

MATERIAL SAFETY DATA SHEET

SECTION 1—PRODUCT IDENTIFICATION AND USE				
PRODUCT IDENTIFIER > ETHYLENE GLYCOL			CATALOGUE NUMBER: BE85	
MANUFACTURER'S NAME Dalynn Biologicals Inc.		SUPPLIER'S NAME Dalynn Biologicals Inc.		
STREET ADDRESS 3253 - 34 Avenue N.E.		STREET ADDRESS 3253 - 34 Avenue N.E.		
CITY Calgary	PROVINCE Alberta	CITY Calgary	PROVINCE Alberta	
POSTAL CODE T1Y 6X2	CHEMICAL EMERGENCY ONLY: 1-613-996-6666	POSTAL CODE T1Y 6X2	CHEMICAL EMERGENCY ONLY: 1-613-996-6666	
SECTION 2—HAZARDOUS INGREDIENTS				
HAZARDOUS INGREDIENTS	%	CAS NUMBER	LD ₅₀ OF INGREDIENT (SPECIFY SPECIES AND ROUTE)	LC ₅₀ OF INGREDIENT (SPECIFY INGREDIENT)
Ethylene glycol	>95	107-21-1	Orl – Rat 4,700 mg/kg Derm – Rbt 10,626 mg/kg	Not available
SECTION 3—PHYSICAL DATA				
PHYSICAL STATE Liquid	ODOUR AND APPEARANCE Clear, colorless liquid with no odor			ODOUR THRESHOLD (ppm) Not available
VAPOUR PRESSURE (mmHg) 0.10 @ 20°C	VAPOUR DENSITY (AIR=1) 2.14	EVAPORATION RATE Not available	BOILING POINT (°C) 196 - 198	FREEZING POINT (°C) -13
PH Not available	SPECIFIC GRAVITY 1.017 @ 20°C	COEFF. WATER/OIL DIST. Not available		
SECTION 4—FIRE AND EXPLOSION DATA				
FLAMMABLE YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> IF YES, UNDER WHICH CONDITIONS? > Minimal fire hazard				
MEANS OF EXTINCTION Water spray, CO2, dry chemical, dry sand, alcohol-resistant foam.				
FLASHPOINT (°C) AND METHOD 111 (closed cup)		UPPER FLAMMABLE LIMIT (% BY VOLUME) 15.3	LOWER FLAMMABLE LIMIT (% BY VOLUME) 3.2	
AUTOIGNITION TEMPERATURE (°C) 400		HAZARDOUS COMBUSTION PRODUCTS Carbon monoxide, carbon dioxide		
EXPLOSION DATA >	SENSITIVITY TO IMPACT No		SENSITIVITY TO STATIC DISCHARGE No	
SECTION 5—REACTIVITY DATA				
CHEMICAL STABILITY YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> IF NO, UNDER WHICH CONDITIONS? >				
INCOMPATIBILITY WITH OTHER SUBSTANCES YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> IF SO, WHICH ONES? > Strong oxidizing agents, strong bases, aldehydes, aluminum				
REACTIVITY, AND UNDER WHAT CONDITIONS Not available				
HAZARDOUS DECOMPOSITION PRODUCTS Carbon dioxide, carbon monoxide				

PRODUCT IDENTIFIER > **ETHYL ACETATE**

SECTION 6—TOXICOLOGICAL PROPERTIES

ROUTE OF ENTRY
 SKIN CONTACT [X] SKIN ABSORPTION [X] EYE CONTACT [X] INHALATION [X] INGESTION [X]

EFFECTS OF ACUTE EXPOSURE TO PRODUCT
Eye: May cause irritation to eyes on contact.
Skin: May cause irritation on contact. Symptoms may include redness and swelling. May be harmful if absorbed through skin.
Inhalation: May be harmful if inhaled. May cause irritation to respiratory tract.
Ingestion: May be toxic if ingested. When ingested early symptoms mimic alcohol inebriation and are followed by nausea, vomiting, abdominal pain, weakness, muscle tenderness, respiratory failure, convulsions, cardiovascular collapse, pulmonary edema, hypocalcemic tetany, and severe metabolic acidosis. Without treatment, death may occur in 8 to 24 hours. Victims who survive the initial toxicity period usually develop renal failure along with brain and liver damage.

EFFECTS OF CHRONIC EXPOSURE TO PRODUCT
The chronic toxicological effects of exposure to this product have not been thoroughly investigated.

EXPOSURE LIMITS Not available	IRRITANCY OF PRODUCT Yes	SENSITISATION TO PRODUCT Not available	CARCINOGENICITY Not available
TERATOGENICITY Not available	REPRODUCTIVE TOXICITY Not available	MUTAGENICITY Not available	SYNERGISTIC PRODUCTS Not available

SECTION 7—PREVENTIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT:
Wear appropriate protective clothing: Chemical resistant gloves, safety goggles, lab coat or other appropriate clothing that covers arms and other open body parts.

ENGINEERING CONTROLS (SPECIFY, EG, VENTILATION, ENCLOSED PROCESS)
Use in area with adequate ventilation or in chemical fume hood.

LEAK AND SPILL PROCEDURE
Soak up with inert absorbent material. Keep in suitable, closed containers and dispose of as hazardous waste. Ventilate area and wash spill site after material pickup is complete.

WASTE DISPOSAL
According to local, provincial and federal regulations. Contact a licensed professional waste disposal service to dispose of this material. Burn in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company.

HANDLING PROCEDURES AND EQUIPMENT
Avoid direct contact. Wash thoroughly after handling.

STORAGE REQUIREMENTS
None.

SPECIAL SHIPPING INFORMATION
UN number: 3082 Class: 9 Packing group: III

SECTION 8—FIRST AID MEASURES

In case of contact with eyes, rinse with copious amounts of water for at least 15 minutes.
In case of contact with skin, wash with copious amounts of water for at least 15 minutes. Remove contaminated clothing and wash before wearing.
If swallowed, wash mouth out repeatedly with water provided person is conscious.
If inhaled remove patient to fresh air and administer approved oxygen supply if breathing is difficult.
Seek medical attention if feeling unwell.

SECTION 9—PREPARATION OF MSDS

PREPARED BY (GROUP, DEPT, ETC.) Technical Department Dalynn Biologicals Inc.	PHONE NUMBER (403) 291-0067	DATE 2014 October
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