

TUB121NTW

POLYETHYLENE COPOLYMER

TECHNICAL DATASHEET

Product Description

TUB121NTW is a natural bimodal HDPE grade 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 formulation¹ is listed in PPI TR-4 as PE4710 and PE100 and is certified to NSF/ANSI Standard 14, CSA B137.1 and CSA B137.4.

Typical Properties²

Property	English Units	SI Units	ASTM Method
Resin			
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)		8.0 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
Pipe³			
Hydrostatic Design Basis (HDB)			D2837
@ 23°C (73°F)	1,600 psi	11 MPa	
@ 60°C (140°F)	1,000 psi	6.9 MPa	
Minimum Required Strength (MRS)	---	10 MPa	ISO 9080
Oxidative Resistance Classification	CC3	CC3	D3350
Rapid Crack Propagation Resistance (0°C) ⁴			ISO 13477
S4 Critical Pressure (P _{c, S4})	>145 psig	>10 bar	
Full Scale Critical Pressure (P _{c, FS}) ⁵	>560 psig	>38.6 bar	

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: 24-in diameter, SDR 11

⁵ Calculated per ISO 13477 correlation factor: P_{c,FS,bar} = 3.6P_{c,S4,bar} + 2.6