SAFETY DATA SHEET

SECTION 1 : IDENTIFICATION

Product identifier used on the label:

Product Name: **Shell Guard Concentrate**

Other means of identification:

Recommended use of the chemical and restrictions on use:

Chemical manufacturer address and telephone number:

Manufacturer Name:	Perma-Chink Systems, Inc.
Address:	1605 Prosser Road Knoxville, TN 37914 USA
Website:	www.permachink.com
General Phone Number:	800-548-3554
General Fax Number:	865-523-9475
Customer Service Phone Number:	865-524-7343

Emergency phone number:

Emergency Phone Number:	CHEMTREC 1-800-424-9300

SECTION 2 : HAZARD(S) IDENTIFICATION

Classification of the chemical in accordance with CFR 1910.1200(d)(f):

GHS Pictograms:

Signal Word:	WARNING.
GHS Class:	Reproductive toxicity. Category 1B.
Hazard Statements:	H360 - May damage fertility or the unborn child.
Precautionary Statements:	P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P280 - Wear protective gloves/protective clothing/eye protection/face protection. P308+P313 - IF exposed or concerned: Get medical advice/attention. P405 - Store locked up. P501 - Dispose of contents/container in accordance with Local, State, Federal and Provincial regulations.

Hazards not otherwise classified that have been identified during the classification process:

Potential Health Effects:

Eye:	Causes eye irritation.
Skin:	Causes skin irritation.
Inhalation:	Prolonged or excessive inhalation may cause respiratory tract irritation.
Ingestion:	May be harmful if swallowed. May cause vomiting.
Chronic Health Effects:	Prolonged or repeated contact may cause skin irritation.
Signs/Symptoms:	Overexposure may cause headaches and dizziness.
Target Organs:	Eyes. Skin. Respiratory system. Digestive system.
Aggravation of Pre-Existing Conditions:	None generally recognized.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures:

Chemical Name	CAS#	Ingredient Percent	EC Num.

Ethylene glycol	107-21-1	0.3 - 2.0 by weight	203-473-3
Disodium Octoborate Tetrahydrate (DOT)	12280-03-4	25 - 26 by weight	
Polyethylene glycol	25322-68-3	30 - 40 by weight	500-038-2
Propylene glycol	57-55-6	30 - 40 by weight	200-338-0

SECTION 4 : FIRST AID MEASURES

Description of necessary measures:

Eye Contact: Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Remove contacts if present and easy to do. Continue rinsing. Get medical attention, if irritation or symptoms of overexposure persists.

Skin Contact: Immediately wash skin with soap and plenty of water.
Get medical attention if irritation develops or persists.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.

Ingestion: If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

SECTION 5 : FIRE FIGHTING MEASURES

Suitable and unsuitable extinguishing media:

Suitable Extinguishing Media: Use alcohol resistant foam, carbon dioxide, dry chemical, or water fog or spray when fighting fires involving this material.

Special protective equipment and precautions for fire-fighters:

Protective Equipment: As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA Ratings:

NFPA Health: 1
NFPA Flammability: 1
NFPA Reactivity: 0

SECTION 6 : ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Personal Precautions: Evacuate area and keep unnecessary and unprotected personnel from entering the spill area. Use proper personal protective equipment as listed in Section 8.

Environmental precautions:

Environmental Precautions: Avoid runoff into storm sewers, ditches, and waterways.

Methods and materials for containment and cleaning up:

Methods for containment: Contain spills with an inert absorbent material such as soil or sand. Prevent from spreading by covering, diking or other means. Provide ventilation.

Methods for cleanup: Clean up spills immediately observing precautions in the protective equipment section. Place into a suitable container for disposal. Provide ventilation. After removal, flush spill area with soap and water to remove trace residue.

SECTION 7 : HANDLING and STORAGE

Precautions for safe handling:

Handling: Use with adequate ventilation. Avoid breathing vapor and contact with eyes, skin and clothing.

