ExxonMobil Signature Polymers

ExxonMobil™ HD 4966HL

(Legacy name: ExxonMobil™ HDPE HD 4710.09)

High Density Polyethylene

Product Description

HD 4966HL is a high molecular weight and high density polyethylene resin for pressure pipe applications. It has combination of excellent long term hydrostatic strength and outstanding stress crack resistance. When HD 4966HL is used with an ExxonMobil approved carbon black masterbatch correctly, it is listed with Plastic Pipe Institute (PPI) as PE4710 and PE100. The ASTM D3350 Cell Classification for this compound is PE445574C. Please contact ExxonMobil Customer and Application Development Engineer or Sales Manager for PPI listing and NSF certification information.

General

Availability [1]	▪ North America		
Additive	▪ Antiblock: No	▪ Slip: No	▪ Thermal Stabilizer: Yes
Applications	▪ Pressure Pipe		
Revision Date	▪ 01/04/2024		

Resin Properties	Typical Value (English)		Typical Value (SI)		Test Based On
Density [2]	0.949	g/cm³	0.949	g/cm³	ASTM D1505
High Load Melt Index [2] (190°C/21.6 kg)	6.6	g/10 min	6.6	g/10 min	ASTM D1238
Melt Mass-Flow Rate (MFR) [2] (190°C/5.0 kg)	0.18	g/10 min	0.18	g/10 min	ASTM D1238

Thermal	Typical Value (English)		Typical Value (SI)		Test Based On
Deflection Temperature Under Load (DTUL) at 264psi - Unannealed	111	°F	44	°C	ASTM D648B

Molded Properties	Typical Value (English)		Typical Value (SI)		Test Based On
Tensile Strength at Yield	3500	psi	24	MPa	ASTM D638
Tensile Strength at Break	5400	psi	37	MPa	ASTM D638
Flexural Modulus - 2% Secant	140000	psi	980	MPa	ASTM D790B
Hydrostatic Design Basis					ASTM D2837
140°F (60.0°C)	1000	psi	6.89	MPa	
73.0°F (22.8°C)	1600	psi	11.0	MPa	
PENT	1000	hr	1000	hr	ASTM F1473

Additional Information

- Properties are based on compression molded plaques, ASTM D4703C.
- Tensile Strength at Yield and Elongation at Break tested using ASTM D638 Type IV, 2 in/min.
- Flexural Modulus tested used ASTM D790B, 0.5 in/min.

Legal Statement

Contact your ExxonMobil Chemical Customer Service Representative for potential food contact application compliance (e.g. FDA, EU, HPFB).

This product is not intended for use in medical applications and should not be used in any such applications.

Notes

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

[1] Product may not be available in one or more countries in the identified Availability regions. Please contact your Sales Representative for complete Country Availability.

[2] based on HD4966HL; all other properties are from HD4966HL and approved carbon black masterbatch

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For additional technical, sales and order assistance: www.exxonmobilchemical.com/ContactUs

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