



Formolene® E6210A

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

Tuesday, November 5, 2019

General Information

Product Description

Formolene® E6210A is a bimodal high molecular weight high density resin that is designed for the most demanding requirements of pressure pipe applications. The resin provides an excellent balance of physical properties and extrusion processability. When blended with the approved color concentrate Formolene® E6210A complies with the following industry standards:

- Cell Classification: 445574C per ASTM D3350
- Material Rating Designation
- Per ASTM standards E6210A is a PE 4710 resin with an HDB of 1,600 psi@73°F and 1,000 psi @ 140°F per PPI TR-4
- Per ISO standards E6210A is a PE 100 resin with an MRS 10 at 20°C. It meets the requirements for a PE 100 compound as qualified by ISO 9080 and ISO 12162.
- Meets NSF 14 and 61 for use with potable water systems.

Suggested Applications:

Potable Water; Oil and Gas Gathering and Distribution; Chemical, Industrial and Mining; and Sewer Systems

General

Material Status	• Commercial: Active		
Availability	• North America		
Features	• Bimodal Molecular Weight Distribution	• High Density	• High Molecular Weight
Uses	• Industrial Applications • Mining Applications	• Oil/Gas Applications • Piping	• Potable Water Applications
Agency Ratings	• ASTM D3350 PE445574C • ASTM PE4710	• EC 1907/2006 (REACH) • ISO PE 100	• NSF STD-14 • NSF STD-61
Forms	• Pellets		
Processing Method	• Extrusion	• Pipe Extrusion	

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density			ASTM D1505
Natural	0.948	g/cm ³	
Black	0.957	g/cm ³	
Melt Mass-Flow Rate			ASTM D1238
190°C/2.16 kg ²	0.040	g/10 min	
190°C/21.6 kg ³	6.7	g/10 min	
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ^{4, 5} (Yield)	> 3480	psi	ASTM D638
Tensile Elongation ^{4, 5} (Break)	> 600	%	ASTM D638
Flexural Modulus ⁶			ASTM D790
1% Secant : 0.0394 in, 0.630 in Span	> 135000	psi	
2% Secant : 0.0394 in, 0.630 in Span	> 115000	psi	
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (73°F, 0.00492 in)	9.2	ft-lb/in	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature ⁷	< -94.0	°F	ASTM D746A

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Thermal	Nominal Value	Unit	Test Method
Thermal Stability	500	°F	ASTM D3350
Additional Information	Nominal Value	Unit	Test Method
PENT	> 2000	hr	ASTM F1473

Notes

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

² MI

³ HLMI

⁴ Type IV, 2.0 in/min

⁵ Pigmented

⁶ 0.50 in/min

⁷ Type I