

INEOS HDPE TUB 121N

High Density Polyethylene Copolymer
INEOS Olefins & Polymers USA

Technical Data

Product Description

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

General

Material Status	• Commercial: Active		
Literature ¹	• Processing - Injection Molding (English) • Technical Datasheet (English)		
Search for UL Yellow Card	• INEOS Olefins & Polymers USA		
Availability	• North America		
Features	• Copolymer	• High Density	
Uses	• Piping		
Agency Ratings	• ASTM D 3350 PE445574A • NSF 14	• NSF 61 • PPI PE-100	• PPI PE-4710
RoHS Compliance	• Contact Manufacturer		
Forms	• Pellets		
Processing Method	• Extrusion	• Pipe Extrusion	

Physical	Nominal Value Unit	Test Method
Density ³	0.949 g/cm³	ASTM D4883
Melt Mass-Flow Rate (MFR) (190°C/21.6 kg)	8.5 g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance	> 5000 hr	ASTM D1693C

Mechanical	Nominal Value Unit	Test Method
Tensile Strength		ASTM D638
Yield ⁴	25.0 MPa	
Break ⁵	38.0 MPa	
Tensile Elongation ⁴ (Break)	> 600 %	ASTM D638
Flexural Modulus - 2% Secant ⁶	1040 MPa	ASTM D790
Hydrostatic Design Basis		ASTM D2837
23°C	11.0 MPa	
60°C	6.90 MPa	

Impact	Nominal Value Unit	Test Method
Notched Izod Impact	480 J/m	ASTM D256

Hardness	Nominal Value Unit	Test Method
Durometer Hardness (Shore D)	66	ASTM D2240

Thermal	Nominal Value Unit	Test Method
Brittleness Temperature	< -118 °C	ASTM D746
Vicat Softening Temperature	126 °C	ASTM D1525
Thermal Stability	220 °C	ASTM D2513

Additional Information	Nominal Value Unit	Test Method
Minimum Required Strength	10.0 MPa	ISO 9080
PENT - Notch Tensile	> 10000 hr	ASTM F1473