



DOWLEX™ IP 10 Polyethylene Resin

Overview

- High Density Polyethylene Resin (HDPE)
- For reusable cases, injection molding, caps and closures
- 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 injection processability is achieved with this resin due to its easy flow at low temperatures. Excellent stiffness in this resin is useful for lightweight caps and closures applications.

Additive

- Antiblock: No
- Slip: No
- Processing aid: No

Properties¹

Physical	Nominal Value (English)	Unit	Nominal Value (SI)	Unit	Test Method ²
Density	0.960	g/cm ³			ASTM D792
Melt Index (190°C/2.16 kg)	10	g/10 min			ASTM D1238
Environmental Stress-Cracking Resistance (ESCR) 122°F (50°C), 100% Igepal, F50	8.00	hr			ASTM D1693
Mechanical	Nominal Value (English)	Unit	Nominal Value (SI)	Unit	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	%			
Break	1200	%			

1. These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.
2. ASTM: American Society for Testing and Materials



Properties (Cont.)

Mechanical	Nominal Value (English)	Unit	Nominal Value (SI)	Unit	Test Method
Flexural Modulus – 2% Secant	168000	psi	1160	MPa	ASTM D790B
Impact	Nominal Value (English)	Unit	Nominal Value (SI)	Unit	Test Method
Tensile Impact Strength ³	50.0	ft-lb/in ²	105	kJ/m ²	ASTM D1822
Hardness	Nominal Value (English)	Unit	Nominal Value (SI)	Unit	Test Method
Durometer Hardness (Shore D)	55		55		ASTM D2240
Thermal	Nominal Value (English)	Unit	Nominal Value (SI)	Unit	Test Method
Deflection Temperature Under Load 66 psi (0.45 MPa), Unannealed	178	°F	81.1	°C	ASTM D648
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.					

