



# HEAT TRANSFER FLUIDS

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## XCEL THERM<sup>®</sup> FF Flush Fluid

Aromatic solvent for system flush of moderately sludged or viscous systems and eliminates two complete drain and fill operations. Add 20% of the system volume, operate up to a week or more and drain before refilling. Time saving and economic. Compatible with Dowtherm<sup>®</sup> A and most other synthetic heat transfer fluids.

### TYPICAL PROPERTIES

<b>Key Operating Temperatures</b>		
Maximum Bulk Fluid Operating Temperature	675°F	357°C
Maximum Film Temperature	725°F	385°C
Freezing/Melting Point	-11.2°F	-24°C
Flash Point by Pensky Martens Closed Cup (ASTM D93), minimum	327°F	164°C
Flash Point by Cleveland Open Cup (ASTM D92), minimum	345°F	174°C
Fire Point (ASTM D92), minimum	374°F	190°C
Pour point (ASTM D97)	<-40°F	<-40°C
Autoignition Temperature, minimum	779°F	415°C
Pumpability at 300 mm <sup>2</sup> /s (cSt)	14°F	-10°C
Initial Boiling Point	>536°F	>280°C

### Physical Properties

Appearance	Water-white, clear liquid	
Odor	Mild	
Composition	Methylethylated aromatic mixture	
Average Molecular Weight	252 g/mol	
Density at 77°F (25°C)	7.98 lbs/gal	
Specific Gravity at 77°F (25°F) (ASTM D1298), typical and range	0.960	0.91 – 1.10
Moisture Content (ASTM D6304), maximum	200 ppm	
Critical Temperature	908.3°F	468.8°C
Critical Pressure	217.5 psia	
Critical Density	16.82 lb/ft <sup>3</sup>	
Kinematic Viscosity, at 104°F (40°C) (ASTM D445)	11 mm <sup>2</sup> /s (cSt)	
Kinematic Viscosity, at 212°F (100°C) (ASTM D445)	2.4 mm <sup>2</sup> /s (cSt)	
Coefficient of Thermal Expansion	0.000556/°F	0.00100/°C
Heat of Vaporization at 675°F (357°C)	113.6 BTU/lb	264.2 kJ/kg
Total Acid Number (ASTM D664), maximum	0.01 mg KOH/g	

Data represents typical laboratory samples and are not guaranteed for all samples