700 Kingsland Drive
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Phone: (630) 232-7966
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XCELTHERM® DE

Key Operating Temperatures

Maximum Bulk Operating Temperature	330°C	626°F
Maximum Film Temperature	358°C	676°F
Pour Point (ASTM D97)	≤ -60°C	< -85°F
Flash Point by Cleveland Open Cup (ASTM D92)	136°C	277°F
Fire Point by Cleveland Open Cup (ASTM D92)	150°C	302°F
Autoignition Temperature (ASTM E659)	464°C	867°F
Pumpability at 300 cSt	-55°C	-67°F
Normal Boiling Point	≥ 270°C	≥ 518°F

Physical Properties

Appearance	Clear, colorless to straw yellow liquid
Odor	Aromatic
Color (ASTM D2129), APHA	≤ 70
Composition	35 to 45% Benzyltoluene 55 to 65% Diphenylethane
Epoxide concentration, mg HCl/g	1.9
Ethyl vanillin content, ppm	0
Kinematic Viscosity, mm^2/s (cSt) (ASTM D445) at 20°C (68°F) at 40°C (104°F) at 100°C (212°F)	 4.27 2.65 1.07
Average Molecular Weight, g/mol	182
Moisture Content, parts per million, maximum	300
Density at 25°C (77°F) (ASTM D1298)	980 kg/m^3
Specific Gravity at 20°C (ASTM D1298)	0.99
Coefficient of Thermal Expansion 20 - 100°C (ASTM D1903)	5.3×10^4
Dielectric Constant at 20°C (68°F)	2.5
Dielectric Breakdown Voltage, kV (IEC 156)	70
Dissipation Factor, 50 Hz at 90°C (IEC 247)	0.001
Gas solubility at 25°C (ASTM D2495) O_2 N_2	 1.9% 3.7%
Permittivity at 25°C (IEC 247) at 100°C (ASTM D924)	 2.4 2.40 – 2.52
Refractive Index	1.566 - 1.5794

Data represents typical laboratory samples and are not guaranteed for all samples.
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Physical Properties		
Surface Tension at 80°C (ASTM D3825, dynes/cm)	38.24	
Volume Resistivity at 90°C (IEC 247)	1.0×10^{15}	
Vapor Pressure		
at 20°C	0.004 kPa	0.00058 psia
at 100°C	0.133 kPa	0.019 psia
Water Solubility at 20°C	Immiscible	
Water Content (ASTM D6304), ppm	≤ 70	
Acid Number, mg·KOH/g	< 0.01	

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