Hygiene Practices: Wash thoroughly after handling. Avoid contact with eyes and skin. Avoid inhaling vapor or mist.

Conditions for safe storage, including any incompatibilities:

Storage: Store in a cool, dry, well ventilated area away from sources of heat, combustible materials, and incompatible substances. Keep container tightly closed when not in use.

SECTION 8: EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE GUIDELINES:

Ethylene glycol :

Guideline ACGIH: TLV-STEL: C 100 mg/m3 (H)

Appropriate engineering controls:

Engineering Controls: Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Good general ventilation should be sufficient to control airborne levels. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.

Individual protection measures:

Eye/Face Protection: Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.

Skin Protection Description: Chemical-resistant gloves and chemical goggles, face-shield and synthetic apron or coveralls should be used to prevent contact with eyes, skin or clothing.

Respiratory Protection: A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

Other Protective: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

PPE Pictograms:

SECTION 9 : PHYSICAL and CHEMICAL PROPERTIES

PHYSICAL AND CHEMICAL PROPERTIES:

Physical State:	Liquid.
Physical State Appearance:	Liquid.
Color:	Clear
Odor:	Odorless.
Odor Threshold:	None.
Boiling Point:	> 369°F
Melting Point:	Not applicable.
Density:	10.1 - 10.3 (lb./gal)
Specific Gravity:	1.21 - 1.24
Solubility:	Miscible in water.
Vapor Density:	No Data
Vapor Pressure:	125mm Hg @ 100°F
Percent Volatile:	35 - 75
Evaporation Rate:	No Data
Evaporation Point:	No Data
pH:	6.0 - 6.2
Molecular Formula:	Mixture
Viscosity:	None.
Coefficient of Water/Oil Distribution:	No Data
Flammability:	No Data
Flash Point:	No Data
Lower Flammable/Explosive Limit:	Not applicable.
Upper Flammable/Explosive Limit:	Not applicable.
VOC Content:	No Data

SECTION 10 : STABILITY and REACTIVITY

Chemical Stability:

Chemical Stability: Stable under normal temperatures and pressures.

Possibility of hazardous reactions:

Hazardous Polymerization: Not reported.

Conditions To Avoid:

Conditions to Avoid: Heat, flames, incompatible materials, and freezing or temperatures below 32 deg. F.

Incompatible Materials:

Incompatible Materials: Oxidizing agents. Strong acids and alkalis.

SECTION 11 : TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION:

Ethylene glycol :

Eye: Administration into the eye - Rat Standard Draize test: 0.012 %/3D [Not reported.]
Administration into the eye - Rabbit Standard Draize test: 500 mg/24H [Mild]
Administration into the eye - Rabbit Standard Draize test: 100 mg/1H [Mild]
Administration into the eye - Rabbit Standard Draize test: 0.012 ppm/3D [Not reported.]
Administration into the eye - Rabbit Standard Draize test: 1440 mg/6H [Moderate] (RTECS)

Skin: Administration onto the skin - Rabbit LD50 - Lethal dose, 50 percent kill: 9530 uL/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)

Ingestion: Oral - Rat LD50 - Lethal dose, 50 percent kill: 4700 mg/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)

Polyethylene glycol :

Eye: Administration into the eye - Rabbit Standard Draize test: 500 mg/24H [Mild]
Administration into the eye - Rabbit Standard Draize test: 100 uL [Mild]
Administration into the eye - Rabbit Standard Draize test: 500 mg [Mild] (RTECS)

Skin: Administration onto the skin - Rabbit LD50 - Lethal dose, 50 percent kill: >20 mL/kg [Details of toxic effects not reported other than lethal dose value]
Administration onto the skin - Rabbit LD50 - Lethal dose, 50 percent kill: >20 gm/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)

