



Safety Data Sheet

I. PRODUCT AND COMPANY IDENTIFICATION

Product Name: PRFSTOP DOT4 BRK FL 12/1
Product Code: PS21BFPL
Emergency Phone: CHEMTREC: +1 (800) 424-9300
 International: +01 (703) 527-3887
Poison Control Center: (800) 222-1222
Company: Warren Distribution, Inc.
 727 S. 13th Street
 Omaha, NE 68102
Information Phone: +01 (800) 825-1235 +01 (402) 341-9397
E-mail: sds@wd-wpp.com

II. HAZARDS IDENTIFICATION

Routes of Entry: Absorption, Eye contact, Inhalation, Ingestion
Target Organs: Eyes, Skin, Kidneys
Chemical Interactions: No chemical interaction known to affect toxicity.
Conditions Aggravated by Exposure: Skin disease including eczema and sensitization, Eye disease, Kidney disease

Acute Health Effects:

Inhalation Irritation: No hazard in normal industrial use.
Skin Contact: No hazard in normal industrial use.
Skin Absorption: No absorption hazard in normal industrial use.
Eye Contact: Contact with the eyes may cause moderate to severe eye injury. Eye contact may result in tearing and reddening, but not likely to permanently injure eye tissue. Temporary vision impairment (cloudy or blurred vision) is possible.
Ingestion Irritation: May be harmful or fatal if swallowed. Excessive exposure may cause central nervous system effects, cardiopulmonary effects (metabolic acidosis), kidney failure, or death.

Chronic Health Effects:

Carcinogenicity: Not a carcinogen according to NTP, IARC, or OSHA.
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.

HMIS Ratings:

Health: 2
 Fire: 1
 Reactivity: 0
 PPE: B

NFPA Ratings:

Health: 2
 Fire: 1
 Reactivity: 0

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

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III. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	%	CAS #	OSHA Exposure Limits
2,5,8,11-Tetraoxatridecan-13-ol, mixed esters with boric acid	30 - 60	176022-80-3	
Ethanol, 2-(2-(2-ethoxyethoxy)ethoxy)-	10 - 30	112-50-5	
Ethanol, 2-(2-(2-methoxyethoxy)ethoxy)-	10 - 30	112-35-6	
Ethanol, 2-(2-(2-butoxyethoxy)ethoxy)-	7 - 13	143-22-6	
Tetraethylene glycol	3 - 7	112-60-7	
Diethylene glycol	1 - 5	111-46-6	

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

IV. FIRST-AID MEASURES

Inhalation:	This material does not present a hazard if inhaled. Remove individual to fresh air after an airborne exposure if any symptoms develop, as a precautionary measure.
Eyes:	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.
Ingestion:	Seek medical attention immediately or call the Poison control center. Do not induce vomiting. If patient is fully conscious, give up to two glasses of water. Provide medical care provider with this SDS. Contains a harmful substance. Seek medical help immediately and contact a poison information service. Drink two glasses of water or milk to dilute.
Notes to Doctor:	No additional first aid information available.

V. FIRE FIGHTING MEASURES

Flammability	Combustible at elevated temperatures
Summary:	
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 Clean-up:	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.

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VII. HANDLING AND STORAGE

Handling Precautions: 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 Conditions: Store in a cool dry place. Isolate from incompatible materials.

VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: No engineering controls are likely to be required to maintain operator comfort under normal conditions of use. Ventilation is required to maintain worker comfort and ensure employees are not overexposed.

Respiratory Protection: No respiratory protection required under normal conditions of use.

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 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: Not normally considered a skin hazard. Where use can result in skin contact, practice good personal hygiene. 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
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X. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid

Color: Colorless to pale amber

Odor: Mild

pH: 8.6

Solubility in Water: Complete; 100%

Octanol/Water Partition Coefficient: Not determined

Evaporation Rate: Not determined

Vapor Density: Not determined

Vapor Pressure: Not determined

Boiling Point (°C): 275

Freezing Point (°C): Not determined

Specific Gravity: 1.07

Density: 8.94

Flash Point (°C): 121

Flash Point Method: ASTM D93

Upper Flammability Limit, % in air: Not established

Lower Flammability Limit, % in air: Not established

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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 Decomp. Products:	Carbon dioxide, Carbon monoxide
Hazardous Polymerization:	Hazardous polymerization will not occur.

XI. TOXICOLOGICAL INFORMATION

Acute Toxicity:

Ingestion:	No hazard in normal industrial use.
Inhalation:	No hazard in normal industrial use.
Absorption:	No absorption hazard in normal industrial use.
Eyes:	This material is likely to be severely irritating to eyes based on animal data.
Skin:	Likely to be non-irritating to skin based on animal data.
Sensitization:	No data available to indicate product or components may be a skin sensitizer.

