

PROTOCOL[®] DLT

Inhibited Triethylene Glycol

Product Description

PROTOCOL DLT is a unique blend of triethylene glycol and corrosion inhibitors developed for use in natural gas dehydration systems. The special inhibitor package is designed to protect system metals from the corrosive effects of Hydrogen Sulfide (H₂S) and Carbon Dioxide (CO₂) without interfering with the water carrying capacity of the triethylene glycol. The incorporation of organic and inorganic corrosion inhibitors, coupled with their higher flash points, makes this product well suited for applications that require a higher temperature tolerance.

PROTOCOL DLT also contains buffers designed to enhance the fluid pH and reserve alkalinity for greater fluid stability and longer service life. The higher reserve alkalinity combined with other proprietary inhibition characteristics not only controls corrosion, but also makes it highly effective in neutralizing acid gases, as well as the organic acids that form when glycols are oxidized.

PROTOCOL DLT has little or no negative effect on seals, elastomers, or other construction materials commonly found in natural gas processing applications and can be commingled with other inhibited triethylene glycol formulations without compromising either fluid.

PROTOCOL DLT has also proven to be highly effective in air dehydration systems when humidity controlled environments are essential for the prevention of flash rusting on metal components.

"Performance products of unparalleled quality and value"

Technical Data

Composition, % by weight

Triethylene Glycol	97.0
Inhibitors	3.0
Color	Water-white
Specific Gravity	1.125 - 1.130
pH, 50% solution	8.5 - 9.5
Reserve Alkalinity	5.0 mls

Physical Properties

BP @ 760 mm Hg	> 400 °F
Flash Point	> 300 °F
VP (mm Hg @ 400°F)	70 - 75
Thermal Conductivity @ 400°F	0.1 - 0.15
Specific Heat @ 400°F	0.7 - 0.75
Viscosity, cP @ 68°F	49.0
Ht of Vaporization (btu/lb@ 1atm)	166



• **Typical Physical Properties of Glycols used as Liquid Desiccants**

Type	Molecular Weight	Specific Gravity @ 68 °F	Δ Sp.Gr.	Boiling Point °F @ 760 mm	Δ BP / Δ P	Vapor Pressure mm Hg @ 68 °F	Freezing Point °F	Viscosity Cps. at 68 °F	Heat of Vaporization Btu/lb. @ 1 atm	Flash Point °F (T.O.C.)
			Δ T		°F / mm					
MEG	62.07	1.1155	0.00070	387	0.045	0.05	8.6	20.9	371	240
DEG	106.12	1.1184	0.00072	474	0.050	<0.01	17.9	32.4	240	290
TEG	150.18	1.1255	0.00078	550	0.057	<0.01	24.3	49.0	166	330
TTEG	194.23	1.1247	0.00080	decomposes	—	<0.01	20.8	55.0	161	—

*This table presents the typical physical properties of uninhibited, purified glycol samples and is not to be construed as specifications.

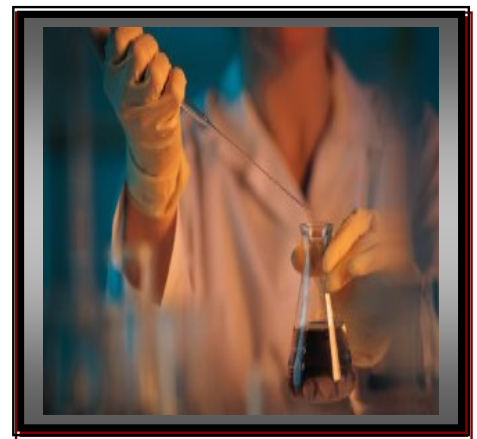
Our state-of-the-art fluid-testing laboratory and highly experienced chemists are dedicated to providing you with the most comprehensive analysis and data interpretation available today. The resulting information is designed to maximize the service life of your equipment and heat transfer fluid.

PROTOCOL[®] Heat Transfer Fluids

➤ Performance

➤ Quality

➤ Value



System Preparation

Before you install PROTOCOL DLT, it is important that the system be properly cleaned and flushed. Typically, new or used equipment is coated with oil, grease, dirt, or corrosion products. These potential forms of contamination must be removed from the system to ensure optimal efficiency and corrosion protection. PROTOCOL[®] System Cleaners and Degreasers are readily available and should be considered prior to the initial fill or fresh fluid change. Please request our TechSpec's[™] for these products from your local sales representative.

receive a detailed report highlighting the results and commenting on unusual or troublesome (if any) conditions. With PROTOCOL DLT, and our comprehensive fluid analysis program, you're assured receiving exceptional performance, quality, and value for years to come.

Glycol Technologies, Inc.

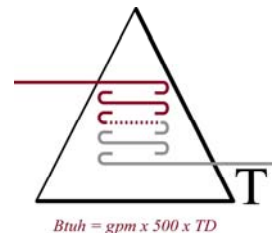
140 Commonwealth Drive

Warrendale, PA 15086

724. 776. 3554

Maintaining Optimal Performance

Once the dehydration system is operational, it is highly recommended that you participate in our fluid-testing program. Our Heat Transfer Fluids Laboratory utilizes the most advanced analytical equipment to provide our customers with fast, accurate, and reliable results. The concept behind this support program is designed to ensure that you maximize the service life of the glycol and your equipment. Approximately 10 days after your sample is logged in by the laboratory you will



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