

TUB121N Polyethylene Copolymer

TUB121N is a natural bimodal high density polyethylene copolymer designed for extrusion of potable water, natural gas, industrial and mining pipe. When blended with an approved black concentrate, the resulting formulation (“TUB121”) is listed by the Plastics Pipe Institute (PPI TR-4, as both PE 4710 and PE 100) and is certified to ANSI/NSF Standards 14 and 61, CSA B137.1 and CSA B137.4.

Typical Properties¹

	Values		ASTM Method
	English Units	SI Units	
Resin			
Density	—	0.949 g/cc	D4883
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 (2 in/min)			D638
@ Yield	3,500 psi	24.1 MPa	
@ Break	4,400 psi	30.3 MPa	
Elongation (2 in/min)			D638
@ Yield	10.4 %	10.4 %	
@ Break	>600 %	>600 %	
Flexural Modulus			D790A
2% Secant	130,000 psi	900 MPa	
Notched Izod Impact Strength	12 ft-lbf/in	63 kJ/m ²	D256
Hardness			D2240
Shore D	64	64	
Vicat Softening Point	259 F	126 C	D1525
Brittleness Temperature	<-180 °F	<-118 °C	D746
Environmental Stress Crack Resistance			D1693
Condition C, 100 % Igepal, F50 (hrs.)	>5,000	>5,000	
Hydrostatic Design Basis ²			D2837
@ 23 C	1,600 psi	11.0 MPa	
@ 60 C	1,000 psi	6.9 MPa	
Minimum Required Strength (MRS) ⁴	1,450 psi	10.0 MPa	ISO 9080/12162
Notch Tensile (PENT) (hrs.)	>10,000	>10,000	F1473
Oxidation Induction Time			D3895
@ 210 C	>20 min	>20 min	
Thermal Stability	>464 F	>240 C	D3350
Cell Classification	445574C ²	445576C ²	D3350
Oxidative Resistance Classification	CC3	CC3	D3350

¹ Typical properties will vary and are not to be used for specification purposes.