KOSTChill PG HD Heat Transfer Fluids

KOSTChill PG HD Heat Transfer Fluids are fully-formulated propylene glycol based heat transfer fluid containing an inhibitor and additive package that controls corrosion of metals, helps prevent scaling and the fouling of heat transfer surfaces and buffers the pH to maintain it in the optimum operating range. It was specifically designed for use in heavy duty applications, such as stationary engines and refinery and chemical plant processes. It meets or exceeds ASTM D 1384, which is the accepted industry standard for multi-metal corrosion test, for steel, cast iron, aluminum, copper, brass and solder. This fluid is also compatible with most plastics, elastomers and types of rubber. The multi-component inhibitor system formulation makes KOSTChill PG HD Heat Transfer Fluids equivalent or better in terms functionality and performance to the very best national brands on the market today. It is also stable when mixed with water containing up to 350 ppm total hardness.

Relative to ethylene glycol, propylene glycol has a lower acute oral toxicity. Accordingly, propylene glycol based heat transfer fluids are at least preferable and often required in food processing industry application in which they may make accidental contact with foods and beverages or where they may contaminate potable and drinking water. In some municipalities, the use of propylene glycol is required by law or regulation. They propylene glycol used in KOSTChill PG HD Heat Transfer Fluids are industrial or heat transfer fluid grade. Propylene glycol also has a higher viscosity than ethylene glycol, which results is somewhat lower heat transfer efficiency and somewhat more difficult cold weather pump start-up for propylene glycol based fluids.

* - For food industry applications in which the potential for food, beverage and drinking water contact exist, KOSTChill PG FG Heat Transfer Fluid is the best choice. Consult the product data sheet for more details.

KOSTChill PG HD Heat Transfer Fluids have a recommended operating temperature range of -50°F to 325°F when mixed with appropriate water concentrations. They can be used to provide both freezing and burst protection for systems exposed to very low temperatures. The freezing point is the temperature at which ice crystals first begin to appear. As the temperature continues to fall below this point, an ice and glycol slush forms until the temperature at which the solution freezes solid is reached. The latter is the burst point, or the point at which the expanded, frozen KOSTChill PG HD Heat Transfer Fluid can cause piping, pumps, etc. to crack or rupture.

KOST USA recommends the use of deionized or distilled water for dilution. However, tap water, well water or city water may be used when it meets the quality standards. KOSTChill PG HD Heat Transfer Fluids contain ingredients that help prevent water hardness compounds from reacting with the inhibitors and additive package to form precipitates, which can form corrosion promoting and heat transfer limiting deposits. It is recommended that water with no more than 350 ppm hardness be used to dilute concentrate or as make-up water for systems. Chlorides and sulfates are usually present in municipal water and should be limited to levels no greater than 50 ppm.

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Made in the U.S.A.

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KOSTChill PG HD Heat Transfer Fluids are also available in pre-diluted concentrations with the same performance characteristics as the KOSTChill PG HD, but has already been diluted with deionized water for ready to use requirements. Other dilution concentrations are available upon request.

Features

- Passes ASTM D2809 (Water Pump Cavitation Erosion/Corrosion Test)
- Exceeds ASTM D1384 (Multi-metal Corrosion Protection)
- Hard Water Stability
- Passes ASTM D1881 (Foaming Tendency test)
- Meets ATA TMC RP 329
- Passes ASTM D4340 (Aluminum Corrosion at Heat Transfer Surface)
- Passes ASTM D2570 (Simulated Service Metal Coupon Corrosion Test)
- Operating Temperature of -50°F to 325°F
- Meets the ASTM engine standards D6210, D5216, D6257, D3306, D4985

Applications

- HVAC Systems- Freeze, Burst, Corrosion Protection
- Solar Heating
- Thermal Energy Storage
- Sidewalk and Playing Field Subsurface Heating
- General Electric GEI 41004H (Cooling Water for GE Gas Turbine Power Systems)
- Process Cooling and Heating
- Refrigeration warehouse floor heating
- Ice Rinks
- Computer Cooling Systems

Typical Properties	Full Strength	60/40	50/50	30/70
Propylene Glycol, % wt	96	57	48	29
Inhibitors and Water, % wt	4	43	52	71
Specific Gravity (60/60 °F)	1.045	1.027	1.020	1.010
pH of Solution	10.5	10.4	10.4	10.2
Reserve Alkalinity, ml	14	8	7	7
Thermal Conductivity (BTU/hr-ft^3) @ 180ºF		0.201	0.228	0.261
Specific Heat (BTU/lb-ºF) @ 180ºF		0.872	0.910	0.986
Nitrite (NO_2), ppm	2400 min	1200 min	1200 min	1200 min
Other chemical and engineering specifications are available upon request				
Product #	2526	2528	2527	2543