



UCON Heat Transfer Fluid 500

Introduction

UCON™ Heat Transfer Fluid 500 (HTF 500) is a polyalkylene glycol-based fluid specially formulated for high-temperature, liquid-phase heat transfer in systems requiring bulk fluid temperatures up to 500°F (260°C).

UCON HTF 500 has been used successfully in many high-temperature applications and is recommended.

Applications

Chemical processing equipment

Laminating and calendering rolls

Dies and molds in the rubber and plastics industries

Drying rolls and ovens

Die-cast zinc and aluminum alloys

(For open bath systems, use UCON Heat Transfer Fluid 50-HB-260-Y3.)

Special Features and Benefits

Long, Trouble-Free Service Life

Features oxidative and thermal stability in vented systems at continuous temperatures up to 500 (260°C).

High Heat Transfer Efficiency

UCON HTF 500 shows less tendency to form coke, lacquers, and resinous deposits than petroleum-based products when used with properly designed, manufactured, and maintained equipment. As a result, the probability of line plugging through deposit buildup is reduced. High heat transfer efficiency is maintained throughout the life of the fluid. (Proper system maintenance is critical for this and all heat transfer fluids.)

Easy to Use with Conventional Equipment

Having a wide liquid range, UCON HTF 500 operates safely and efficiently with properly designed gas-fired, oil-fired, or electrical heat sources. No expensive pressurized equipment is needed at high temperatures. No secondary heating equipment is needed at low temperatures.

Excellent Materials Compatibility

UCON HTF 500 is compatible with carbon steel, aluminum, copper, and other common metals.

Water Soluble

UCON HTF 500 is water-washable with cold or hot water. No expensive solvents and solvent recovery systems are required for cleanup.

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UCON Fluids&Lubricants Shanghai Ping Yiao Trading Co.,Ltd

High Flash and Fire Points

UCON HTF 500 has a higher flash point at 575°F (302°C), Cleveland Open Cup, and fire point at 600°F (316°C), Cleveland Open Cup, than petroleum fluids and most other synthetic fluids.

Typical Physical Properties

Effective Operating Temperature Range: 0 to 500°F (-18 to 260°C)

Viscosity at 100 °F (38° C), cSt (SUS)	62 (288)
Specific Gravity 68/68°F (20/20°C)	1.038
Coefficient of Expansion at 68° to 500°F at 20° to 250°C	4.4 x 10 ⁻⁴ per °F 7.9 x 10 ⁻⁴ per °C
Pour Point (ASTM D 97), °F (°C)	-55 (-48)
Boiling Point	None nonvolatile liquid
Flash Point, °F (°C) Cleveland Open Cup (ASTM D 92) Pensky-Martens Closed Cup (ASTM D 93)	575 (302) 425 (218)
Fire Point (ASTM D 92), °F (°C)	600 (316)
Spontaneous Ignition Temperature, °F (°C)	750 (400)
Viscosity Index (ASTM D 2270)	200
Water Solubility	Nearly complete below 100°F (38°C) Dispersible above 100°F (38°C)
Dielectric Constant (25 °C, 1000cps)	7
Specific Volume, ft ³ /lb (dm ³ /g)	0.015 (0.936)
Enthalpy, Btu/lb (J/g)	100°F -0.46; 400°F -0.56 (38°C -1.07; 204°C -1.37)
Specific Heat, cal/gm °C	0.44745 + 0.00052812 (T) (T = Temperature in °C)
Particulates	Substantially free
Appearance	Transparent red to brown liquid

Additional Properties

Extrapolated Vapor Pressure at 500°F	<0.1/mmHg
Volumetric Expansion	5% per 100°F (5% per 56 °C) above room temperature

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Approximate Standard Heat of Combustion, Btu/lb (kJ/g)	Net 11,800 (27.5) Gross 12,700 (29.6)
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