



Formolene® HP4000

Formosa Plastics Corporation, U.S.A. - High Density Polyethylene

Tuesday, November 5, 2019

General Information

Product Description

Formolene® HP4000 is a high performance copolymer that is designed for the most demanding requirements of non-pressure 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 and UL651A for use in solid wall HDPE conduit pipe.

Suggested Applications:

Telecommunications Conduit

Non-Pressure Pipe Applications

General

Material Status	• Commercial: Active		
Availability	• North America		
Features	• Copolymer • Good Melt Strength	• Good Toughness • High Density	• Low Temperature Toughness
Uses	• Conduit	• Piping	
Agency Ratings	• ASTM D4976-PE235	• ASTM F2160	• EC 1907/2006 (REACH)
Forms	• Pellets		
Processing Method	• Compression Molding		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	0.944	g/cm ³	ASTM D1505
Melt Mass-Flow Rate (190°C/2.16 kg)	0.14	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (ESCR)			
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 ² (Yield, Compression Molded)	3190	psi	ASTM D638
Tensile Strength ² (Break, Compression Molded)	4930	psi	ASTM D638
Tensile Elongation ² (Break, Compression Molded)	> 500	%	ASTM D638
Flexural Modulus			
Compression Molded	139000	psi	ASTM D790
Compression Molded	110000	psi	ASTM D3350
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	< -130	°F	ASTM D746

Notes

¹ Typical properties: these are not to be construed as specifications.

² Type IV, 2.0 in/min