



HEAT TRANSFER FLUIDS

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XCEL THERM[®] LV1

Biphenyl-free, non-hazardous alternative for high temp fluids with liquid or vapor phase to 700°F (370°C). Chemically similar to DOW THERM™ A when used under 700°F (370°C). Recommended for Concentrated Solar Power Systems, PET production, Synthetic Fiber plants, Chemical Processing and many other applications that require a high temperature heat transfer fluid.

TYPICAL PROPERTIES

Key Operating Temperatures

Maximum Bulk Fluid Operating Temperature

Liquid Phase	700°F	371°C
Vapor Phase	700°F	371°C
Maximum Film Temperature	750°F	400°C
Freezing/Melting Point	45°F	7.2°C
Flash Point (Pensky Martens)(ASTM D93)	225°F	107°C
Flash Point (COC)(ASTM D92)	252°F	122°C
Fire Point (minimum)(ASTM D92)	262°F	128°C
Autoignition Temperature (minimum)	1120°F	604°C
Normal Boiling Point, at 760 mm Hg	496°F	258°C

Physical Properties

Appearance	Water-white to straw yellow liquid or solid (may vary)	
Odor	Aromatic	
Composition	Stable mixtures of 1,1 Diphenylethane and Diphenyl Oxide	
Critical Temperature	931°F	
Critical Pressure	443.2 psia	
Critical Volume	0.0516 ft ³ /lb	
Moisture Content (maximum)	300 ppm	
Density @ 77°F/25°C	8.84 lbs/gal	
Specific Gravity @ 77°F/25°C	1.060	
Average Molecular Weight		171.9 g/mol
Heat of Vaporization, at Maximum Use	119 BTU/lb	276.8 kJ/kg
Heat of Fusion	42 BTU/lb	23.3 cal/g
Moisture Content (maximum)	300 ppm	

Electrical Properties

Specific Resistivity, at 68°F/20°C	6.4 x 10 ohm-cm
Surface Tension in Air, at 77°F/ 25°C	36.6 dynes/cm

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

Dowtherm™ is a registered trademark of Dow Chemical