



## 1 Identification

<b>Product Identifier</b>	<b>Universal Bioink™</b>
<b>Supplier</b>	VoxCell BioInnovation Inc. 300-637 Bay Street Victoria, British Columbia V8T 5L2 Canada <a href="mailto:bioinks@voxcellbio.com">bioinks@voxcellbio.com</a>
<b>Recommended use and restriction on use</b>	For Research and Development use only. Not intended for use by consumers or children.
<b>Emergency telephone number and any restrictions on the use of that number, if applicable</b>	IMMEDIATELY contact the local POISON CONTROL center for your area (24 hours): Alberta 1-800-332-1414 British Columbia 1-800-567-8911 Manitoba 1-855-776-4766 New Brunswick 911 Newfoundland and Labrador 1-866-727-1110 Northwest Territories 1-800-332-1414 Nova Scotia and Prince Edward Island 1-800-565-8161, 1-800-332-1414 or 911 Nunavut 1-800-268-9017 Ontario 1-800-268-9017 Quebec 1-800-463-5060 Saskatchewan 1-866-454-1212 Yukon Territory 867-393-8700 United States call 1-800-222-1222
<b>Substance or mixture</b>	Mixture

## 2 Hazard Identification

<b>Signal Word</b>	None
<b>Pictographs</b>	No symbols
<b>Hazard Classifications and categories</b>	Does not meet any hazard classification criteria.
<b>Hazard Statements</b>	Read the label and this safety data sheet before handling, using or storing this product.
<b>Precautionary Statements</b>	
<b>PREVENTION</b>	Avoid skin and eye contact. Do not eat this product. Avoid breathing dusts, vapors, mists or fumes generated when using this product.
<b>RESPONSE</b>	Wash skin thoroughly. If in eyes rinse with water for 15 minutes and obtain medical assistance if irritation occurs or persists.



<b>STORAGE</b>	Store between 2 and 8 °C. Protect from light and avoid temperature fluctuations.
<b>DISPOSAL</b>	Dispose of unused product and containers in accordance with local regulations.
<b>Other Hazards</b>	May cause skin and eye irritation. Ingestion may cause gastrointestinal irritation. May cause respiratory irritation.
<b>% of ingredients of unknown toxicity</b>	Not applicable – this product does not meet any health hazard classification criteria.

### 3 Composition / Information on ingredients

Chemical Name and Synonyms	CAS #	Concentration % by weight
No hazardous ingredients	Not applicable	Not applicable

### 4 First Aid Measures

#### Description of necessary first aid measures

<b>INHALATION</b>	Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Consult a doctor if you feel unwell or if any respiratory irritation should occur.
<b>INGESTION</b>	Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse out the mouth with water. Get medical attention immediately.
<b>SKIN CONTACT</b>	Immediately remove contaminated clothing and shoes. Wash the affected area with plenty of soap and water until no evidence of the chemical remains (at least 15-20 minutes). Launder clothing before reuse. Seek medical attention if symptoms occur.
<b>EYE CONTACT</b>	Immediately flush eyes with plenty of clean water for an extended time, not less than fifteen (15) minutes. Flush longer if there is any indication of residual chemicals in the eye. Ensure adequate flushing of the eyes by separating the eyelids with fingers and roll eyes in a circular motion. Seek medical attention if irritation develops or persists.
<b>The most important symptoms and effects (acute or delayed)</b>	May cause skin and eye irritation. Ingestion may cause gastrointestinal irritation. May cause respiratory irritation.
<b>Immediate and special treatment</b>	Treat symptomatically. A copy of this Safety Data Sheet must accompany a worker seeking treatment for potential exposure to this product.



## 5 Fire-Fighting Measures

**Suitable and unsuitable extinguishing media**

Use water spray, foam, dry chemical or carbon dioxide suitable for surrounding fire.

**Special hazards**

Closed containers may rupture (due to build up in pressure) when exposed to extreme heat.

Irritating or toxic substances may be emitted upon burning, combustion or decomposition including oxides of carbon.

