

# TUB 121N Polyethylene Copolymer

TUB121N is a natural high density bimodal polyethylene copolymer designed for extrusion of potable water, natural gas, industrial, and mining pipe. When blended with an approved black concentrate, the resulting TUB 121 formulation 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. The ASTM D3350 Cell Classification for this resin is: PE445576A

## Typical Properties<sup>1</sup>

	Values		ASTM Method
	English Units	SI Units	
Density (Natural)	–	0.9485 g/cc	D 4883
Melt Index <sup>2</sup>	–	8.5 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 <sup>3</sup>	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 <sup>5</sup>			
@ 23 °C	1600 psi	11.0 MPa	D 2837
@ 60 °C	1000 psi	6.9 MPa	D 2837
Minimum Required Strength <sup>5</sup>	–	10.0 MPa	ISO 9080
Environmental Stress Crack Resistance <sup>4</sup>	>5000 hrs	>5000 hrs	D 1693
Notch Tensile (PENT)	>10,000 hrs	>10,000 hrs	F 1473

<sup>1</sup> Typical properties will vary within specification limits.

<sup>2</sup> 190° C/21,600 g

<sup>3</sup> 2% Secant-Method 1

<sup>4</sup> Condition C

<sup>5</sup> Based upon black compound TUB 121

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Olefins & Polymers USA



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## Regulatory Information

The product and uses described herein may require global product registrations and notifications for chemical inventory listings, or for use in food contact or medical devices. For further information, please refer to the Regulatory Position Statement (RPS) online at [www.ineos-op.com](http://www.ineos-op.com), or call + 1-800-527-5419.

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The Material Safety Data Sheet for this product contains shipping descriptions and should be consulted, before transportation, as a reference in determining the proper shipping description. If the material shipped by INEOS is altered or modified, different shipping descriptions may apply and the MSDS of the original material should not be used.

For additional information, samples, pricing and availability, please contact:

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