INTREPID™ 2498 NT

Bimodal Polyethylene Resin

The Dow Chemical Company

Message:

INTREPID™ 2498 NT Bimodal Polyethylene Resin is produced using UNIPOL™ II process technology. This product is intended for use in industrial piping system where extreme conditions such as high pressures, elevated temperatures and aggressive chemicals or hydrocarbons exist. Suitable uses include oil & gas field pipelines, gas distribution pipelines, and other industrial applications.
Industrial Standards Compliance:
ASTM D 3350: cell classification
Black - PE445576C (MRS) (See NOTES 1)
Black - PE445574C (HDB) (See NOTES 1)
Plastics Pipe Institute (PPI): TR-4
Black Pipe - INTREPID 2498 BK (See NOTES 1)
ISO PE100 pipe grade - MRS 10 @ 20°C;
ASTM PE4710 pipe grade - 1600 psi HDB and 1000 psi HDS @ 73°F, and 1000 psi HDB @ 140°F
NOTES: (1) The first five numbers of the cell classification are based on natural resin. The last number and letter are based on black resin (natural resin plus 6.5% DFNF-0092 BK).

General Information			
Additive	Processing Aid		
Agency Ratings	ASTM D 3350 PE445574C ASTM D 3350 PE445576C ASTM PE4710 ISO PE 100 PPI TR-4		
Appearance	Natural Color		
Forms	Pellets		
Processing Method	Profile Extrusion		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity			ASTM D792
Natural	0.949	g/cm³	
Black [1]	0.959	g/cm³	
Melt Mass-Flow Rate (MFR)			ASTM D1238
190°C/2.16 kg	0.080	g/10 min	
190°C/21.6 kg	7.0	g/10 min	
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength [2] (Yield)	> 24.1	MPa	ASTM D638
Tensile Elongation [3] (Break)	> 500	%	ASTM D638
Flexural Modulus	1030	MPa	ASTM D790B
Creep Rupture Strength - 1798 psi (12.4 MPa) (20°C)	> 200	hr	ISO 1167
Hydrostatic Strength [4]			ISO 4427
1798 psi (12.4 MPa) : 20°C	> 200	hr	

725 psi (5.0 MPa) : 80°C	> 1000	hr	
Resistance to Rapid Crack Propagation, Pc			
Calculated, Full Scale : 0°C [5]	> 46.0	bar	ISO 13478
S-4 : 0°C [6]	> 12.0	bar	ISO 13477
Resistance to Rapid Crack Propagation, Tc - S-4 @ 10 bar [7]	< -17	°C	ISO 13477
Resistance to Short-Time Hydraulic Pressure	> 27.6	MPa	ASTM D1599
Slow Crack Growth PENT [8]	> 10000	hr	ASTM F1473
Stress Crack Resistance - Pipe notch (80°C) [9]	> 1000	hr	ISO 13479
Thermal Stability	> 220	°C	ASTM D3350

Impact	Nominal Value	Unit	Test Method
Notched Izod Impact [10] (23°C)	490	J/m	ASTM D256A

Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature [11]	< -75.0	°C	ASTM D746A

NOTE	
1.	Natural resin extruded under proper conditions with carbon black masterbatch DFNF-0092 (6.5%).
2.	Compression molded parts prepared according to ASTM D 4703 Procedure C unless otherwise noted in the test method. Properties will vary with changes in molding conditions and aging time.
3.	Compression molded parts prepared according to ASTM D 4703 Procedure C unless otherwise noted in the test method. Properties will vary with changes in molding conditions and aging time.
4.	Natural resin extruded under proper conditions with carbon black masterbatch DFNF-0092 (6.5%).
5.	Calculated value, determined by the equation in ISO 4437 based on S-4 test data. Pipe diameter of 10 inch IPS (25.4 cm) and Standard Diameter Ratio (SDR) 11
6.	Pipe diameter of 10 inch IPS (25.4 cm) and Standard Diameter Ratio (SDR) 11.
7.	Pipe diameter of 10 inch IPS (25.4 cm) and Standard Diameter Ratio (SDR) 11.

8.	Compression molded parts prepared according to ASTM D 4703 Procedure C unless otherwise noted in the test method. Properties will vary with changes in molding conditions and aging time.
9.	133 psi (0.92 MPa)
10.	Compression molded parts prepared according to ASTM D 4703 Procedure C unless otherwise noted in the test method. Properties will vary with changes in molding conditions and aging time.
11.	Compression molded parts prepared according to ASTM D 4703 Procedure C unless otherwise noted in the test method. Properties will vary with changes in molding conditions and aging time.

Recommended distributors for this material

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