

Generic Polyolefin, Unspecified

Polyolefin

Generic

Message:

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General Information			
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	0.890 - 1.52	g/cm³	ASTM D792
23°C	0.870 - 1.51	g/cm³	ISO 1183
--	0.890 - 1.42	g/cm³	ASTM D1505
Apparent Density	0.51 - 0.56	g/cm³	ASTM D1895
Melt Mass-Flow Rate (MFR)			
230°C/2.16 kg	0.30 - 30	g/10 min	ASTM D1238
230°C/2.16 kg	0.50 - 17	g/10 min	ISO 1133
Molding Shrinkage			
Flow: 23°C	0.56 - 1.5	%	ASTM D955
Transverse flow: 23°C	1.2 - 1.8	%	ASTM D955
23°C	0.20 - 1.2	%	ISO 294-4
Carbon Black Content	34 - 40	%	ASTM D1603
Moisture Content	938 - 2063	ppm	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (23°C)	20 - 120		ASTM D785
Durometer Hardness			
23°C	28 - 96		ASTM D2240
23°C	29 - 97		ISO 868
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
23°C	1430 - 2510	MPa	ASTM D638
23°C	4.50 - 2560	MPa	ISO 527-2
Tensile Strength			
Yield, 23°C	8.60 - 26.2	MPa	ASTM D638
Yield, 23°C	3.92 - 53.8	MPa	ISO 527-2
Fracture, 23°C	6.00 - 17.3	MPa	ASTM D638
Fracture, 23°C	10.6 - 13.9	MPa	ISO 527-2
23°C	1.31 - 61.9	MPa	ASTM D638
23°C	10.0 - 19.0	MPa	ISO 527-2
Tensile Elongation			

Yield, 23°C	2.0 - 17	%	ASTM D638
Yield, 23°C	4.4 - 40	%	ISO 527-2
Fracture, 23°C	4.0 - 510	%	ASTM D638
Fracture, 23°C	3.0 - 800	%	ISO 527-2
Flexural Modulus			
23°C	6.89 - 2490	MPa	ASTM D790
23°C	20.0 - 2180	MPa	ISO 178
Flexural Strength			
23°C	20.0 - 95.1	MPa	ASTM D790
23°C	58.2 - 105	MPa	ISO 178
Yield, 23°C	16.0 - 99.7	MPa	ASTM D790
Films	Nominal Value	Unit	Test Method
Film Thickness - Tested	47 - 53	µm	
secant modulus			
MD	70.1 - 426	MPa	ASTM D882
TD	96.9 - 426	MPa	ASTM D882
23°C	90.0 - 344	MPa	ISO 527-3
Tensile Strength			
MD: Yield	8.96 - 18.6	MPa	ASTM D882
TD: Yield	7.79 - 15.4	MPa	ASTM D882
Yield, 23°C	13.7 - 15.1	MPa	ISO 527-3
MD: Fracture	20.5 - 33.1	MPa	ASTM D882
TD: Fracture	11.3 - 48.0	MPa	ASTM D882
Fracture, 23°C	24.5 - 45.0	MPa	ISO 527-3
Tensile Elongation			
Yield, 23°C	12 - 40	%	ISO 527-3
MD: Fracture	190 - 680	%	ASTM D882
TD: Fracture	480 - 870	%	ASTM D882
Fracture, 23°C	800 - 900	%	ISO 527-3
Elmendorf Tear Strength			
MD	20 - 3000	g	ASTM D1922
TD	80 - 1100	g	ASTM D1922
Seal Initiation Temperature	104 - 115	°C	
Elastomers	Nominal Value	Unit	Test Method
Tear Strength (23°C)	7.00 - 67.4	kN/m	ASTM D624
Compression Set	15 - 75	%	ASTM D395
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	13 - 55	kJ/m ²	ISO 179
Notched Izod Impact			
23°C	11 - 820	J/m	ASTM D256
23°C	8.3 - 60	kJ/m ²	ISO 180
Notched Izod Impact (23°C)	2.30 - 10.3	kJ/m ²	ASTM D256

