



DOWLEX™ IP 40 Polyethylene Resin

Overview

- High Density Polyethylene Resin (HDPE)
- For food container applications
- Excellent processability and impact resistance
- Complies with U.S. FDA 21 CFR 177.1520 (c) 3.2a
- Complies with Canadian HPFB No Objection (With Limitations)
- Consult the regulations for complete details.

DOWLEX™ IP 40 Polyethylene Resin is an Improved Processing high density resin designed to offer the excellent processing and impact resistance required for food container applications. This resin was designed by optimizing the breadth, shape and peak molecular weight, and has demonstrated both excellent impact and processability over a wide range of conditions.

Additive

- Antiblock: No
- Slip: No
- Processing Aid: No

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.952 g/cm ³	0.952 g/cm ³	ASTM D792
Base Density ¹	0.952 g/cm ³	0.952 g/cm ³	Dow Method
Melt Index (190°C/2.16 kg)	40 g/10 min	40 g/10 min	ASTM D1238
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength			ASTM D638
Yield	3700 psi	25.5 MPa	
Break	3900 psi	26.9 MPa	
Tensile Elongation			ASTM D638
Yield	3.0 %	3.0 %	
Break	10 %	10 %	
Flexural Modulus - 2% Secant	145000 psi	1000 MPa	ASTM D790B
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Impact Strength ²	40.0 ft-lb/in ²	84.1 kJ/m ²	ASTM D1822
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Durometer Hardness (Shore D)	56	56	ASTM D2240
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
66 psi (0.45 MPa), Unannealed	156 °F	68.9 °C	
Brittleness Temperature	< -105 °F	< -76.1 °C	ASTM D746
Vicat Softening Temperature	255 °F	124 °C	ASTM D1525
Melting Temperature (DSC)	262 °F	128 °C	Dow Method
Peak Crystallization Temperature (DSC)	243 °F	117 °C	Dow Method

Additional Information

Plaque molded and tested in accordance with ASTM D4976.

Notes

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

¹ Base density is estimated using the assumption that every 1000 ppm of antiblock in the finished product raises the density of the polymer by 0.0006 g/cm³. Base density is the estimated density of the polymer if it did not contain any antiblock.

² Type S

