

# TUB121GN

POLYETHYLENE COPOLYMER

## TECHNICAL DATASHEET

### Product Description

TUB121GN is a natural HDPE grade designed for extrusion of potable water, natural gas, industrial, and mining pipe. When blended with an approved black concentrate, the resulting formulation<sup>1</sup> is listed in PPI TR-4 as both PE4710 and PE100 and is certified to NSF/ANSI Standard 14, CSA B137.1 and CSA B137.4.

### Typical Properties<sup>2</sup>

Property	English Units	SI Units	ASTM Method
<b>Resin</b>			
Density		0.949 g/cc	D4883
Melt Index (190°C/5.0 kg)		0.24 g/10 min	D1238
Melt Index (190°C/21.6 kg)		8.5 g/10 min	D1238
<b>Compression Molded Specimens</b>			
Tensile Stress @ 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 <sup>3</sup>	445574C <sup>3</sup>	D3350
<b>Pipe<sup>3</sup></b>			
Hydrostatic Design Basis (HDB)			D2837
@ 23°C	1,600 psi	11 MPa	
@ 60°C	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) <sup>4</sup>			ISO 13477
S4 Critical Pressure (P <sub>c, S4</sub> )	>145 psig	>10 bar	
Full Scale Critical Pressure (P <sub>c, FS</sub> ) <sup>5</sup>	>560 psig	>38.6 bar	

<sup>1</sup> Under compound name TUB121

<sup>2</sup> Typical properties will vary and are not to be used for specifications

<sup>3</sup> Pipe extruded from blend of TUB121N with approved black concentrate. Contact INEOS Technical Service for a list of approved concentrates.

<sup>4</sup> Pipe Size: 12-in diameter, SDR 11

<sup>5</sup> Calculated per ISO 13477 correlation factor: P<sub>c,FS,bar</sub> = 3.6P<sub>c,S4,bar</sub> + 2.6