Safety Data Sheet

I. PRODUCT AND COMPANY IDENTIFICATION

Product Name:	**PS DOT4BRKFL 4/1G CANADA**
Product Code:	PS21BF4C
Supplier:	Warren Distribution, Inc. 727 S. 13th Street Omaha, NE 68102
Phone Number:	+01 (800) 825-1235 +01 (402) 341-9397
Emergency Phone:	CHEMTREC: +1 (800) 424-9300 International: +01 (703) 527-3887
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II. HAZARDS IDENTIFICATION

Acute Health Effects:

Routes of Entry:	Absorption, Eye contact, Inhalation, Ingestion
Target Organs:	Kidneys, Bladder
Inhalation:	Can cause moderate respiratory irritation, dizziness, weakness, fatigue, nausea and headache. Irritating to the nose, throat, and respiratory tract.
Skin Contact:	Can cause minor skin irritation, defatting, and dermatitis. Continued or prolonged contact may irritate the skin and cause a skin rash (dermatitis).
Skin Absorption:	No absorption hazard in normal industrial use.
Eye Contact:	Can cause severe irritation. Eye contact may result in corneal injury. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. Temporary vision impairment (cloudy or blurred vision) is possible. Severely irritating.
Ingestion:	Irritating to mouth, throat, and stomach. Can cause abdominal discomfort, nausea, vomiting and diarrhea. Small amounts (a tablespoonful) swallowed during normal handling operations are not likely to cause injury; swallowing amounts larger than that may cause injury.

Chronic Health Effects:

Carcinogenicity:	Not a carcinogen according to NTP, IARC, or OSHA. Material did not cause cancer in long-term animal studies.
Reproductive Toxicity:	No data available to indicate product or any components present at greater than 0.1% may cause birth defects.
Mutagenicity:	No data available to indicate product or any components present at greater than 0.1% is mutagenic or genotoxic.
Potential Health Effects:	See Section 11 for more information.
Medical Conditions Aggravated by Exposure:	Kidney disease

III. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS #	Range %
Triethylene glycol monomethyl borate ester	71243-41-9	15 - 40
Ethanol, 2-(2-(2-methoxyethoxy)ethoxy)-	112-35-6	10 - 30
Polyethylene glycol methyl ether	9004-74-4	10 - 30
Diethylene glycol	111-46-6	1 - 5
Ethanol, 2-(2-(2-butoxyethoxy)ethoxy)-	143-22-6	1 - 5
Polyethylene glycol	25322-68-3	0.1 - 1
Tetraethylene glycol	112-60-7	0.1 - 1
Tetraethylene glycol monobutyl ether	1559-34-8	0.1 - 1

Components not listed are not physical or health hazards as defined in 29 CFR 1910.1200 (Hazard Communication Standard).

IV. FIRST-AID MEASURES

Inhalation:	Remove to fresh air. If breathing is difficult, have a trained individual administer oxygen. If not breathing, give artificial respiration and have a trained individual administer oxygen. Get medical attention immediately.
Eye Contact:	Immediately flush eyes with plenty of water for at least 20 minutes retracting eyelids often. Tilt the head to prevent chemical from transferring to the uncontaminated eye. Get immediate medical attention and monitor the eye daily as advised by your physician.
Skin Contact:	Wash with soap and water. Get medical attention if irritation develops or persists.
Ingestion:	Do not induce vomiting and seek medical attention immediately. Provide medical care provider with this SDS.
Notes to Doctor:	No additional first aid information available.

