



VINPOL™ HD0646

High Density Polyethylene

Melt Index: 6

Density: 0.946

VINPOL HD0646 is a high density polyethylene designed for injection molding with exceptional impact, warp and environmental stress crack resistance as well as enhanced processability. Typical applications include rigid packaging, consumer durables, closures and institutional seating.

Resin Property	Typical Value	Units	Test Method
Melt Index, 2.16 Kg at 190 °C	6	g/10 min	ASTM D-1238
Density	0.946	g/cm ³	ASTM D-792
Bulk Density	37-39 (593-625)	lb/ft ³ (kg/m ³)	ASTM D-1895
Tensile Stress at Yield, 50 mm/min, Type IV Specimen	3,430 (23.6)	psi (MPa)	ASTM D-638
Tensile Stress at Break, 50 mm/min, Type IV Specimen	2,150 (14.8)	psi (MPa)	ASTM D-638
Tensile Elongation at Yield, 50 mm/min, Type IV Specimen	12	%	ASTM D-638
Tensile Elongation at Break, 50 mm/min, Type IV Specimen	610	%	ASTM D-638
Tensile Modulus, 1% Secant, 50 mm/min, Type I Specimen	90,000 (621)	psi (MPa)	ASTM D-638
Tensile Young's Modulus	111,000 (765)	psi (MPa)	ASTM D-638
Flexural Modulus, 1% Secant, 12.5 mm/min	136,000 (938)	psi (MPa)	ASTM D-790
Flexural Modulus, 2% Secant, 12.5 mm/min	113,000 (779)	psi (MPa)	ASTM D-790
Flexural Young's Modulus	147,000 (1,010)	psi (MPa)	ASTM D-790
Notched Izod Impact Strength, 23°C	1 (53)	ft-lb/in (J/m)	ASTM D-256
Hardness, Shore D	68		ASTM D-2240
Vicat Softening Point	253 (123)	°F (°C)	ASTM D-1525
Low Temperature Brittleness, F ₅₀	<-105 (<-76)	°F (°C)	ASTM D-746
DTUL, 66psi, Unannealed	144 (62)	°F (°C)	ASTM D-648
Melting Temperature	262 (128)	°F (°C)	ASTM D-3418
Crystallization Temperature	236 (113)	°F (°C)	ASTM D-3418

Vinmar Polymers America cannot anticipate or control the many different conditions under which this information and/or product may be used. It does not guarantee the applicability or the accuracy of this information or the suitability of its products in any given situation. User of the material should make their own tests to determine the suitability of each such product for their particular purposes. The data listed herein falls within the normal range of product properties, but they should not be used to establish specification limits or used alone as the basis of design.

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