

## XCELTHERM 500M TDS



700 Kingsland Drive  
PO Box 1928  
Batavia, IL 60510  
Phone: (630) 232-7966  
Fax: (630) 232-7968  
[www.Radcoind.com](http://www.Radcoind.com)

### MILITARY FLUIDS

# MIL-PRF-87252 E

## XCELTHERM® 500M

(COOLANT FLUID, HYDROLYTICALLY STABLE, DIELECTRIC)

**XCELTHERM® 500M Coolant Fluid** is a military-qualified dielectric/cooling fluid consisting of a synthetic hydrocarbon base oil and additives. Designed for safe use in land and airborne closed loop cooling systems, XCELTHERM® 500M demonstrates excellent heat transfer fluid properties, oxidative stability and dielectric characteristics in both military and commercial applications from -54°C (-65°F) to 135°C (275°F).

Qualification Number: AFPET/PTPT 11-006

Qualification Date: 20 April 2011

NATO CODE: S-1748

ISO 9001:2008 Certification Number: C2015-00068

#### National Stock Numbers Available From Radco

9150-01-306-2475	Quart
9150-01-336-7174	Gallon-Oblong
9150-01-304-0885	Gallon-Round
9160-01-380-2175	Gallon-Oblong (Insulating Oil, Electrical)
9150-01-306-2470	55 Gallon Drum

CHARACTERISTICS	REQUIREMENT	TYPICAL RESULTS	TEST METHOD
Kinematic Viscosity, centistokes			
@ 40 °C, minimum	5.0 cSt	5.14 cSt	ASTM D455
@ 100 °C, minimum	1.65 cSt	1.71 cSt	ASTM D455



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@ -40 °C, maximum	300 cSt	267.5 cSt	ASTM D455
Low Temperature Viscosity Stability @ -54°C, maximum			
Viscosity @ 1.5hrs, maximum	1,300 cSt	1,132 cSt	ASTM D2532
Viscosity @ 3hrs, maximum	1,300 cSt	1,140 cSt	ASTM D2532
Viscosity @ 72hrs, maximum	1,300 cSt	1,142 cSt	ASTM D2532
Flash Point, °C, minimum	150°C	158°C	ASTM D92
Fire Point, °C minimum	160°C	178°C	ASTM D92
Total acid number, maximum	0.20 mg KOH/gm	<0.1 mg KOH/gm	ASTM D664
Water content, ppm, maximum	50 ppm	11 ppm	ASTM D6304
Solid Particle Contamination per 100 ml, microns			
5 to 15	10,000 max	68	FED STD 791D 3012
16 to 25	1,000 max	10	FED STD 791D 3012
26 to 50	150 max	8	FED STD 791D 3012



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51 to 100	20 max	2	FED STD 791D 3012
+100	5 max	0	FED STD 791D 3012

**Manufacturing Location: LaFox IL**