

**Long Life Coolant Formulation** Manufactured under license by: Glycol Technologies - Warrendale, PA 724-776-3554



Table 1 • Properties of Sub <sub>Zero</sub> LLC <sup>TM</sup>					
Volume %	Freeze Pt. ° F	. Burst Pt. ° F	Boiling Pt. ° F		
25	9	-5	217		
30	3	-15	218		
35	- 4	-30	219		
40	- 13	-65	221		
45	- 24	-100	223		
50	- 34	<-100	225		
55	- 52	<-100	227		
60	- 70	<-100	231		

- Longer life means longer coolant change intervals.
- Excellent freeze, burst, and boil-over protection.
- Engineered to protect against liner damage.
- Additives prevent cooling system corrosion.
- Compatible with cooling system hose and seals.Will not gel.
- Blended with deionized water... "no scale build-up"



**Sub<sub>Zero</sub> LLC** is an ethylene glycol based coolant chemically engineered to provide superior corrosion protection and longer service life. Our NoPit<sup>TM</sup> inhibitors will protect your cooling system by stifling the electrical potential that exists between dissimilar metals in an electrolyte. This is accomplished by rapidly passivating all metal surfaces with a micro-thin layer of inhibitors, which mitigates corrosion by creating a barrier between the coolant and metal surfaces.

**Dilution Water** selection is of the utmost importance to ensure superior corrosion protection and optimal heat transfer efficiency. While tap water may be suitable for drinking or cooking purposes, it is not necessarily well suited as a diluent for coolants. Impurities in tap water can increase the electrical conductivity "hardness" of the water, which makes it more corrosive. Calcium and Magnesium in tap water will promote scale on critical heat transfer surfaces resulting in reduced heat transfer while increasing the potential for under-deposit corrosion. Other impurities typically associated with poor water quality are Chloride and Sulfate. These negatively charged "corrosive" ions interfere with the inhibitors and break down the protective barriers they establish on the metal surface. <u>Deionized Water</u> should always be used for blending or when system make-up water is required. Deionized Water is chemically pure water, free of any scale or corrosive ions, and will dramatically increase the performance of the <u>Sub<sub>Zero</sub> LLC</u> Coolants.

**Inhibitor Testing Procedures:** Test kits and test strips are commercially available to check the coolant for proper inhibitor levels. The coolant must be tested every 15,000 miles or 150 hours to ensure that good corrosion protection is being maintained. Equally important, is regular testing of the glycol concentration. When make-up water is added the glycol concentration decreases as do the inhibitor levels. Therefore, we highly recommend that only the premixed version of  $Sub_{Zero}$  LLC be added each time that make-up fluid is required. This will ensure that your desired level of freeze, burst, and boil-over protection are achieved, while maintaining the NoPit<sup>TM</sup> inhibitors at optimum levels. Using  $Sub_{Zero}$  LLC in a premixed version will also prevent unwanted contaminants from being introduced into your system and shortening its life cycle. © Thermal Fluid Technologies, Incorporated - Fort Mill, SC 29715 – 803-802-5070

<sup>®</sup> SubZero and Logo are registered trademarks of Thermal Fluid Technologies. Used with permission from TFTI.





## Glycol Concentration & Inhibitor Levels (ppm)

Volume %	>.	30 < 60
pН	>	8.0
RA (alkalinity)	>	5.0
Nitrite NO <sub>2</sub>	>	1000



Whether your business involves the use of heavy-duty equipment for moving earth minerals, or, moving commodities and specialty products by water. **Sub-Zero** <sup>TM</sup> antifreeze will keep your equipment protected 24-hours/day – 7 days/week – 365 days/year.





**Sub-Zero** <sup>TM</sup> is available is a wide range of colors to satisfy you're leak detection requirements. Just let us know what color you'd prefer, and we'll take care of the rest. Our standard color is fluorescent yellow and will be shipped as such, unless we are advised of an alternate color selection.



Distribution Center Glycol Technologies, Inc. 140 Commonwealth Dr. Thorn Hill Industrial Park Warrendale, PA 15086 724.776.3554





Glycol Technologies, Inc., hereinafter referred to as GTI believes the information and recommendations contained herein to be accurate and reliable as of June 1, 2001. However, since any assistance furnished by GTI with reference to the proper use and disposal of its products is provided without charge. And, since use conditions and disposal are not within its control, GTI assumes no obligation or liability for such assistance and does not guarantee any results from the use of such products or other information contained herein. No warranty, expressed or implied is given or is this article to be construed as permission, or as a recommendation, to practice any patented invention without a license. The information contained in this bulletin is offered solely for the end-users consideration, investigation, and verification. Sub-Zero<sup>TM</sup>, NoPit<sup>TM</sup>, and Delta T Logo are Trademarks of Thermal Fluid Technologies, Incorporated.