



PRODUCT DATA

PICO THERMAL HTF 100

Inhibited Propylene Glycol
Non-VOC Freeze Control Fluid

GENERAL DESCRIPTION:

PICO THERMAL HTF 100 is a non-VOC, environmentally and ecologically acceptable, corrosion inhibited propylene glycol based freeze control fluid.

PICO THERMAL HTF 100 is highly recommended for use in plasma and water jet cutting tables operating in cold conditions.

PICO THERMAL HTF 100 inhibits scale and corrosion on all metals, including copper.

PICO THERMAL HTF 100 provides freeze and burst protection in use temperatures of -50°F to +250°F (-46°C to +121°C).

PICO THERMAL HTF 100 is non-toxic and may be used in applications where incidental contact with food or beverage may occur or where required by federal, state, or local regulations.

PRODUCT FEATURES AND BENEFITS:

- Environmentally safe
- All temperature operational
- Non-corrosive
- Biodegradable
- Non-toxic
- Non-hazardous

PRODUCT APPLICATION:

PICO THERMAL HTF 100 can be used "as received" or diluted with deionized or tap water and in PICO QUENCH GUARD solutions, depending upon temperature and application requirements.

PICO THERMAL HTF 100 suitable applications include process heating and cooling, closed loop, freeze and burst protection of pipes (coils), deicing, defrosting, dehumidifying, and HVAC.

PICO THERMAL HTF 100 remains fluid in various temperature ranges allowing processes to be restarted readily after being shut down.

PICO THERMAL HTF 100 has a very low evaporation rate and should be checked regularly and replenished as needed when constantly used in systems.

TYPICAL PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear liquid
Odor	Mild
Percent Thermal HTF	100
Freeze Point	-72°F (-58°C)
Boiling Point	369°F (187°C)
Flash Point	217°F (103°C)
pH	9.7
Weight, lbs. / gal. @ 77°F (25°C)	8.67

FREEZING POINTS OF (DILUTED) PICO THERMAL HTF 100 SOLUTIONS

% Thermal HTF 100		Freezing Point
10		28°F (-2°C)
25		15°F (-9°C)
50		-30°F (-34°C)
75		-65°F (-54°C)
100		-72°F (-58°C)



Trick-Tools.com

75 Truman Road
Pella, IA 50219
Phone: 1-877-VAN-SANT
E-mail: sales@trick-tools.com



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PICO THERMAL Series Heat Transfer/Cooling System Cleaning Procedure

NEW START-UPS

New systems will usually contain residues of original manufacture. Before charging the system with PICO THERMAL Series, clean and flush all existing internal lines and materials thoroughly of all previous solutions, rust, scale, oil, grease, or foreign soils with PICOCLEAN FS 100 as directed. After cleaning, a complete flush with fresh, deionized water is recommended. Once this is completed, the system is now ready to be charged with a PICO THERMAL Series.

OPERATING CONDITIONS

PICO THERMAL Series offer the user a variety of heat transfer dilutions that can be used as received. If dilutions with water are necessary, dilutions should be made with deionized water to keep cooling systems at proper operating levels and expectations.

Using tap water make-up additions is not recommended. Tap water can reduce the system's effectiveness by:

- a. Increased mineral and scale deposits
- b. Decreased boiling point
- c. Creating electrolysis at bus bar terminals
- d. Additional flushing and maintenance repairs
- e. Freeze-up at low temperature operation
- f. Corrosion of interior metal surfaces

PREVENTIVE MAINTENANCE PROCEDURE

When operating systems start to show variations in concentration, color change, oil content, burnt odor, or sludge in the fluid, this may indicate the need for cleaning and fluid replacement. The heat transfer/cooling system should be drained, flushed with PICOCLEAN FS 100, and recharged regularly with PICO THERMAL Series:

- a. Drain system completely, flush, and circulate with approximately 15% PICOCLEAN FS 100 descaler/cleaner in water for 20 minutes. If system is equipped with in-line filters, they should also be removed and cleaned of residues with PICOCLEAN FS 100.
- b. Drain flushing mixture solution, then neutralize system with fresh water rinse for 5 minutes. After this, rinse the system thoroughly with deionized or distilled water for 5 minutes.
- c. Drain rinse water completely and check for complete clarity.
- d. Immediately after final rinse inspection, recharge system with PICO THERMAL Series heat transfer fluid.



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