



VINPOL™ HD21H45

High Density Polyethylene

HLMI: 21

Density: 0.945

VINPOL HD21H45 is a hexene-based HDPE produced via gas phase technology and designed for non-pressure pipe applications, such as telecommunications pipe and drip irrigation pipe. This product combines good long-term hoop strength performance with outstanding toughness, even at low temperatures. It meets the requirements of the U.S. Food and Drug Administration as specified in 21 CFR 177.1520, covering safe use of polyolefin articles intended for direct food contact.

*Resin Property	Typical Value	Units	Test Method
Melt Index, 21.6 Kg at 190°C (HLMI)	21	g/10 min	ASTM D-1238
Density	0.945	g/cc	ASTM D-1505
Tensile Strength at Yield	2,800/19	psi (MPa)	ASTM D-638
Tensile Strength at Break	4,600 / 32	psi (MPa)	ASTM D-638
Tensile Elongation at Break	>600	%	ASTM D-638
Flexural Modulus, 1% Secant (0.5 in/min)	130,000 (896)	psi (MPa)	ASTM D-790
Notched Izod Impact Strength at 23°C	4.4 (0.24)	ft-lb/in (KJ/m)	ASTM D-256
Hardness	62	Shore D	ASTM D-2240
Vicat Softening Temperature	250 (121)	°F (°C)	ASTM D-1525
Heat Deflection Temperature at 66psi	145 (63)	°F (°C)	ASTM D-648

**Physical properties measured on compression molded specimens prepared according to Procedure C of ASTM D4703, Annex A1.*

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.

Vinmar Polymers America, LLC / 16825 Northchase Drive, Suite 1400, Houston, TX 77060
Phone: 281-902-0900 Fax: 281-260-8096

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