V. FIRE FIGHTING MEASURES

Flammability:	Combustible at elevated temperatures
Extinguishing Media:	Use alcohol resistant foam, carbon dioxide, or dry chemical when fighting fires. Water or foam may cause frothing if liquid is burning but it still may be a useful extinguishing agent if carefully applied to the surface of the fire. Do not direct a stream of water into the hot burning liquid.
Fire and/or Explosion Hazards:	Material may be ignited only if preheated to temperatures above the high flash point, for example in a fire.
Fire Fighting Methods and Protection:	Do not enter fire area without proper protection including self- contained breathing apparatus and full protective equipment. Use methods for the surrounding fire.
Hazardous Combustion Products:	Carbon dioxide, Carbon monoxide

VI. ACCIDENTAL RELEASE MEASURES

Personal Precautions and Equipment:	Exposure to the spilled material may be irritating or harmful. Follow personal protective equipment recommendations found in Section 8 of this SDS. Additional precautions may be necessary based on special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred. Also consider the expertise of employees in the area responding to the spill.
Methods for Cleanup:	Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Dispose of according to Federal, State, Local, or Provincial regulations. Used fluid should be disposed of at a recycling center. Do not flush to sewer.

VII. HANDLING AND STORAGE

Handling:	Harmful or irritating material. Avoid contacting and avoid breathing the material. Use only in a well ventilated area. Empty containers may retain product residues/ vapors. Use proper bonding and grounding during bulk product transfer.
Storage:	Store in a cool dry place. Isolate from incompatible materials. Do not store in direct sunlight.

VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:	No exposure limits exist for the constituents of this product. Use local exhaust ventilation or other engineering controls to minimize exposures and maintain operator comfort. Ventilation is required to maintain worker comfort and ensure employees are not overexposed.
Respiratory Protection:	Respiratory protection may be required to avoid overexposure when handling this product. General or local exhaust ventilation is the preferred means of protection. Use a

	respirator if general room ventilation is not available or sufficient to eliminate symptoms.
Respirator Type(s):	None required where adequate ventilation is provided. If airborne concentrations are above the applicable exposure limits, use NIOSH/MSHA approved respiratory protection.
Eye/Face Protection:	Wear chemically resistant safety glasses with side shields when handling this product. Wear additional eye protection such as chemical splash goggles and/or face shield when the possibility exists for eye contact with splashing or spraying liquid, or airborne material. Do not wear contact lenses. Have an eye wash station available.
Skin Protection:	Where use can result in skin contact, practice good personal hygiene and wear impervious gloves. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.
Gloves:	Butyl rubber, Polyethylene

Chemical Name	**Occupational Exposure Limits**	**Value**

IX. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Colour:	Colorless to pale amber
Odour:	Mild
pH:	8.6
Solubility:	Complete; 100%
Water/Oil Partition Coefficient:	Not determined
Evaporation Rate:	Not determined
Vapor Density:	Not determined
Vapor Pressure:	Not determined
Boiling Point (°C):	Not determined
Freezing Point (°C):	Not determined
Specific Gravity:	1.07
Bulk Density:	8.94 Lbs/Gallon

X. STABILITY AND REACTIVITY

Stability:	Stable under normal conditions.
Conditions to Avoid:	Temperatures above the high flash point of this combustible material in combination with sparks, open flames, or other sources of ignition.
Materials to Avoid:	Strong oxidizing agents Heat, sparks, or other sources of ignition.
Hazardous Decomposition Products:	Carbon dioxide, Carbon monoxide

XI. TOXICOLOGICAL INFORMATION

Routes of Entry:	Absorption, Eye contact, Inhalation, Ingestion
Ingestion:	No hazard in normal industrial use.
Inhalation:	Toxic! Can cause systemic damage (see "Target Organs"). Respiratory failure is possible at high doses.
Absorption:	No absorption hazard in normal industrial use.
Eye:	Upon prolonged or repeated contact, can cause minor irritation, tearing and reddening.
Skin:	Upon prolonged or repeated contact, can cause minor skin irritation, defatting, and dermatitis.

