



HEAT TRANSFER FLUIDS

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XCEL THERM® CA PLUS Oxidation Resistant Heat Transfer Fluid

Xceltherm® CA Plus is targeted for use in heat transfer fluid applications that require prolonged life in systems that are open to the atmosphere and subject to accelerated oxidation up to 450° F. Our advanced mineral base oils and proprietary inhibitor package enables Radco to offer a superior product for the Die Casting, Injection Molding and Extruder Markets.

Oxidative stability studies have identified the benefits of **Xceltherm® CA Plus** to Typical Hot Oils:

ASTM D2272 Oxidation Stability of Steam Turbine Oils (RPVOT)

Sample	Minutes to failure	Total Acid Number change
Typical Hot Oil	38.1	3.425
Xceltherm® CA Plus	1958.9	0.611

Key Operating Temperatures

Maximum Bulk Fluid Operating Temperature	450°F	232°C
Maximum Film Temperature	500°F	260°C
Flash Point (PMCC)(ASTM D93) (min)	345°F	174°C
Flash Point (COC) (ASTM D92) (min)	380°F	193°C
Fire Point (ASTM D92) (min)	417°F	214°C
Autoignition Temperature (min)	660°F	349°C
Pour Point (max)	-27°F	-33°C
Pumpability, at 300 mm ² /s (cSt)	10°F	-12°C
Normal Boiling Point, 10% fraction (min)	669°F	354°C

Physical Properties

Composition	Radco-engineered hydrogenated white oil with proprietary additive package	
Odor	Faint, oily	
Appearance	Clear, Orange liquid	
Average Molecular Weight	350 g/mol	
Moisture Content (ppm) (max)	100 ppm	
Critical Temperature	1007°F	542°C
Critical Pressure	220 psia	
Critical Density	17.5 lb/ft ³	
Kinematic Viscosity, at 40°C/104°F (typical and range)	15.5 cSt	14.0 cSt - 18.0 cSt
Coefficient of Thermal Expansion, at 200°C/392°F	0.000495/°F	0.000892/°C
Heat of Vaporization, at Maximum Use Temperature	211.7 kJ/kg (91 BTU/lb)	
Heat of Combustion	46,520 kJ/kg (20,000 BTU/lb)	
Color, Saybolt (ASTM D-156) (min)	30	
Density, at 25°C/77°F	7.1 lbs/gal	850.4 kg/m ³

*Data Represents typical laboratory samples and are not guaranteed for all samples