



DOWLEX™ IP 40

The Dow Chemical Company - Polyethylene Resin

Tuesday, November 5, 2019

General Information

Product Description

- 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.

General

Material Status	• Commercial: Active		
Availability	• Latin America	• North America	
Additive	• Antiblock: No	• Processing Aid: No	• Slip: No
Agency Ratings	• FDA 21 CFR 177.1520(c) 3.2a • HPFB (Canada) No Objection ¹		
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties²

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.954		ASTM D792
Melt Mass-Flow Rate (190°C/2.16 kg)	40	g/10 min	ASTM D1238
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength (Yield)	3700	psi	ASTM D638
Tensile Strength (Break)	3900	psi	ASTM D638
Tensile Elongation (Yield)	3.0	%	ASTM D638
Tensile Elongation (Break)	10	%	ASTM D638
Flexural Modulus - 2% Secant	145000	psi	ASTM D790B
Impact	Nominal Value	Unit	Test Method
Tensile Impact Strength ³	40.0	ft-lb/in ²	ASTM D1822
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	56		ASTM D2240
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	156	°F	ASTM D648
Brittleness Temperature	< -105	°F	ASTM D746
Vicat Softening Temperature	255	°F	ASTM D1525
Melting Temperature (DSC)	262	°F	Internal Method
Peak Crystallization Temperature (DSC)	243	°F	Internal Method

Additional Information

Plaque molded and tested in accordance with ASTM D4976.

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Notes

¹ With limitations

² Typical properties: these are not to be construed as specifications.

³ Type S