**Special protective equipment and precautions for firefighters**

Wear self-contained breathing apparatus (SCBA) equipped with a full-facepiece and operated in a pressure-demand mode (or other positive pressure mode) and approved protective clothing suitable for surrounding fire. Personnel without suitable respiratory protection must leave the area to prevent significant exposure to hazardous gases from combustion, burning or decomposition. In an enclosed or poorly ventilated area, wear SCBA during cleanup immediately after a fire as well as during the attack phase of firefighting operations. See section 9 for additional information.

## 6 Accidental Release Measures

**Personal precautions**

Do not touch spilled material without personal protective equipment.

**Protective equipment**

Wear impervious gloves and eye protection.

**Emergency procedures**

If spilled in an enclosed area, ventilate. Eliminate ignition sources. Personal protective equipment must be worn.

**Method and materials for containment and clean up**

Do not flush product into public sewer, water systems or surface waters.

Stop leak if without risk. Move containers from spill area. Wear proper personal protective clothing and equipment. Avoid generating dust – shovel or sweep and place into labeled, closed container; store in safe location to await disposal. Change contaminated clothing and launder before reuse.

## 7 Handling and Storage

**Precautions for safe handling**

As with any chemical product, use good laboratory/workplace procedures. Do not cut, puncture, or weld on or near the container. Use under well-ventilated conditions. Wash thoroughly after handling this product. Always wash up before eating, smoking or using the facilities. Avoid eye and skin contact. Avoid inhalation of aerosol, mist, spray, fume, vapor or dust generated by this product. Avoid drinking, tasting, swallowing or ingesting this product. Wash contaminated clothing before reuse.



**Conditions for safe storage including incompatibilities**

Keep away from heat, sparks and open flames. Store between 2 and 8 °C (35 and 46 °F) away from light and heat. Store under well-ventilated conditions. Store this material away from incompatible substances such as strong oxidizing substances. Do not store in open, unlabeled or mislabeled containers. Keep the container closed when not in use. Empty container containing residual product which may exhibit hazards of product. Do not reuse empty containers without commercial cleaning or reconditioning.

**8 Exposure Controls / Personal Protection**

**Appropriate engineering controls**

Always provide effective general and, when necessary, local exhaust ventilation to draw spray, aerosol, fume, mist and vapor away from workers to prevent routine inhalation. Ventilation must be adequate to maintain air concentrations below occupational exposure standards. When necessary, use mechanical handling to reduce human contact with materials.

**Individual protection measures/personal protective equipment**

Eyewash fountains and safety showers are recommended in the work area.

**Eye/Face**

Safety glasses or goggles to prevent contact with eyes.

**Skin**

Use good laboratory/ workplace procedures including personal protective clothing: lab coat and impervious gloves.

**Respiratory**

A respirator should not be required when using or handling this product. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Ingredient	Exposure limit value
No hazardous ingredients – follow local requirements for particles not otherwise listed or specified, such as nuisance dusts.	Recommended: 10 mg/m <sup>3</sup> (inhalable fraction) 3 mg/m <sup>3</sup> (respirable fraction)

**9 Physical and Chemical Properties**

**Physical State**

Lyophilized solid

**Appearance**

Clump, powder

**Color**

White to off-white

**Odor**

Not available

**Odour Threshold**

Not available

**pH**

Not available



<b>Melting / Freezing Point °C</b>	Not available
<b>Initial Boiling Point / Boiling Range °C</b>	Not available
<b>Evaporation Rate</b>	Not available
<b>Flammability in the case of solids and gases</b>	Not applicable
<b>Flash Point °C</b>	Not available
<b>Upper and Lower Flammability or Explosive Limits</b>	Not available
<b>Auto-Ignition Temperature °C</b>	Not available
<b>Vapor Pressure</b>	Not available
<b>Vapor Density</b>	Not available
<b>Relative Density</b>	Not available
<b>Solubility</b>	Not available
<b>Partition Coefficient (n-Octanol/Water)</b>	Not available
<b>Decomposition Temperature °C</b>	Not available
<b>Viscosity</b>	Not applicable

## 10 Stability and Reactivity

<b>Reactivity</b>	This product is stable.
<b>Chemical stability</b>	This product is stable under recommended storage conditions.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization will not occur.
<b>Conditions to avoid</b>	Excessive heat and sources of ignition.
<b>Incompatible materials</b>	Avoid strong oxidizing agents. Avoid high temperatures.
<b>Hazardous decomposition products</b>	Thermal decomposition may produce smoke, carbon monoxide, carbon dioxide, and other products of incomplete combustion.

