

Generic MDPE

Medium Density Polyethylene

Generic

Message:

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This information is provided for comparative purposes only.

General Information			
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	0.933 - 0.942	g/cm ³	ASTM D792
23°C	0.934 - 0.949	g/cm ³	ISO 1183
--	0.929 - 0.953	g/cm ³	ASTM D1505
Melt Mass-Flow Rate (MFR)			
190°C/2.16 kg	0.040 - 5.4	g/10 min	ASTM D1238
190°C/2.16 kg	0.12 - 4.3	g/10 min	ISO 1133
Environmental Stress-Cracking Resistance (23°C)	6.00 - 5000	hr	ASTM D1693
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			
23°C	59 - 65		ASTM D2240
23°C	53 - 62		ISO 868
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
23°C	291 - 1070	MPa	ASTM D638
23°C	698 - 803	MPa	ISO 527-2
Tensile Strength			
Yield, 23°C	13.8 - 21.1	MPa	ASTM D638
Yield, 23°C	16.6 - 19.4	MPa	ISO 527-2
Fracture, 23°C	11.5 - 33.2	MPa	ASTM D638
Tensile Strain			
Yield, 23°C	9.0 - 10	%	ISO 527-2
Fracture, 23°C	390 - 910	%	ASTM D638
Fracture, 23°C	330 - 800	%	ISO 527-2
Flexural Modulus			
23°C	474 - 852	MPa	ASTM D790
23°C	588 - 900	MPa	ISO 178
Films	Nominal Value	Unit	Test Method
Film Thickness - Tested	13 - 63	µm	
secant modulus			ASTM D882
MD	145 - 811	MPa	ASTM D882

TD	155 - 1290	MPa	ASTM D882
Tensile Strength			
MD: Yield	12.4 - 21.4	MPa	ASTM D882
TD: Yield	19.1 - 23.3	MPa	ASTM D882
Yield, 23°C	14.3 - 24.0	MPa	ISO 527-3
MD: Fracture	23.4 - 57.6	MPa	ASTM D882
TD: Fracture	18.0 - 48.3	MPa	ASTM D882
Fracture, 23°C	26.0 - 65.8	MPa	ISO 527-3
23°C	47.4 - 57.8	MPa	ISO 527-3
Tensile Elongation			
MD: Fracture	290 - 900	%	ASTM D882
TD: Fracture	590 - 900	%	ASTM D882
Fracture, 23°C	450 - 710	%	ISO 527-3
Dart Drop Impact			
23°C	50 - 170	g	ASTM D1709
23°C	95 - 230	g	ISO 7765-1
Elmendorf Tear Strength			
MD	10 - 57	g	ASTM D1922
TD	40 - 1900	g	ASTM D1922
--	0.20 - 5.8	N	ISO 6383-2
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	76 - 650	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, not annealed	57.6 - 64.0	°C	ASTM D648
1.8 MPa, not annealed	41.0 - 42.0	°C	ASTM D648
Brittleness Temperature	-100 - -69.1	°C	ASTM D746
Vicat Softening Temperature			
--	114 - 126	°C	ASTM D1525
--	112 - 124	°C	ISO 306
Melting Temperature			
--	125 - 127	°C	
--	125 - 128	°C	ASTM D3418
--	123 - 127	°C	ISO 3146
CLTE - Flow	1.0E-4 - 2.8E-4	cm/cm/°C	ASTM D696
Optical	Nominal Value	Unit	Test Method
Gloss	5 - 90		ASTM D2457
Haze	6.2 - 10	%	ASTM D1003
Extrusion	Nominal Value	Unit	
Cylinder Zone 1 Temp.	140 - 205	°C	
Cylinder Zone 2 Temp.	160 - 205	°C	
Cylinder Zone 3 Temp.	174 - 205	°C	

Cylinder Zone 4 Temp.	195 - 205	°C
Cylinder Zone 5 Temp.	194 - 205	°C
Melt Temperature	195 - 214	°C
Die Temperature	199 - 211	°C

Extrusion instructions

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