

Generic PE, Unspecified

Polyethylene

Generic

Message:

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General Information			
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	0.898 - 0.960	g/cm ³	ASTM D792
23°C	0.900 - 0.964	g/cm ³	ISO 1183
--	0.896 - 0.964	g/cm ³	ASTM D1505
Melt Mass-Flow Rate (MFR)			
190°C/2.16 kg	0.20 - 7.7	g/10 min	ASTM D1238
190°C/2.16 kg	0.20 - 9.2	g/10 min	ISO 1133
Water Absorption (23°C, 24 hr)	9.8E-3 - 0.011	%	ASTM D570
Environmental Stress-Cracking Resistance (23°C)	1.00 - 1000	hr	ASTM D1693
Carbon Black Content	40 - 45	%	ASTM D1603
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (23°C)	46 - 96		ASTM D2240, ISO 868
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
23°C	350 - 2220	MPa	ASTM D638
23°C	329 - 902	MPa	ISO 527-2
Tensile Strength			
Yield, 23°C	10.0 - 24.4	MPa	ASTM D638
Yield, 23°C	10.8 - 27.4	MPa	ISO 527-2
Fracture, 23°C	10.7 - 26.7	MPa	ASTM D638
Fracture, 23°C	12.0 - 19.2	MPa	ISO 527-2
23°C	11.0 - 19.8	MPa	ASTM D638
Tensile Strain			
Yield, 23°C	5.6 - 19	%	ISO 527-2
Fracture, 23°C	36 - 830	%	ASTM D638
Fracture, 23°C	1.0 - 530	%	ISO 527-2
Apparent Bending Modulus (23°C)	97.0 - 171	MPa	ASTM D747
Flexural Modulus			
23°C	101 - 1030	MPa	ASTM D790
23°C	80.0 - 1160	MPa	ISO 178
Flexural Strength			

23°C	8.00 - 37.9	MPa	ASTM D790
23°C	18.0 - 45.0	MPa	ISO 178
Coefficient of Friction	0.10 - 0.50		ASTM D1894
Films	Nominal Value	Unit	Test Method
Film Thickness - Tested	23 - 45	µm	
secant modulus			ASTM D882
MD	108 - 185	MPa	ASTM D882
TD	105 - 225	MPa	ASTM D882
Tensile Strength			ASTM D882
MD: Yield	4.80 - 20.3	MPa	ASTM D882
TD: Yield	4.20 - 11.1	MPa	ASTM D882
MD: Fracture	20.7 - 60.7	MPa	ASTM D882
TD: Fracture	20.2 - 62.7	MPa	ASTM D882
Tensile Elongation			ASTM D882
MD: Fracture	350 - 720	%	ASTM D882
TD: Fracture	580 - 720	%	ASTM D882
Dart Drop Impact (23°C)	55 - 110	g	ASTM D1709
Elmendorf Tear Strength			ASTM D1922
MD	100 - 360	g	ASTM D1922
TD	220 - 600	g	ASTM D1922
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
23°C	19 - 470	J/m	ASTM D256
23°C	2.0 - 6.8	kJ/m ²	ISO 180
Tensile Impact Strength (23°C)	285	kJ/m ²	ISO 8256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, not annealed	69.3 - 70.2	°C	ASTM D648
0.45 MPa, not annealed	58.0 - 82.3	°C	ISO 75-2/B
Brittleness Temperature	-75.0 - -48.8	°C	ASTM D746
Vicat Softening Temperature			
--	68.4 - 125	°C	ASTM D1525
--	83.9 - 126	°C	ISO 306
Peak Melting Temperature			
--	117 - 128	°C	ASTM D3418
--	114 - 125	°C	ISO 3146
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	2.0 - 2.5E+13	ohms	ASTM D257
Volume Resistivity			
23°C	3.6 - 1.0E+16	ohms·cm	ASTM D257
23°C	25 - 1.0E+16	ohms·cm	IEC 60093
Dielectric Constant (23°C)	2.30 - 3.70		ASTM D150

Dissipation Factor (23°C)	3.0E-4 - 0.010		ASTM D150
Flammability	Nominal Value	Unit	Test Method
Oxygen Index	30 - 32	%	ISO 4589-2
Optical	Nominal Value	Unit	Test Method
Gloss	58 - 88		ASTM D2457
Haze	2.2 - 7.3	%	ASTM D1003
Injection	Nominal Value	Unit	
Drying Temperature	75.9 - 81.0	°C	
Drying Time	1.0 - 4.0	hr	
Processing (Melt) Temp	105 - 232	°C	
Mold Temperature	37.8 - 47.6	°C	
Injection instructions			

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Extrusion	Nominal Value	Unit	
Drying Temperature	40.0 - 69.3	°C	
Drying Time	4.0 - 5.0	hr	
Cylinder Zone 1 Temp.	83.4 - 202	°C	
Cylinder Zone 2 Temp.	83.4 - 212	°C	
Cylinder Zone 3 Temp.	83.5 - 220	°C	
Cylinder Zone 4 Temp.	83.8 - 151	°C	
Cylinder Zone 5 Temp.	83.8 - 223	°C	
Melt Temperature	109 - 228	°C	
Die Temperature	115 - 232	°C	
Extrusion instructions			

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