

# TUB121NTW Polyethylene Copolymer

TUB121NTW is a natural high density bimodal polyethylene copolymer designed for extrusion of large diameter, thick wall piping for potable water, industrial and mining applications. When blended with an approved black concentrate, the resulting formulation (“TUB 121”) is listed by the Plastics Pipe Institute (in PPI TR-4, as PE4710 and PE100) and is certified to ANSI/NSF Standard 14.

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

	Values		ASTM Method
	English Units	SI Units	
<b>Resin</b>			
Density	—	0.949 g/cc	D4883
Melt Index 190°C/5.0 kg	—	0.25 g/10 min	D1238
Melt Index 190°C/ 21.6 kg	—	8 g/10 min	D1238
<b>Compression Molded Sample</b>			
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 %	10 %	
@ Break	>600 %	>600 %	
Flexural Modulus			D790A
2% Secant Method	130,000 psi	900 MPa	
Notched Izod Impact Strength	12 ft-lbf/in	63 kJ/m <sup>2</sup>	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 <sup>2</sup>			D2837
@ 23 C	1,600 psi	11.0 MPa	
@ 60 C	1,000 psi	6.9 MPa	
Minimum Required Strength (MRS) <sup>2</sup>	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	D 3350
Cell Classification	445574C <sup>2</sup>	445576C <sup>2</sup>	D 3350
Oxidative Resistance Classification	CC3	CC3	D3350

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<sup>1</sup> Typical properties will vary and are not to be used for specification purposes.

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<sup>2</sup> Blended with approved black concentrate. Contact INEOS Technical Service for a list of approved concentrates.

## 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, call +1-800-527-5419.

## Health and Safety Information

The product described herein may require precautions in handling and use because of toxicity, flammability, or other consideration. The Material Safety Data Sheet (MSDS) contains the available product health and safety information for this material and can be found at [www.ineos-op.com](http://www.ineos-op.com). Before using any material, a customer is advised to consult the MSDS for the product under consideration for use.

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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