



JG Summit Petrochemical Corporation

EVALENE[®]

HIGH DENSITY POLYETHYLENE

Property	ASTM Test Method	Unit	BLOW MOLDING		BLOWN FILM			INJECTION MOLDING				MONOFILAMENT	PIPE										
			HB23551	HB33531	HF09522	HF14462	HF14522	HJ04601	HJ08601	HJ20571	HJ30541	HM10561	HP10441	HP17411									
Melt Index, 190°C/2.16 kg	D1238	g/10 min	0.26 ⁽¹⁾	0.39 ⁽¹⁾	0.06 ⁽¹⁾	0.15 ⁽¹⁾	0.15 ⁽¹⁾	4.0	8.0	20.0	30.0	1.0	0.08 ⁽¹⁾	0.18 ⁽¹⁾									
Flow Index, 190°C/21.6 kg	D1238	g/10 min	23	33	9	14	14	-	-	-	-	-	10	17									
Density	D1505	kg/m ³	955	953	952	946	952	960	960	957	954	956	944	941									
Tensile Yield Strength	*	MPa	28	25	25/24	28/30	27/29	26	25	24	23	24	24	21									
Tensile Break Strength	*	MPa	-	-	47/42	38/35	39/36	-	-	-	-	-	30	24									
Elongation at Break	*	%	>500	>500	>500/>500	>500/>500	>500/>500	>500	>500	350	>200	>500	>600	>500									
Tensile Modulus	**	MPa	1000	800	1150/1450	1000/1050	1200/1500	990	920	900	840	800	700	700									
Notched Izod Impact Strength	D256	J/m	-	-	-	-	-	160	80	40	36	-	-	-									
Elmendorf Tear Strength	D1992	g	-	-	10/65	15/50	18/15	-	-	-	-	-	-	-									
Dart Impact Strength	D1709A	g	-	-	160	120	90	-	-	-	-	-	-	-									
ESCR, F ₅₀	D1693	hours	-	50	-	-	-	-	-	-	-	-	>1000	>1000									
<p>* For Film grades: ASTM D882 using 25-micron blown film samples. Test speed: 500 mm/min.</p> <p>For Pipe grades: ASTM D638 using Type IV compression molded specimens as per ASTM D3350. Test speed: 50 mm/min.</p> <p>For Other grades: ASTM D638 using injection-molded \ specimens as per ASTM D4976. Test speed: 50 mm/min.</p>			Special Features		excellent drop impact properties & toughness			good ESCR and cycle time				good stretch, high tenacity		PE80 Pipe, excellent ESCR									
<p>** For Film grades: Same test method as in (*), except that testing rate is 25 mm/min.</p> <p>For Other grades: Same test method as in (*), except that testing rate is 5 mm/min.</p>			Typical Applications		Bottles for HIC, 0.2 - 16 Liter containers			Shopping and grocery bags				pallets, crates, rotomolded items		crates, cases, rotomolded items		toys, trays, caps		thin-walled injection molded houseware, caps		yarn, rope, nets		potable water, industrial, irrigation, sewage, corrugated pipes, electrical conduits	

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For Other grades: ASTM D638 using injection-molded \ specimens as per ASTM D4976. Test speed: 50 mm/min.

** For Film grades: Same test method as in (*), except that testing rate is 25 mm/min.

For Other grades: Same test method as in (*), except that testing rate is 5 mm/min.

(1) Product is controlled by Flow index. Melt index is estimated for customer use.

Conversions:

MPa x 10.2 = kg/cm²

MPa x 145 = psi

kg-cm/cm x 9.81 = J/m

kJ/m² x 10.2 = J/m (only if dimensions under notch are 3.2 x 10.16 mm)

All EVALENE HDPE grades comply with FDA 21CFR177.1520.

Since the conditions and circumstances in which the polymer may be used are beyond our control, JG Summit Petrochemical Corporation does not accept any liability regarding loss and damage which may result directly or indirectly from the use of this information.

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