

DOWLEX™ IP 41

Polyethylene Resin

Overview

- High Density Polyethylene Resin (HDPE)
- For food containers, overcaps and general purpose applications
- ESCR processability and rigidity

Complies with:

- U.S. FDA 21 CFR 177.1520 (c) 3.2a
- U.S. FDA-DMF
- Canadian HPFB No Objection (With Limitations)

Consult the regulations for complete details.

DOWLEX™ IP 41 Polyethylene Resin is an Improved Processing high density resin designed to offer excellent processability and rigidity for food containers, overcaps and other general purpose applications. DOWLEX IP 41 resin balances peak molecular weight with a proprietary, optimized molecular weight distribution and a slightly higher density for excellent rigidity. This resin has demonstrated excellent processability over a wide range of processing conditions.

Additive

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

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.956 g/cm ³	0.956 g/cm ³	ASTM D792
Base Density ¹	0.956 g/cm ³	0.956 g/cm ³	Dow Method
Melt Index (190°C/2.16 kg)	42 g/10 min	42 g/10 min	ASTM D1238
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength			ASTM D638
Yield	4200 psi	29.0 MPa	
Break	4300 psi	29.6 MPa	
Tensile Elongation			ASTM D638
Yield	5.0 %	5.0 %	
Break	10 %	10 %	
Flexural Modulus - 2% Secant	162000 psi	1120 MPa	ASTM D790B
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Impact Strength ²	30.0 ft·lb/in ²	63.0 kJ/m ²	ASTM D1822
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Durometer Hardness (Shore D)	58	58	ASTM D2240
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
66 psi (0.45 MPa), Unannealed	149 °F	65.0 °C	
Brittleness Temperature	-4.00 °F	-20.0 °C	ASTM D746
Vicat Softening Temperature	259 °F	126 °C	ASTM D1525
Melting Temperature (DSC)	264 °F	129 °C	Dow Method
Peak Crystallization Temperature (DSC)	244 °F	118 °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

