INEOS
Olefins & Polymers USA

TUB121N

POLYETHYLENE COPOLYMER

TECHNICAL DATASHEET

Product Description

TUB121N is a natural bimodal HDPE grade designed for extrusion of potable water, natural gas, industrial and mining pipe. When blended with an approved black concentrate, the resulting formulation[1] is listed in PPI TR-4 as both PE4710 and PE100 and is certified to NSF/ANSI Standard 14, as well as CSA B137.1 and CSA B137.4.

Typical Properties[2]

Property	English Units	SI Units	ASTM Method
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 Specimens			
Tensile Strength @ Yield	3,500 psi	24 MPa	D638
Tensile Elongation @ Break	>600 %	>600 %	D638
Flexural Modulus, 2% Secant Method	130,000 psi	900 MPa	D790A
Brittleness Temperature	<-180 °F	<-118 °C	D746
Notch Tensile (PENT)	>10,000 hrs	>10,000 hrs	F1473
Cell Classification	445574C[3]	445574C[3]	D3350
Pipe			
Hydrostatic Design Basis (HDB) @ 23°C @ 60°C	 1,600 psi 1,000 psi	 11 MPa 6.9 MPa	D2837
Minimum Required Strength (MRS)	---	10 MPa	ISO 9080
Oxidative Resistance Classification	CC3	CC3	D3350
Rapid Crack Propagation Resistance (0°C)[4] S4 Critical Pressure ($P_{c,S4}$) Full Scale Critical Pressure ($P_{c,FS}$)[5]	 >145 psig >560 psig	 >10 bar >38.6 bar	ISO 13477

[1] Under compound name *TUB121*
[2] Typical properties will vary and are not to be used for specifications.
[3] Pipe extruded from blend of TUB121N with approved black concentrate. Contact INEOS Technical Service for a list of approved concentrates.
[4] Pipe Size: 12-in diameter, SDR 11
[5] Calculated per ISO 13477 correlation factor: $P_{C,FS,bar} = 3.6P_{C,S4,bar} + 2.6$

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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, or 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 Safety Data Sheet (SDS) contains the available product health and safety information for this material and can be found at www.ineos-op.com. Before using any material, a customer is advised to consult the SDS for the product under consideration for use.

The 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 O&P is altered or modified, different shipping descriptions may apply and the SDS of the original material should not be used.

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