

# PG-Plus

MSDS# PG-Plus

## Safety Data Sheet

November 2010

4 pages

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

**Product Name:**

ProTek Plus Propylene Glycol Heat Transfer Fluid

**Manufacturer**

Diversitech

6650 Sugarloaf Parkway, Duluth, GA, 30097

**EMERGENCY Phone No.:** 1 800.255.3924 Chem-Tel (Chemical Emergencies)

**Phone (For Information):** 1+678.542.3600

**DATE REVISED:** 11/29/2010

**PREPARED BY:** Anthony Jernigan

### 2. HAZARDS IDENTIFICATION

**POTENTIAL HEALTH EFFECTS**

**Routes of Exposure:** Inhalation, Ingestion, Skin Contact/Absorption, Eye Contact

**EYE:** May cause minor eye irritation.

**SKIN:** No significant adverse effects are expected under anticipated conditions of normal use. Repeated, prolonged exposure may cause slight flaking, tenderness, and softening of skin.

**INGESTION:** No significant adverse effects are expected under anticipated conditions of normal use. Excessive ingestion may cause central nervous system effects.

**INHALATION:** No significant adverse effects are expected under anticipated conditions of normal use. If effects do occur, refer to FIRST AID Section.

**SIGNS AND SYMPTOMS OF OVEREXPOSURE:** Same as above.

**MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:** Material and/or its emissions may aggravate preexisting eye disease.

**OTHER HEALTH INFORMATION:** None

### 3. INGREDIENTS

INGREDIENT	CAS No.	% by Weight	Hazard Symbol	Risk Phrases
Water	7732-18-5	1-3	None	None
Propylene Glycol	57-55-6	90-95	None	None
Dipotassium phosphate	77 58-11-4	1-3	None	None

### 4. FIRST AID PROCEDURES

**Eyes:** Immediately flush eyes with large amounts of water for 15 minutes, lifting lower and upper lids. Obtain medical attention if pain, blinking, tears or redness persist.

**Skin:** Product is not expected to present a significant skin hazard under anticipated conditions of normal use.

**Inhalation:** If overcome by exposure, remove victim to fresh air immediately. Give oxygen or artificial respiration as needed. Obtain emergency medical attention. Prompt action is essential.

**Ingestion:** If large quantity is allowed, give a pint of luke warm water if victim is completely conscious and alert. If large quantities are consumed, induce vomiting. Obtain emergency medical attention.

# PG-Plus

## 5. FIRE FIGHTING PROCEDURES

### FLAMMABLE PROPERTIES

**FLASH POINT:** 99 °C (211 °F)

### FLAMMABILITY LIMITS

**Lower Flammability Limit:** 3.5%

**Upper Flammability Limit:** 17.5%

**EXTINGUISHING MEDIA:** Carbon dioxide, dry chemical, alcohol type foam, water spray, water fog.

**SPECIAL FIRE FIGHTING PROCEDURES:** Wear positive pressure, self-contained breathing apparatus and other protective apparatus as warranted. Fight fire from distance or protected location – heat may build up pressure and rupture closed containers. Liquid may form slippery film. Use water spray or fog for

cooling, solid stream may spread fire as burning liquid will float on water. Avoid frothing/steam explosion. Notify authorities if liquid enters sewers/ public waters.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** heat from fire can generate flammable vapor. When mixed with air and exposed to ignition source, vapors can burn in open or explode if confined. Vapors may be heavier than air and travel long distances along ground before igniting and flashing back. Fine sprays and mists may be combustible at temperatures below normal flash point.

## 6. ACCIDENTAL RELEASE MEASURES

**EMERGENCY CONTACTS:** Chemtel 800-255-3924

Prevent flow to sewers and public waters. Restrict usage to prevent slip/fall hazard. Soak up small spills with inert solids. Dike and recover large land spills. Absorb spilled liquid with inert absorbent material such as sand, clay or vermiculite. Notify appropriate authorities if product enters any waterways.

## 7. HANDLING AND STORAGE

Product on surfaces can cause slippery conditions. Practice reasonable care and cleanliness. Avoid breathing spray mists if generated. Keep out of reach of children. Product may become a solid at temperatures below -73 °C (-100°F). Do not store near food, foodstuffs, drugs or potable water supplies.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Respiratory Protection:** No special respiratory protection equipment is recommended under normal conditions of anticipated use with adequate ventilation.

**Ventilation:** Adequate general ventilation is required, local exhaust is recommended if possible.

**Protective Gloves:** Not required.

**Eye Protection:** Safety goggles and face shield. Emergency eyewash should be available. Contact lenses should not be worn when working with this chemical.

**Engineering Controls:** Keep containers closed when not in use.

**Personal Hygiene:** If product handling results in skin contact, wash hands and other exposed areas with mild soap and water before eating, drinking, smoking, or using the toilet facilities. Promptly remove soiled clothing and wash before reuse.

