

TUB 121 Polyethylene Copolymer

TUB 121 (aka ELTEX[®] TUB 121, ELTEX[®] TUB 121 N2025, and ELTEX[®] TUB 121 N3000) is a black high density bimodal polyethylene copolymer designed for extrusion of potable water, natural gas, industrial, and mining pipe. It has NSF Standard 14 certification and complies with ANSI/NSF Standard 61 health effects requirements. TUB 121 is recognized by the Plastic Pipe Institute as having a pipe material designation code of PE 4710 and PE 100.

Typical Properties¹

	Values		ASTM Method
	English Units	SI Units	
Density (Natural)	—	0.9485 g/cc	D 4883
Density (Black)	—	0.959 g/cc	
Melt Index ²	—	8.0 g/10 min	D 1238
Tensile Strength			
@ Yield (2 in/min)	3625 psi	25.0 MPa	D 638
@ Break (2 in/min)	5500 psi	38.0 MPa	D 638
Elongation			
@ Break (2 in/min)	>600%	>600%	D 638
Flexural Modulus ³	150,000 psi	1,035 MPa	D 790
Notched Izod Impact Strength	9 ft-lbf/in	0.49 kJ/m	D 256
Hardness (Shore D)	66	66	D 2240
Brittleness Temperature	<-180 °F	<-118 °C	D 746
Vicat Softening Point	259 °F	126 °C	D 1525
Thermal Stability	428 °F min	220 °C min	D2513/D3350
Hydrostatic Design Basis			
@ 23 °C	1600 psi	11.0 MPa	D 2837
@ 60 °C	1000 psi	6.9 MPa	D 2837
Minimum Required Strength	—	10.0 MPa	ISO 9080
Environmental Stress Crack Resistance ⁴	>5000 hrs	>5000 hrs	D 1693
Notch Tensile (PENT)	>10,000 hrs	>10,000 hrs	F 1473
Carbon Black Concentration	2.3%	2.3%	D 1603
Cell Classification	445574C	445576C	D 3350

¹ Typical properties will vary within specification limits.

² 190° C/21,600 g

³ 2% Secant-Method 1

⁴ Condition C

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