DOWLEX™ IP 40

Polyethylene Resin

The Dow Chemical Company

Technical Data

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 Polyethyelne 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	
Literature [1]	• Technical Datasheet	
Search for UL Yellow Card	• The Dow Chemical Company	
Availability	• Latin America	• North America
Agency Ratings	• FDA 21 CFR 177.1520(c) 3.2a	• HPFB (Canada) No Objection [2]
Forms	• Pellets	
Processing Method	• Injection Molding	
Multi-Point Data	• Viscosity vs. Shear Rate (ASTM D3835)	

Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.952	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	40	g/10 min	ASTM D1238
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength			ASTM D638
Yield	25.5	MPa	
Break	26.9	MPa	
Tensile Elongation			ASTM D638
Yield	3.0	%	
Break	10	%	
Flexural Modulus - 2% Secant	1000	MPa	ASTM D790B
Impact	**Nominal Value**	**Unit**	**Test Method**
Tensile Impact Strength [4]	84.1	kJ/m²	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			ASTM D648
0.45 MPa, Unannealed	68.9	°C	
Brittleness Temperature	< -76.1	°C	ASTM D746
Vicat Softening Temperature	124	°C	ASTM D1525
Melting Temperature (DSC)	128	°C	Internal Method
Peak Crystallization Temperature (DSC)	117	°C	Internal Method

Additional Information

Plaque molded and tested in accordance with ASTM D4976.