Formolene® HP4000

High Density Polyethylene

Formosa Plastics Corporation, U.S.A.

Technical Data

Product Description

Formolene® HP4000 is a high performance copolymer that is designed for the most demanding requirements of nonpressure pipe applications. It has good long-term hoop strength performance, very high melt strength, and outstanding toughness even at low temperatures.

Formolene® HP4000 meets all requirements of ASTM D4976 - PE 235

Formolene® HP4000 meets the requirements of ASTM F 2160 for use in solid wall HDPE conduit based pipe.

General

Material Status	• Commercial: Active		
Literature [1]	• Technical Datasheet (English)		
Search for UL Yellow Card	• Formosa Plastics Corporation, U.S.A. • Formolene®		
Availability	• North America		
Features	• Copolymer • Good Melt Strength	• Good Toughness • High Density	• Low Temperature Toughness
Uses	• Conduit	• Piping	
Agency Ratings	• ASTM D 4976-PE235	• ASTM F 2160	• EC 1907/2006 (REACH)
Forms	• Pellets		
Processing Method	• Compression Molding		

Physical	Nominal Value	Unit	Test Method
Density	0.944	g/cm³	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	0.16	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance			
100% Igepal, Compression Molded, F50	> 1000	hr	ASTM D1693A
100% Igepal, Compression Molded, F50	> 1000	hr	ASTM D1693B
100% Igepal, Compression Molded, F50	> 1000	hr	ASTM D1693C
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength [3]			ASTM D638
Yield, Compression Molded	22.1	MPa	
Break, Compression Molded	34.5	MPa	
Tensile Elongation [3]			ASTM D638
Break, Compression Molded	> 500	%	
Flexural Modulus			
Compression Molded	965	MPa	ASTM D790
Compression Molded	758	MPa	ASTM D3350
Thermal	**Nominal Value**	**Unit**	**Test Method**
Brittleness Temperature	< -90.0	°C	ASTM D746

Notes

[1] These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

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

[3] Type IV, 51 mm/min