# PG-Plus

## 9. PHYSICAL PROPERTIES

**Boiling point:** 185 °C (365 °F)

**Specific gravity (water = 1):** 1.055

**Vapor pressure @ 20 °C:** <0.1 mm hg

**Water solubility:** miscible

**Appearance and odor:** Slightly viscous, almost odorless blue liquid

**Freeze point:** N/A

**pH @ 25°C:** 10.0-10.5

**Vapor density (air = 1):** 2.6

**Evaporation rate (buac = 1):** slight

## 10. STABILITY AND REACTIVITY

**STABILITY:** Stable

**CONDITIONS TO AVOID:** Heat, sparks, open flame.

**MATERIALS TO AVOID:** Strong alkalis, strong oxidizing agents.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Carbon monoxide and other toxic vapors.

**HAZARDOUS POLYMERIZATION:** Not expected to occur.

## 11. TOXICOLOGICAL INFORMATION

**SKIN:** The LD50 for skin absorption in rabbits is > 10,000 mg/kg.

**INGESTION:** The oral LD50 for rats is 20,000-34,000 mg/kg.

**MUTAGENICITY (THE EFFECTS ON GENETIC MATERIAL):** In vitro mutagenicity studies were negative. Animal mutagenicity studies were negative.

## 12. ECOLOGICAL INFORMATION

### ENVIRONMENTAL FATE

#### MOVEMENT & PARTITIONING:

**Bioconcentration Potential** is low (BCF less than 100 or Log Kow less than 3).

**Log octanol/water partition coefficient (LogKow)** is 1.36.

**Henry's Law Constant (H)** is 1.2E-8 atm.m<sup>3</sup>/mole.

#### DEGRADATION & TRANSFORMATION:

Biodegradation under aerobic static laboratory conditions is high (BOD<sub>20</sub> or BOD<sub>28</sub>/ThOD greater than 40%). Biodegradation is expected to be achievable in a secondary wastewater treatment plant.

**5-Day Biochemical Oxygen Demand (BOD<sub>5</sub>)** is 1.16 p/p.

#### 20-Day

**Biochemical Oxygen Demand (BOD<sub>20</sub>)** is 1.45 p/p. Theoretical oxygen demand (ThOD) is calculated to be 1.68 p/p. Biodegradation may occur under both aerobic and anaerobic conditions (in either the presence or absence of oxygen).

**Inhibitory concentration (IC<sub>50</sub>) in OECD "Activated Sludge, Respiration**

**Inhibition Test" (Guideline #209)** is < 1000 mg/L. Degradation is expected in the atmospheric environment within days to weeks.

**ECOTOXICOLOGY:** based largely or completely in information for similar material, i.e. propylene glycol. Material is practically non-toxic to aquatic organisms

on an acute basis (LC<sub>50</sub> > than 100 mg/L in most sensitive species).

**Acute LC<sub>50</sub>**, fathead minnow (*Pimephales promelas*): 4600-54900 mg/L.

**Acute LC<sub>50</sub>**, guppy (*Poecilla reticulata*): > 10000 mg/L.

**Acute LC<sub>50</sub>**, water flea (*Daphne magna*): 4850-34400 mg/L.

**Acute LC<sub>50</sub>**, rainbow trout (*Oncorhynchus mykiss*): 44mL/L (about 44000 mg/L).

# PG-Plus

## SECTION 13. DISPOSAL CONSIDERATIONS

**Waste Disposal Method:** Landfill solids at permitted sites using registered transporters. Burn concentrated liquids, avoiding flameouts, and assuring emissions comply with applicable regulations. Diluted aqueous waste may biodegrade, but avoid overloading plant biomass and assure effluent complies with applicable regulations.

## SECTION 14. TRANSPORT INFORMATION

**US DOT:** This product is not regulated by DOT.

**IMO:** This product is not classified as hazardous

**UN ID No.:** None

## SECTION 15. REGULATORY INFORMATION

This product is not classified as hazardous and is not regulated under OSHA, EPA or DOT

**WHMIS classification for product:** N/A

This product has been classified in accordance with the hazard criteria of the CFR and the MSDS contains all the information required by the CFR

## 16. OTHER INFORMATION:

	HMIS	NFPA
<b>HEALTH:</b>	0	0
<b>FLAMMABILITY:</b>	1	1
<b>REACTIVITY:</b>	0	0

**KEY:** 0 – Minimal, 1 – Slight, 2 – Moderate, 3 – Serious, 4 – Severe

**Label:**

**Warning:**

CAUTION: Contains inhibited propylene glycol.

**Precautions:**

Avoid eye contact or prolonged skin contact.

Skin and eye protection recommended when mixing or handling solutions of this product.

Do not take internally.

**First Aid:**

In case of contact, flush with cool, clean water for 15 minutes.