Dart Drop Impact (23°C)	20.2 - 22.8	J	ASTM D5420
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, not annealed	61.0 - 144	°C	ASTM D648
0.45 MPa, not annealed	35.0 - 108	°C	ISO 75-2/B
1.8 MPa, not annealed	46.1 - 124	°C	ASTM D648
1.8 MPa, not annealed	49.3 - 55.1	°C	ISO 75-2/A
Brittleness Temperature	-75.0 - -8.00	°C	ASTM D746
Glass Transition Temperature	84.0 - 140	°C	DSC
Vicat Softening Temperature			
--	40.0 - 108	°C	ASTM D1525
--	46.5 - 131	°C	ISO 306
Melting Temperature			
--	163 - 216	°C	
--	75.8 - 128	°C	DSC
--	131 - 143	°C	ISO 11357-3
--	105 - 145	°C	ASTM D3418
CLTE - Flow			
--	6.0E-5 - 7.0E-5	cm/cm/°C	ASTM D696
--	7.0E-5 - 7.1E-5	cm/cm/°C	ASTM E831
Thermal Conductivity (23°C)	0.18 - 0.23	W/m/K	ISO 8302
RTI Elec	65.0 - 106	°C	UL 746
RTI Imp	65.0 - 106	°C	UL 746
RTI	65.0 - 106	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity			
23°C	1.0E+2 - 1.1E+16	ohms·cm	ASTM D257
23°C	1.0E+2 - 2.5E+16	ohms·cm	IEC 60093
Dielectric Strength (23°C)	40 - 70	kV/mm	ASTM D149
Dielectric Constant			
23°C	2.27 - 3.38		ASTM D150
23°C	2.30 - 2.40		IEC 60250
Dissipation Factor			
23°C	1.0E-4 - 1.3E-3		ASTM D150
23°C	2.0E-4 - 3.5E-3		IEC 60250
Flammability	Nominal Value	Unit	Test Method
Oxygen Index			
--	26 - 41	%	ASTM D2863
--	33 - 40	%	ISO 4589-2
Optical	Nominal Value	Unit	Test Method
Gloss	4 - 93		ASTM D2457
Refractive Index	1.525 - 1.530		ASTM D542

Transmittance	92.0	%	ASTM D1003
Haze	0.20 - 2.6	%	ASTM D1003
Chemical Resistance	Nominal Value	Unit	Test Method
HCl solution impregnation test		%	IEC 60811
NaOH solution impregnation test		%	IEC 60811
Oxalic acid impregnation test		%	IEC 60811
Hydrocarbon Impregnation Test		%	IEC 60811
Thermoset	Nominal Value	Unit	Test Method
Pot Life (23°C)	4.7 - 6.2	min	
Thermoset Mix Viscosity	40.0 - 1000	cP	ASTM D2393
Demold Time	37 - 180	min	
Injection	Nominal Value	Unit	
Drying Temperature	73.5 - 105	°C	
Drying Time	1.5 - 8.0	hr	
Hopper Temperature	95.0 - 145	°C	
Rear Temperature	150 - 280	°C	
Middle Temperature	155 - 280	°C	
Front Temperature	160 - 280	°C	
Nozzle Temperature	210 - 271	°C	
Processing (Melt) Temp	188 - 195	°C	
Mold Temperature	25.0 - 40.5	°C	
Injection Pressure	6.55 - 98.0	MPa	
Holding Pressure	5.17 - 113	MPa	
Back Pressure	0.689 - 12.5	MPa	
Injection instructions			
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Extrusion	Nominal Value	Unit	
Drying Temperature	55.0 - 110	°C	
Drying Time	2.0 - 3.5	hr	
Cylinder Zone 1 Temp.	96.6 - 183	°C	
Cylinder Zone 2 Temp.	98.0 - 193	°C	
Cylinder Zone 3 Temp.	80.0 - 193	°C	
Cylinder Zone 4 Temp.	149 - 192	°C	
Cylinder Zone 5 Temp.	109 - 206	°C	
Adapter Temperature	116 - 196	°C	
Melt Temperature	163 - 167	°C	
Die Temperature	157 - 218	°C	
Extrusion instructions			
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