Property Data

Envalior
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Arnitel® CM551

TPC–ES

Heat Resistant Copolyester

Print Date: 2024–09–28

PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
RHEOLOGICAL PROPERTIES	**VALUE**		
Melt volume–flow rate	8	cm³/10min	ISO 1133
Temperature	230	°C	ISO 1133
Load	2.16	kg	ISO 1133
MECHANICAL PROPERTIES	**VALUE**		
Shore D Hardness (3s)	51	–	ISO 868
Shore D Hardness (15s)	51	–	ISO 868
Tensile modulus	160	MPa	ISO 527–1/–2
Stress at break	34	MPa	ISO 527–1/–2
Nominal strain at break	450	%	ISO 527–1/–2
Stress at 5% strain	8.4	MPa	ISO 527–1/–2
Stress at 10% strain	12	MPa	ISO 527–1/–2
Stress at 50% strain	16	MPa	ISO 527–1/–2
Stress at 100% strain	16	MPa	ISO 527–1/–2
Charpy notched impact strength (+23°C)	N	kJ/m²	ISO 179/1eA
Charpy notched impact strength (–30°C)	6	kJ/m²	ISO 179/1eA
Izod notched impact strength (+23°C)	N	kJ/m²	ISO 180/1A
Izod notched impact strength (–20°C)	N	kJ/m²	ISO 180/1A
Izod notched impact strength (–30°C)	6.4	kJ/m²	ISO 180/1A
Compression Set under constant strain at 23 °C	18	%	ISO 815
Compression Set under constant strain at 70 °C	42	%	ISO 815

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PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
MECHANICAL PROPERTIES (DIE CUTTING)	**VALUE**		
Stress at break (normal)	34	MPa	ISO 527-1/-2
Stress at 5% strain (normal)	8.5	MPa	ISO 527-1/-2
Stress at 10% strain (normal)	12	MPa	ISO 527-1/-2
Stress at 50% strain (normal)	16	MPa	ISO 527-1/-2
Stress at 100% strain (normal)	15	MPa	ISO 527-1/-2
Tear strength (normal)	145	kN/m	ISO 34-1; Method B
Tear strength (parallel)	160	kN/m	ISO 34-1; Method B
Strain at break (normal)	660	%	ISO 527-1/-2
THERMAL PROPERTIES	**VALUE**		
Melting temperature (10°C/min)	205	°C	ISO 11357-1/-3
Vicat softening temperature (50°C/h 50N)	61	°C	ISO 306
Coeff. of linear therm. expansion (normal)	1.9	E-4/°C	ISO 11359-1/-2
ELECTRICAL PROPERTIES	**VALUE**		
Relative permittivity (100Hz)	4.34	-	IEC 62631-2-1
Relative permittivity (1 MHz)	3.58	-	IEC 62631-2-1
Dissipation factor (100 Hz)	212	E-4	IEC 62631-2-1
Dissipation factor (1 MHz)	460	E-4	IEC 62631-2-1
Volume resistivity	>1E13	Ohm*m	IEC 62631-3-1
Electric strength	25	kV/mm	IEC 60243-1
Comparative tracking index	600	V	IEC 60112
OTHER PROPERTIES	**VALUE**		
Density	1240	kg/m³	ISO 1183
Humidity absorption	0.11	%	Sim. to ISO 62