Generic TPC-ET

Thermoplastic Copolyester Elastomer

Generic

Message:

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This information is provided for comparative purposes only.

General Information			
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity			
--	1.12 - 1.25	g/cm³	ASTM D792
23°C	1.07 - 1.28	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR)			
230°C/2.16 kg	2.0 - 31	g/10 min	ASTM D1238
230°C/2.16 kg	0.50 - 34	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (230°C/2.16 kg)	3.91 - 32.4	cm³/10min	ISO 1133
Molding Shrinkage			
Flow: 23°C	0.58 - 2.0	%	ASTM D955
23°C	0.59 - 2.0	%	ISO 294-4
Water Absorption			
23°C, 24 hr	0.29 - 0.85	%	ASTM D570
23°C, 24 hr	0.28 - 0.70	%	ISO 62
Saturated, 23°C	0.16 - 0.98	%	ISO 62
Equilibrium, 23°C	0.29 - 0.51	%	ASTM D570
Equilibrium, 23°C, 50% RH	0.20 - 0.41	%	ISO 62
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness			
23°C	27 - 81		ASTM D2240
23°C	26 - 84		ISO 868
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus (23°C)	20.0 - 281	MPa	ISO 527-2
Tensile Strength			
Yield, 23°C	13.2 - 34.5	MPa	ASTM D638
Yield, 23°C	14.6 - 36.0	MPa	ISO 527-2
Fracture, 23°C	0.300 - 55.1	MPa	ASTM D638
Fracture, 23°C	9.66 - 53.8	MPa	ISO 527-2
23°C	1.30 - 31.0	MPa	ASTM D638
23°C	1.00 - 22.9	MPa	ISO 527-2
Tensile Strain			
Yield, 23°C	15 - 50	%	ISO 527-2

Fracture, 23°C	4.0 - 810	%	ASTM D638
Fracture, 23°C	250 - 750	%	ISO 527-2
Nominal Tensile Strain at Break (23°C)	50 - 900	%	ISO 527-2
Flexural Modulus			
23°C	28.0 - 1110	MPa	ASTM D790
23°C	17.0 - 209	MPa	ISO 178
Flexural Stress (23°C)	1.00 - 4.63	MPa	ISO 178
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tear Strength			
23°C	29.4 - 251	kN/m	ASTM D624
23°C	40 - 190	kN/m	ISO 34-1
Bayshore Resilience	40 - 65	%	ASTM D2632
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength (23°C)	9.4 - 120	kJ/m^2	ISO 179
Notched Izod Impact (23°C)	8.5 - 81	kJ/m^2	ISO 180
Tensile Impact Strength (23°C)	179	kJ/m^2	ISO 8256
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			
0.45 MPa, not annealed	46.0 - 140	°C	ASTM D648
0.45 MPa, not annealed	44.7 - 116	°C	ISO 75-2/B
1.8 MPa, not annealed	48.7 - 55.8	°C	ASTM D648
1.8 MPa, not annealed	39.9 - 46.4	°C	ISO 75-2/A
Brittleness Temperature	-100 - -90.0	°C	ISO 974
Glass Transition Temperature			
--	-60.0 - 50.0	°C	ISO 11357-2
--	3.00 - 68.3	°C	DSC
Vicat Softening Temperature			
--	70.4 - 196	°C	ASTM D1525
--	86.2 - 211	°C	ISO 306
Melting Temperature			
--	185 - 219	°C	
--	170 - 222	°C	ISO 11357-3
--	165 - 223	°C	ASTM D3418
--	173 - 220	°C	ISO 3146
Linear thermal expansion coefficient			
Flow	1.0E-4 - 2.3E-4	cm/cm/°C	ASTM E831
Flow	1.0E-4 - 2.6E-4	cm/cm/°C	ISO 11359-2
Lateral	1.4E-4 - 2.3E-4	cm/cm/°C	ASTM E831
Lateral	1.0E-4 - 2.3E-4	cm/cm/°C	ISO 11359-2
RTI Elec	50.0 - 90.0	°C	UL 746
RTI Imp	50.0 - 85.0	°C	UL 746
RTI	50.0 - 85.0	°C	UL 746

Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	2.0E+13 - 5.0E+15	ohms	IEC 60093
Volume Resistivity			
23°C	1.0E+11 - 1.0E+15	ohms·cm	ASTM D257
23°C	8.3E+10 - 1.0E+15	ohms·cm	IEC 60093
Dielectric Strength			
23°C	26	kV/mm	ASTM D149
23°C	14 - 22	kV/mm	IEC 60243-1
Dielectric Constant			
23°C	4.19 - 4.64		ASTM D150
23°C	4.20 - 6.00		IEC 60250
23°C	4.14		IEC 60250
Dissipation Factor			
23°C	5.0E-3 - 0.041		ASTM D150
23°C	7.0E-3 - 0.081		IEC 60250

Flammability	Nominal Value	Unit	Test Method
Oxygen Index			
--	20 - 21	%	ASTM D2863
--	19 - 22	%	ISO 4589-2

Fill Analysis	Nominal Value	Unit	Test Method
Melt Viscosity	0.500 - 403	Pa·s	ASTM D3835

Injection	Nominal Value	Unit
Drying Temperature	79.4 - 110	°C
Drying Time	2.5 - 3.5	hr
Suggested Max Moisture	0.010 - 0.082	%
Rear Temperature	179 - 231	°C
Middle Temperature	168 - 240	°C
Front Temperature	196 - 245	°C
Nozzle Temperature	210 - 247	°C
Processing (Melt) Temp	180 - 246	°C
Mold Temperature	22.5 - 50.0	°C
Back Pressure	0.172 - 44.1	MPa
Screw Speed	45 - 65	rpm

Injection instructions

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Extrusion	Nominal Value	Unit
Drying Temperature	80.0 - 110	°C
Drying Time	2.5 - 3.5	hr
Suggested Max Moisture	0.010 - 0.060	%
Cylinder Zone 1 Temp.	190 - 230	°C
Cylinder Zone 2 Temp.	199 - 235	°C

Cylinder Zone 3 Temp.	190 - 240	°C
Cylinder Zone 4 Temp.	210 - 240	°C
Adapter Temperature	210 - 240	°C
Melt Temperature	173 - 245	°C
Die Temperature	199 - 240	°C

Extrusion instructions

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Recommended distributors for this material

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