Generic HDPE Copolymer

High Density Polyethylene Copolymer

Generic

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Technical Data

Product Description

This data represents typical values that have been calculated from all products classified as: Generic HDPE Copolymer

This information is provided for comparative purposes only.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density / Specific Gravity			
--	0.953 to 0.954	0.950 to 0.952 g/cm³	ASTM D792
--	0.943 to 0.958 g/cm³	0.943 to 0.958 g/cm³	ISO 1183
--	0.946 to 0.956 g/cm³	0.946 to 0.956 g/cm³	ASTM D1505
--	0.944 to 0.955 g/cm³	0.944 to 0.955 g/cm³	ASTM D4883
Melt Mass-Flow Rate (MFR)			
190°C/2.16 kg	0.060 to 11 g/10 min	0.060 to 11 g/10 min	ASTM D1238
190°C/2.16 kg	0.050 to 4.7 g/10 min	0.050 to 4.7 g/10 min	ISO 1133
Environmental Stress-Cracking Resistance (ESCR)	1.00 to 188 hr	1.00 to 188 hr	ASTM D1693
Mechanical	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Tensile Modulus			
--	34800 to 185000 psi	240 to 1280 MPa	ASTM D638
--	123000 to 176000 psi	850 to 1210 MPa	ISO 527-1
Tensile Strength			
Yield	3470 to 4100 psi	24.0 to 28.2 MPa	ASTM D638
Yield	3180 to 3930 psi	21.9 to 27.1 MPa	ISO 527-2
Break	1650 to 5120 psi	11.4 to 35.3 MPa	ASTM D638
Tensile Elongation			
Yield	8.9 to 12 %	8.9 to 12 %	ASTM D638
Yield	8.0 to 10 %	8.0 to 10 %	ISO 527-2
Break	480 to 1000 %	480 to 1000 %	ASTM D638
Break	200 to 1100 %	200 to 1100 %	ISO 527-2
Flexural Modulus			
--	109000 to 200000 psi	749 to 1380 MPa	ASTM D790
--	123000 to 232000 psi	850 to 1600 MPa	ISO 178
Impact	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Charpy Notched Impact Strength	1.2 to 7.1 ft·lb/in²	2.5 to 15 kJ/m²	ISO 179
Notched Izod Impact	0.32 to 2.4 ft·lb/in	17 to 130 J/m	ASTM D256
Notched Izod Impact (Area)	1.24 to 8.96 ft·lb/in²	2.60 to 18.8 kJ/m²	ASTM D256
Hardness	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Durometer Hardness			
--	60 to 68	60 to 68	ASTM D2240
--	57 to 66	57 to 66	ISO 868

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Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
66 psi (0.45 MPa), Unannealed	144 to 170 °F	62.1 to 76.4 °C	
264 psi (1.8 MPa), Unannealed	113 °F	44.8 to 45.1 °C	
Brittleness Temperature	-180 to -94.0 °F	-118 to -70.0 °C	ASTM D746
Vicat Softening Temperature			
--	250 to 262 °F	121 to 128 °C	ASTM D1525
--	253 to 262 °F	123 to 128 °C	ISO 306
Melting Temperature			
--	266 to 273 °F	130 to 134 °C	ISO 11357-3
--	262 to 271 °F	128 to 133 °C	ASTM D3418
--	268 to 270 °F	131 to 132 °C	ISO 3146

Injection	Nominal Value (English)	Nominal Value (SI)
Processing (Melt) Temp	401 to 448 °F	205 to 231 °C

Injection Notes

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Extrusion	Nominal Value (English)	Nominal Value (SI)
Melt Temperature	392 to 428 °F	200 to 220 °C

Extrusion Notes

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Notes

[1] Typical properties: these are not to be construed as specifications.

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