

Asahi Kasei Delpet® 80N Acrylic Molding Compound, High Heat Grade

Category : Polymer , Thermoplastic , Acrylic (PMMA) , Acrylic, Heat Resistant, Molded

Material Notes:

80N has high heat resistance and strength. Recommended for taillight lenses, reflectors, and other auto parts, and general lighting fixtures. General Delpet® qualities include attractive transparency, elegant luster and color brightness, excellent weather resistance, surface hardness, excellent chemical resistance, superior electrical resistance and insulation properties, and superior machinability.

Physical Properties	Metric	English	Comments
Density	1.19 g/cc	0.0430 lb/in ³	ASTM D792
Water Absorption	0.30 %	0.30 %	details not reported; ASTM D792
Linear Mold Shrinkage	0.0020 - 0.0060 cm/cm	0.0020 - 0.0060 in/in	ASTM D955
Melt Flow	0.90 g/10 min	0.90 g/10 min	Condition L; ASTM D1238
	2.0 g/10 min	2.0 g/10 min	Condition I; ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	100	100	ASTM D785
Tensile Strength, Ultimate	73.0 MPa	10600 psi	ASTM D638
Elongation at Break	5.0 %	5.0 %	ASTM D638
Flexural Yield Strength	120 MPa	17400 psi	ASTM D790
Flexural Modulus	3.30 GPa	479 ksi	ASTM D790

Thermal Properties	Metric	English	Comments
CTE, linear	60.0 µm/m-°C @Temperature 20.0°C	33.3 µin/in-°F @Temperature 68.0 °F	ASTM D257
Specific Heat Capacity	1.46 J/g-°C	0.349 BTU/lb-°F	
Thermal Conductivity	0.210 W/m-K	1.46 BTU-in/hr-ft ² -°F	ASTM C177
Maximum Service Temperature, Air	100 °C	212 °F	Heat Distortion Temp
	100 °C	212 °F	Deflection Temp; Load not reported; ASTM D648

Electrical Properties	Metric	English	Comments
Electrical Resistivity	$\geq 1.00 \times 10^{15}$ ohm-cm	$\geq 1.00 \times 10^{15}$ ohm-cm	ASTM D257
Surface Resistance	$\geq 1.00 \times 10^{16}$ ohm 3.0	$\geq 1.00 \times 10^{16}$ ohm 3.0	ASTM D257
Dielectric Constant	@Frequency 40.0 - 50.0Hz	@Frequency 40.0 - 50.0Hz	ASTM D150
	4.0	4.0	
Dielectric Strength	@Frequency 60 Hz	@Frequency 60 Hz	ASTM D150
	20.0 kV/mm	508 kV/in	Short-term; 4 kV/s; ASTM D149
Dissipation Factor	0.020	0.020	ASTM D150
	@Frequency 40.0 Hz	@Frequency 40.0 Hz	
	0.040	0.040	ASTM D150
	@Frequency 50 Hz	@Frequency 50 Hz	
	0.060	0.060	ASTM D150
	@Frequency 60 Hz	@Frequency 60 Hz	