Chemical Name	**LD_{50} and LC_{50}**
Diethylene glycol	Dermal LD50 Rabbit 11890 mg/kg (Source: NLM_CIP); Oral LD50 Rat 12565 mg/kg (Source: IUCLID)
Ethanol, 2-(2-(2-butoxyethoxy)ethoxy)-	Oral LD50 Rat 5300 mg/kg (Source: IUCLID); Dermal LD50 Rabbit 3480 mg/kg (Source: IUCLID)

Polyethylene glycol	Dermal LD50 Rabbit >20 mL/kg (Source: NLM_CIP)
Tetraethylene glycol	Dermal LD50 Rabbit >20 g/kg (Source: NLM_CIP)
3,6,9,12-Tetraoxahexadecan-1-ol	Oral LD50 Rat 5175 mg/kg (Source: IUCLID); Dermal LD50 Rat >4000 mg/kg (Source: IUCLID)

Target Organs: Kidneys, Bladder
Carcinogenicity: Not a carcinogen according to NTP, IARC, or OSHA.
Mutagenicity: Not known or reported to be mutagenic.
Reproductive Toxicity: Not known or reported to cause reproductive or developmental toxicity.
Skin Sensitization: No data available to indicate product or components may be a skin sensitizer.

Chemical Listed as Carcinogen or Potential Carcinogen	Source Agency
Not applicable	ACGIH- Threshold Limit Values-Carcinogens
Not applicable	IARC Carcinogen
Not applicable	NTP- Report on Known Human Carcinogens
Not applicable	NTP- Report on Reasonably Anticipated to be Human Carcinogens
Not applicable	U.S. - OSHA - Hazard Communication Carcinogens

XII. ECOLOGICAL INFORMATION

Overview: Slight ecological hazard. In high concentrations, this product may be dangerous to plants and/or wildlife.
Mobility: This material is expected to have essentially no mobility in soil. It absorbs strongly to most soil types.
Persistence: Biodegradation, adsorption to sediment, and bioconcentration to aquatic organisms should not be significant.
Bioconcentration: Bioconcentration is not expected to occur.
Degradability: Does not biodegrade readily.

XIII. DISPOSAL CONSIDERATIONS

Disposal Methods: Dispose of according to Federal, State, Local, or Provincial regulations.

XIV. TRANSPORTATION INFORMATION

Not classified as hazardous for transport (DOT, TDG, IMO/IMDG, IATA/ICAO).

XV. REGULATORY INFORMATION

Chemical Name	Regulation	CAS #	% Range
None.	CERCLA RQ		
None.	SARA 313		
None.	SARA 302-EHS		
None.	CA Prop 65 – Cancer		
None.	CA Prop 65 - Dev. Toxicity		
None.	CA Prop 65 - Reprod –fem		
None.	CA Prop 65 - Reprod –male		

Diethylene glycol	Canadian WHMIS List	111-46-6	1 - 5

Inventory- U.S. TSCA: All components of this material are on the US TSCA Inventory or are exempt.

OSHA Hazard Classification: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

WHMIS Classification: D2B

Inventory- Canada Domestic Substance List: Present

Inventory- Canada Non-Domestic Substance List: Present

HMIS Ratings:		**NFPA Ratings:**	
Health:	2	**Health:**	2
Fire:	1	**Fire:**	1
Reactivity:	0	**Reactivity:**	0
PPE:	B		

KEY: 0 - Least 1 - Slight 2 - Moderate 3 - High 4 – Extreme

XVI. ADDITIONAL INFORMATION

Superseded by: None

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Prepared by: TPRUETT

References:
ACGIH: American Conference of Governmental Industrial Hygienists
AIHA: American Industrial Hygiene Association
CFR: Code of Federal Regulations
DOT: United States Department of Transportation
GHS: Globally Harmonized System of Classification and Labeling of Chemicals
HMIS: Hazardous Materials Identification System
IARC: International Agency for Research on Cancer
IATA: International Air Transportation Association
IDLH: Immediately Dangerous to Life or Health
IMDG: International Maritime Dangerous Goods
NFPA: National Fire Protection Association
NIOSH: National Institute for Occupational Safety and Health
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PEL: Permissible Exposure Limit
RTK: Right-to-Know
SARA: Superfund Amendments and Reauthorization Act
STEL: Short-term Exposure Limit
TLV: Threshold limit value
TSCA: Toxic Substances Control Act
TWA: Time weighted average
UN: United Nations
WHMIS: Workplace Hazardous Materials Information System

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