TUB121B Polyethylene Copolymer

TUB121B is a black high density bimodal polyethylene copolymer designed for extrusion of potable water, natural gas, industrial, and mining pipe. It is listed by the Plastics Pipe Institute (PPI TR-4, as both PE 4710 and PE 100) and is certified to ANSI/NSF Standard 14, ANSI/NSF Standard 61, CSA B137.1 and CSA B137.4.

Typical Properties[1]

	Values		ASTM
	English Units	SI Units	Method
Density (Natural)	–	0.9485 g/cc	**D4883**
Density (Black)	–	0.959 g/cc	**D792**
Melt Index 190°C/5.0 kg	–	0.30 g/10 min	**D1238**
Melt Index 190°C/ 21.6 kg	–	8.5 g/10 min	**D1238**
Compression Molded Sample			
Tensile Strength			**D638**
@ Yield (2 in/min)	3625 psi	25.0 MPa	
@ Break (2 in/min)	5500 psi	38.0 MPa	
Elongation			**D638**
@ Break (2 in/min)	>600%	>600%	
Flexural Modulus [2]	150,000 psi	1,035 MPa	**D790**
Notched Izod Impact Strength	9 ft-lbf/in	0.49 kJ/m	**D256**
Hardness (Shore D)	66	66	**D2240**
Brittleness Temperature	<-180 °F	<-118 °C	**D746**
Vicat Softening Point	259 °F	126 °C	**D1525**
Thermal Stability	428 °F min	220 °C min	**D2513/D3350**
Hydrostatic Design Basis			**D2837**
@ 23 °C	1600 psi	11.0 MPa	
@ 60 °C	1000 psi	6.9 MPa	
Minimum Required Strength	–	10.0 MPa	**ISO 9080**
Environmental Stress Crack Resistance [3]	>5000 hrs	>5000 hrs	**D1693**
Notch Tensile (PENT)	>10,000 hrs	>10,000 hrs	**F1473**
Carbon Black Concentration	2.3%	2.3%	**D1603**
Cell Classification	445574C	445576C	**D3350**
Oxidative Resistance Classification	CC3	CC3	**D3350**

[1] Typical properties will vary within specification limits.

[2] 2% Secant-Method 1

[3] Condition C

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