Ingestion: Oral - Rat LD50 - Lethal dose, 50 percent kill: 28 gm/kg [Details of toxic effects not reported other than lethal dose value]
Oral - Rat LD50 - Lethal dose, 50 percent kill: 31640 mg/kg [Kidney/Ureter/Bladder - Other changes]
Oral - Rat LD50 - Lethal dose, 50 percent kill: 27500 mg/kg [Kidney/Ureter/Bladder - Other changes]
Oral - Rat LD50 - Lethal dose, 50 percent kill: 22 gm/kg [Details of toxic effects not reported other than lethal dose value]
Oral - Rat LD50 - Lethal dose, 50 percent kill: 30200 mg/kg [Details of toxic effects not reported other than lethal dose value]
Oral - Rat LD50 - Lethal dose, 50 percent kill: 600 mg/kg [Details of toxic effects not reported other than lethal dose value]
Oral - Rat LD50 - Lethal dose, 50 percent kill: 30 gm/kg [Details of toxic effects not reported other than lethal dose value]
Oral - Rat LD50 - Lethal dose, 50 percent kill: 32 gm/kg [Details of toxic effects not reported other than lethal dose value]
Oral - Rat LD50 - Lethal dose, 50 percent kill: 1054 mg/kg [Details of toxic effects not reported other than lethal dose value]
Oral - Rat LD50 - Lethal dose, 50 percent kill: 51310 mg/kg [Kidney/Ureter/Bladder - Other changes] (RTECS)

Propylene glycol :

Eye: Administration into the eye - Rabbit Standard Draize test: 100 mg [Mild]
Administration into the eye - Rabbit Standard Draize test: 500 mg/24H [Mild] (RTECS)

Skin: Administration onto the skin - Rabbit LD50 - Lethal dose, 50 percent kill: 20800 mg/kg [Details of toxic effects not reported other than lethal dose value]
Administration onto the skin - Rabbit LD50 - Lethal dose, 50 percent kill: 20800 mg/kg [Behavioral - Ataxia Behavioral - Tetany Lungs, Thorax, or Respiration - Respiratory depression] (RTECS)

Ingestion: Oral - Rat LD50 - Lethal dose, 50 percent kill: 20 gm/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)

SECTION 12 : ECOLOGICAL INFORMATION

Ecotoxicity:

Ecotoxicity: No ecotoxicity data was found for the product.

Environmental Fate: No environmental information found for this product.

SECTION 13 : DISPOSAL CONSIDERATIONS

Description of waste:

Waste Disposal: Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines.

SECTION 14 : TRANSPORT INFORMATION

DOT Shipping Name: Not restricted as a dangerous good.

DOT UN Number:	Not restricted as a dangerous good.
IATA Shipping Name:	Not restricted as a dangerous good.
IATA UN Number:	Not restricted as a dangerous good.
Canadian Shipping Name:	Not restricted as a dangerous good.
Canadian UN Number:	Not restricted as a dangerous good.
IMDG UN Number :	Not restricted as a dangerous good.
IMDG Shipping Name :	Not restricted as a dangerous good.
ADR UN Number:	Not restricted as a dangerous good.
ADR Shipping Name :	Not restricted as a dangerous good.

SECTION 15 : REGULATORY INFORMATION

Safety, health and environmental regulations specific for the product:

Ethylene glycol :

TSCA Inventory Status:	Listed
Section 313:	EPCRA - 40 CFR Part 372 - (SARA Title III) Section 313 Listed Chemical.
California PROP 65:	* WARNING! This product contains a chemical known to the State of California to cause reproductive toxicity. * developmental.
Canada DSL:	Listed
EC Number:	203-473-3

Polyethylene glycol :

TSCA Inventory Status:	Listed
Canada DSL:	Listed
EC Number:	500-038-2

Propylene glycol :

TSCA Inventory Status:	Listed
Canada DSL:	Listed
EC Number:	200-338-0

SECTION 16 : ADDITIONAL INFORMATION

HMIS Ratings:

HMIS Health Hazard:	1
HMIS Fire Hazard:	1
HMIS Reactivity:	0
HMIS Personal Protection:	X

Health Hazard	**1**
Fire Hazard	**1**
Reactivity	**0**
Personal Protection	**X**

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