## 11 Toxicological Information

<b>Likely route of exposure</b>	Eye, skin, inhalation and ingestion
<b>Symptoms</b>	
<b>Eyes</b>	May cause irritation.
<b>Skin</b>	May cause irritation.
<b>Inhalation</b>	May cause irritation.
<b>Ingestion</b>	May cause irritation.
<b>Delayed effects from short- and long-term exposure</b>	Not available
<b>Carcinogenicity</b>	No component of this product present at concentrations greater than or equal to 0.1% has been identified as a probable, possible or recognized human carcinogen by IARC.
<b>Mutagenicity</b>	Not available



**Reproductive toxicity** Not available  
**Other effects** To our knowledge, the chemical, physical and toxicological properties have not been fully investigated.

Numerical measures of toxicity including ATEs	LD <sub>50</sub> Oral	LD <sub>50</sub> Dermal	LC <sub>50</sub> (Gas, Vapor, Mist, Fume)
No hazardous ingredients	Not available	Not available	Not available

## 12 Ecological Information

**Ecotoxicity, if available** Not available  
**Persistence and biodegradability** Not available  
**Bioaccumulative potential** Not available  
**Mobility in soil** Not available  
**Other adverse effects** Not available

## 13 Disposal Considerations

**Disposal instructions** Dispose of unused contents (incineration) in accordance with national and local regulations.  
**Disposal methods** Dispose of containers in accordance with national and local regulations. Ensure the use of properly authorized waste management companies, where appropriate. See section 8 for recommendations on the use of personal protective equipment.

## 14 Transportation Information

**UN Number** NOT REGULATED  
**Proper Shipping Name** Not applicable  
**Hazard Class(es)** Not applicable  
**Packing Group** Not applicable  
**Environmental Hazards** Not applicable  
**Special precautions** Not applicable  
**Label** None  
**Classification Statement** This product has been classified in accordance with the Transportation of Dangerous Goods Regulations and 49CFR DOT regulations.



## 15 Regulatory Information

<b>Canada's Domestic Substances List (DSL)</b>	All ingredients appear on Canada's Domestic Substances List or Non-Domestic Substances List (NDSL) and NDLS substances may be subject to notification depending on volumes – contact us for more information.
<b>Significant New Activity notice (SNAc)</b>	None
<b>National Pollutant Release Inventory (NPRI)</b>	None
<b>Environmental Emergency Regulations (E2)</b>	None
<b>US TSCA Inventory Status</b>	All ingredients appear on the TSCA inventory or are exempted.
<b>Significant New Use Rule</b>	None
<b>OSHA SARA III</b>	
<b>Emergency Planning (301-303)</b>	None
<b>Emergency Release (304)</b>	None
<b>Storage reporting (311-312)</b>	None
<b>CERCLA reportable quantity</b>	None
<b>Hazardous Air Pollutants (HAPS)</b>	None
<b>California Proposition 65</b>	None
<b>HMIS</b>	1-0-0
<b>European EINECS Inventory</b>	All ingredients appear on the list

## 16 Other Information

<b>Date of the latest revision</b>	October 12, 2022
<b>Revision number</b>	1
<b>Revision details</b>	New
<b>Abbreviations</b>	CERCA – Comprehensive Environmental Response, Compensation and Liability Act EINECS – European Inventory of Existing Commercial Substances EPCRA – Emergency Planning and Community Right to Know Act HMIS – Hazardous Materials Identification System – American Coatings Association OSHA – Occupational Safety and Health Administration SARA – Superfunds Amendments and Reauthorization Act TSCA – Toxic Substances Control Act



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