



Formosa Plastics®

Technical Data Sheet

Formolene® HDPE

Formolene HP4401

Melt Index – 0.11
Density – 0.944

(Produced using licensor formulation for HHM TR-480Z)*
High Density Hexene Copolymer

Formolene HP4401 is a high performance copolymer that is designed for the most demanding requirements of pressure pipe applications. It has good long-term hoop strength performance, very high melt strength, outstanding toughness even at low temperatures.

Formolene HP4401 meets all requirements of ASTM D4976 – PE 235.

When blended with the approved color concentrates, Formolene HP4401 has a cell class of 345464C per ASTM D3350, is listed by PPI as a PE3408 material and meets the requirements of NSF Standard 14/61 for use with potable water.

Suggested Applications

Potable water, Oil and gas gathering and distribution, Chemical, Industrial and mining, Sewer

Nominal Physical Properties

PROPERTY** (Natural Resin)	TEST METHOD	ENGLISH		SI	
		Unit	Value	Unit	Value
Density (Natural) (Black)	D1505	g/cc	0.944	g/cc	0.944
			0.955		0.955
Melt Index, Condition E, 190°C/2.16 kg (MI) Condition F, 190°C/21.6 kg (HLMI)	D1238	g/10 min.	0.11	g/10 min.	0.11
		g/10 min.	12.0	g/10 min.	12.0
Environmental Stress Crack Resistance (ESCR) Condition A, B, C (100% Igepal), F ₅₀	D1693	h	>1000	h	>1000
Tensile Yield Strength, @ Yield @ Break 2" (50 mm) per min.	D638	psi	3200	MPa	22
	Type IV	psi	5000	MPa	34
Ultimate Elongation, 2" (50 mm) per min.	D638 Type IV	%	>500	%	>500
Flexural Modulus	D3350	psi	110,000	MPa	760
	D790	psi	140,000	MPa	960
Brittleness Temperature	D746	°F	<-130	°C	<-90
Pent Slow Crack Growth	F1473	h	150	h	150

* Our licensor does not warrant or imply that this product meets their specifications for HHM TR 480Z

** Physical properties reported herein were determined on compression molded specimens prepared in accordance with Procedure C of ASTM D1928

THE NOMINAL PROPERTIES REPORTED HEREIN ARE TYPICAL OF THE PRODUCT BUT DO NOT REFLECT NORMAL TESTING VARIANCE AND THEREFORE SHOULD NOT BE USED FOR SPECIFICATION PURPOSES.

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EMS 35710

