensed land-fill or Incineration in a licensed apparatus (after admixture with suitable combustible material).

Empty contaminated packaging should be taken for local recycling, recovery or waste disposal.

Do not discharge into drains, surface and ground water.

Section 16: TRANSPORT INFORMATION

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: UN, IATA, IMDG.

Not classified as a Dangerous Good under NZS 5433:2007 Transport of Dangerous Goods on Land.

Section 17: REGULATORY INFORMATION

Non-hazardous.

Cyathea medullaris leaf extract CAS Number N/A .

Glycerin CAS Number 56-81-5 is listed in the New Zealand Inventory of Chemicals.

Glycerin (CAS: 56- 81- 5) is found on the following regulatory lists;

CODEX General Standard for Food Additives (GSFA) - Additives Permitted for Use in Food in General, Unless Otherwise Specified, in Accordance with GMP.

IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances International Council of Chemical Associations (ICCA) - High Production Volume List.

New Zealand Workplace Exposure Standards (WES).

OECD Representative List of High Production Volume (HPV) Chemicals.

Section 18: OTHER INFORMATION

NEW ZEALAND POISON CENTRE 0800 POISON (0800 764 766)

NZ EMERGENCY SERVICES: 111

Abbreviations:

ACGIH – American Conference of Governmental Industrial Hygienists.

IARC – International Agency for Research on Cancer.

NTP – National Toxicology Program.

NZIoC – New Zealand Inventory of Chemicals.

OECD HPV – The Organisation for Economic Co-operation and Development High Product Volume Chemicals.

PPE – Personal Protective Equipment.

Prop 65 – California Proposition 65 List of Chemicals.

The information contained in this Safety Data Sheet is obtained from current and reliable sources. OB Ltd provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This Safety Data Sheet summarises our best current knowledge of the health and safety hazard information of the product, but does not claim to be all inclusive. This document is intended only as a guide to the appropriate handling of this material.

Section 19: DISCLAIMER

No liability can be accepted arising out of the use, application or processing of this product. It is the users' responsibility to determine the safe conditions for use of this product.
