Celanese
The chemistry inside innovation™

CoolPoly® E3603

Thermally Conductive Polyphthalamide (PPA)

Description

CoolPoly E series of thermally conductive plastics transfers heat, a characteristic previously unavailable in injection molding grade polymers. CoolPoly is lightweight, netshape moldable and allows design freedom in applications previously restricted to metals. The E series is electrically conductive and provides inherent EMI/RFI shielding characteristics.

Physical Properties	Value	Unit	Test Standard
Density	1560	kg/m^3	ISO 1183
Mold Shrinkage – Parallel	0.4	%	ISO 294-4
Mold Shrinkage – Normal	0.6	%	ISO 294-4
Mechanical Properties	**Value**	**Unit**	**Test Standard**
Tensile Modulus	9070	MPa	ISO 527-1
Tensile Strength	44	MPa	ISO 527-1
Strain @ Break	0.56	%	ISO 527-1
Flexural Modulus	9840	MPa	ISO 178
Flexural Strength	75	MPa	ISO 178
Charpy Unnotched (23°C)	4.73	kJ/m^2	ISO 179-1
Charpy Notched (23°C)	2.00	kJ/m^2	ISO 179-1
Thermal Properties	**Value**	**Unit**	**Test Standard**
Thermal Conductivity, In-Plane	20	W/mK	ASTM E1461
Thermal Diffusivity, In-Plane	0.12	cm^2/sec	ASTM E1461
Specific Heat	1.05	J/g°C	ASTM E1461