



Formolene® HP4525

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

Tuesday, November 5, 2019

General Information

Product Description

Formolene® HP4525 is a high performance copolymer designed for non-pressure pipe applications. It has good long-term hoop strength performance and outstanding toughness even at low temperatures. Overall, it provides an excellent balance of stiffness, and processability in conduit pipe applications.

Formolene HP4525 meets the requirements of ASTM F2160, UL651A and NEMA TC-7. DP4525A also meets a minimum ASTM D3350 Cell Classification of 335430A.

General

Material Status	• Commercial: Active		
Availability	• North America		
Features	• Copolymer • Good Processability	• Good Stiffness • High Density	• High Toughness • Low Temperature Toughness
Uses	• Conduit	• Irrigation Applications	• Piping
Agency Ratings	• ASTM D3350 PE335430A • ASTM F2160	• NEMA TC-7 DP4525A • UL 651A	
Forms	• Pellets		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	0.948	g/cm ³	ASTM D1505
Melt Mass-Flow Rate			ASTM D1238
190°C/2.16 kg	0.30	g/10 min	
190°C/21.6 kg	20	g/10 min	
Environmental Stress-Cracking Resistance (ESCR)			
10% Igepal, F10	> 96.0	hr	ASTM D1693B
100% Igepal, F20	> 192	hr	ASTM D1693C
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ² (Break)	3630	psi	ASTM D638
Tensile Elongation ² (Break)	> 600	%	ASTM D638
Flexural Modulus - Tangent ³ (0.0394 in, 0.630 in Span)	120000	psi	ASTM D790
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	68		ASTM D2240
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	< -175	°F	ASTM D746

Notes

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

² Type IV, 2.0 in/min

³ 0.50 in/min