

Technical Information
DOWLEX™ IP 10
Polyethylene Resin



Overview

- High Density Polyethylene Resin (HDPE)
- For reusable cases
- Excellent processability, easier flow
- Complies with U.S. FDA 21 CFR 177.1520 (c) 3.2a
- Complies with Canadian HPFB No Objection (With Limitations)
- Complies with EU, No 10/2011
- Consult the regulations for complete details.

DOWLEX™ IP 10 Polyethylene Resin is an Improved Processing high density resin specifically designed for reusable case applications including: poultry, fast food, automotive, retail, fresh produce, beverages, food service and chemicals, including plastics. Excellent processability is achieved with this resin due to its easy flow at low temperatures.

Additive

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

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.960 g/cm ³	0.960 g/cm ³	ASTM D792
Base Density ¹	0.960 g/cm ³	0.960 g/cm ³	Dow Method
Melt Index (190°C/2.16 kg)	10 g/10 min	10 g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (ESCR)			ASTM D1693
122°F (50°C), 100% Igepal, F50	8.00 hr	8.00 hr	
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength			ASTM D638
Yield	4200 psi	29.0 MPa	
Break	2700 psi	18.6 MPa	
Tensile Elongation			ASTM D638
Yield	7.0 %	7.0 %	
Break	1200 %	1200 %	
Flexural Modulus - 2% Secant	168000 psi	1160 MPa	ASTM D790B
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Impact Strength ²	50.0 ft-lb/in ²	105 kJ/m ²	ASTM D1822
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Durometer Hardness (Shore D)	55	55	ASTM D2240
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
66 psi (0.45 MPa), Unannealed	178 °F	81.1 °C	
Brittleness Temperature	< -150 °F	< -101 °C	ASTM D746
Vicat Softening Temperature	266 °F	130 °C	ASTM D1525
Melting Temperature (DSC)	270 °F	132 °C	Dow Method
Peak Crystallization Temperature (DSC)	247 °F	119 °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

