

Generic TP, Unspecified

Thermoplastic

Generic

Message:

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General Information			
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	0.811 - 1.60	g/cm ³	ASTM D792
23°C	0.954 - 1.40	g/cm ³	ISO 1183
--	1.09 - 1.22	g/cm ³	ASTM D1505
Apparent Density	0.52 - 0.72	g/cm ³	ASTM D1895
Melt Mass-Flow Rate (MFR)			
300°C/1.2 kg	0.50 - 45	g/10 min	ASTM D1238
150°C/21.6 kg	4.0 - 8.9	g/10 min	ISO 1133
Molding Shrinkage - Flow (23°C)	0.050 - 0.42	%	ASTM D955
Water Absorption (23°C, 24 hr)	0.010 - 0.14	%	ASTM D570
Environmental Stress-Cracking Resistance (23°C)	504 - 720	hr	ASTM D1693
Mooney Viscosity	40 - 45	MU	ASTM D1646
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (23°C)	34 - 126		ASTM D785
Durometer Hardness			
23°C	45 - 96		ASTM D2240
23°C	39 - 88		ISO 868
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	0.755 - 3210	MPa	ASTM D638
Tensile Strength			
Yield, 23°C	26.8 - 74.0	MPa	ASTM D638
Yield, 23°C	0.0276 - 16.4	MPa	ISO 527-2
Fracture, 23°C	2.20 - 60.3	MPa	ASTM D638
23°C	0.862 - 57.6	MPa	ASTM D638
Tensile Elongation			
Yield, 23°C	8.2 - 38	%	ASTM D638
Fracture, 23°C	0.14 - 30	%	ASTM D638
Fracture, 23°C	150 - 1100	%	ISO 527-2
Flexural Modulus (23°C)	50.3 - 3490	MPa	ASTM D790
Flexural Strength			
23°C	2.05 - 126	MPa	ASTM D790

Yield, 23°C	17.9 - 123	MPa	ASTM D790
Compressive Strength (23°C)	97.0 - 175	MPa	ASTM D695
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress (Yield, 23°C)	10.5 - 15.0	MPa	ISO 37
Tensile Elongation (Break, 23°C)	150 - 200	%	ISO 37
Tear Strength (23°C)	5.00 - 116	kN/m	ASTM D624
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	9.6 - 130	J/m	ASTM D256
Unnotched Izod Impact (23°C)	29 - 500	J/m	ASTM D256
Aging	Nominal Value	Unit	Test Method
Change in Tensile Strength (23°C)	-21 - 0.50	%	ISO 1817
Change in Tensile Strain at Break (23°C)	-15 - -4.1	%	ISO 1817
Change in Volume (23°C)	0.88 - 20	%	ISO 1817
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, not annealed	49.9 - 133	°C	ASTM D648
1.8 MPa, not annealed	36.7 - 164	°C	ASTM D648
Brittleness Temperature	-40.2 - -39.4	°C	ASTM D746
Glass Transition Temperature			
--	-54.0 - 104	°C	ASTM E1356
--	-40.0 - 171	°C	DSC
Melting Temperature	203 - 263	°C	
CLTE - Flow			
--	2.9E-5 - 2.1E-4	cm/cm/°C	ASTM D696
--	3.1E-5 - 1.5E-4	cm/cm/°C	ASTM E831
Thermal Conductivity (23°C)	0.21 - 0.22	W/m/K	ASTM C177
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+3 - 1.3E+14	ohms	ASTM D257
Volume Resistivity			
23°C	10 - 2.2E+15	ohms · cm	ASTM D257
23°C	6.0 - 18	ohms · cm	ASTM D991
Dielectric Strength (23°C)	13 - 16	kV/mm	ASTM D149
Dielectric Constant (23°C)	1.66 - 4.82		ASTM D150
Dissipation Factor (23°C)	3.0E-4 - 0.22		ASTM D150
Flammability	Nominal Value	Unit	Test Method
Oxygen Index			
--	29 - 44	%	ASTM D2863
--	30 - 45	%	ISO 4589-2
Optical	Nominal Value	Unit	Test Method
Refractive Index	1.502 - 1.585		ASTM D542
Transmittance	90.0 - 92.0	%	ASTM D1003
Haze	1.0 - 4.5	%	ASTM D1003

Thermoset	Nominal Value	Unit	Test Method
Thermoset Mix Viscosity	72.0 - 5060	cP	ASTM D2393
Demold Time	2.5 - 450	min	
Post Cure Time	8.0	hr	
Injection	Nominal Value	Unit	
Drying Temperature	70.8 - 80.3	°C	
Drying Time	3.0 - 3.1	hr	
Rear Temperature	179 - 288	°C	
Middle Temperature	186 - 299	°C	
Front Temperature	194 - 308	°C	
Nozzle Temperature	190 - 311	°C	
Processing (Melt) Temp	197 - 310	°C	
Mold Temperature	23.9 - 136	°C	
Back Pressure	0.517 - 0.862	MPa	
Screw Speed	55 - 61	rpm	

Injection instructions

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Extrusion	Nominal Value	Unit
Drying Temperature	60.0 - 66.1	°C
Drying Time	2.0 - 6.0	hr
Cylinder Zone 1 Temp.	130 - 181	°C
Cylinder Zone 2 Temp.	138 - 161	°C
Cylinder Zone 3 Temp.	145 - 167	°C
Cylinder Zone 4 Temp.	150 - 182	°C
Cylinder Zone 5 Temp.	158 - 173	°C
Melt Temperature	127 - 227	°C
Die Temperature	157 - 206	°C

Extrusion instructions

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