Component Toxicology Data:

Chemical Name	CAS #	LD ₅₀ /LC ₅₀
Ethanol, 2-(2-(2-ethoxyethoxy)ethoxy)-	112-50-5	Oral LD50 Rat 7750 mg/kg; Dermal LD50 Rabbit 3540 mg/kg
Ethanol, 2-(2-(2-butoxyethoxy)ethoxy)-	143-22-6	Oral LD50 Rat 5300 mg/kg (Source: IUCLID); Dermal LD50 Rabbit 3480 mg/kg (Source: IUCLID)
Tetraethylene glycol	112-60-7	Dermal LD50 Rabbit >20 g/kg (Source: NLM_CIP)
Diethylene glycol	111-46-6	Dermal LD50 Rabbit 11890 mg/kg (Source: NLM_CIP); Oral LD50 Rat 12565 mg/kg (Source: IUCLID)

XII. ECOLOGICAL INFORMATION

Mobility:	This material is expected to have essentially no mobility in soil. It absorbs strongly to most soil types. {EMSFORM_12MOBA }
Persistence:	Biodegradation, adsorption to sediment, and bioconcentration to aquatic organisms should not be significant.
Bioconcentration:	Bioconcentration is not expected to occur.
Degradability:	Biodegrades at a moderate rate.

Toxicity to Aquatic Invertebrates:	CAS #	Results
Triethylene glycol monomethyl ether	112-35-6	48 Hr EC50 Daphnia magna: >500 mg/L
Triethylene glycol monobutyl ether	143-22-6	48 Hr EC50 Daphnia magna: >500 mg/L
Tetraethylene glycol	112-60-7	48 Hr EC50 Daphnia magna: >1000 mg/L
Diethylene glycol	111-46-6	48 Hr EC50 Daphnia magna: 84000 mg/L
Triethylene glycol monomethyl ether	112-35-6	72 Hr EC50 Desmodesmus subspicatus: >500 mg/L
Triethylene glycol monobutyl ether	143-22-6	72 Hr EC50 Desmodesmus subspicatus: >500 mg/L
Tetraethylene glycol	112-60-7	96 Hr EC50 Pseudokirchneriella subcapitata: >1000 mg/L

Toxicity to Fish:	CAS #	Results
Triethylene glycol monomethyl ether	112-35-6	96 Hr LC50 Pimephales promelas: >10000 mg/L [static]; 96 Hr LC50 Brachydanio rerio: >5000 mg/L [static]; 96 Hr LC50 Leuciscus idus: >10000 mg/L [static]
Triethylene glycol monobutyl ether	143-22-6	96 Hr LC50 Leuciscus idus: 2200 - 4600 mg/L

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		[static]; 96 Hr LC50 Pimephales promelas: 2400 mg/L [static]; 96 Hr LC50 Pimephales promelas: 2400 mg/L
Tetraethylene glycol	112-60-7	96 Hr LC50 Oncorhynchus mykiss: >1000 mg/L [static]
Diethylene glycol	111-46-6	96 Hr LC50 Pimephales promelas: 75200 mg/L [flow-through]

XIII. DISPOSAL CONSIDERATIONS

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

XIV. TRANSPORTATION INFORMATION

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

XV. REGULATORY INFORMATION

TSCA Status: All components of this material are on the US TSCA Inventory or are exempt.
State Restrictions: Not applicable
WHMIS: D2B

Chemical Name	Regulation	CAS #	% Range
None.	CERCLA RQ		
None.	SARA 313		
None.	SARA 302-EHS		
None.	TSCA 12b export notification		
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
None.	Massachusetts RTK List		
None.	New Jersey RTK List		
Ethanol, 2,2'-oxybis-	Pennsylvania RTK List	111-46-6	1 - 5
Diethylene glycol	Minnesota Hazardous Substance List	111-46-6	1 - 5

Consumer Product Safety Improvement Act of 2008 General Conformity Certification:

This product has been evaluated and certified to be labeled and packaged in compliance with the applicable provisions of the Federal Hazardous Substance Act as stated in 16 CFR 1500 and enforced by the Consumer Product Safety Commission, and where applicable the products that require Child Resistant Closures are packaged in accordance with the Poison Prevention Packaging Act as stated in 16 CFR 1700 and enforced by the Consumer Product Safety Commission. All closures have been tested in accordance with the latest protocols. No other testing is required to certify compliance with the above. The date of manufacture is stamped on the product container.

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XVI. ADDITIONAL INFORMATION

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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

Disclaimer:

This safety data sheet and the information it contains is offered to you in good faith as accurate. We have reviewed any information contained in the data sheet which we have received from outside sources and we believe the information to be correct, but cannot guarantee its accuracy or completeness. Health and safety precautions in this data sheet may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product in a safe manner and to comply with all applicable laws and regulations. No statement made in this data sheet shall be construed as permission or recommendation for the use of any product in a manner that might infringe existing patents. No warranty is made, either expressed or implied.