



Adflex Q 402 F

Advanced Polyolefin

Product Description

Adflex Q 402 F is a reactor TPO (thermoplastic polyolefin) manufactured using LyondellBasell's proprietary *Catalloy* process technology. It is suitable for air quenched blown film applications.

For regulatory compliance information, see the *Adflex Q 402 F* Product Stewardship Bulletin (PSB).

Product Characteristics

Status	Commercial: Active
Test Method used	ISO
Availability	North America, Asia-Pacific, Australia/NZ, Africa-Middle East, Latin America
Processing Methods	Blown Film
Features	Autoclavable, High Heat Resistance , Good Puncture Resistance , Good Tear Strength
Typical Customer Applications	Blown Film, Film

Typical Properties	Method	Value	Unit
Physical			
Density (Method A)	ISO 1183	0.89	g/cm ³
Melt flow rate (MFR) (230 °C/ 2.16 kg)	ISO 1133	0.65	g/10 min
Mechanical			
Tensile Stress at Break (23 °C)	ISO 527-1, -2	21	MPa
Tensile Stress at Yield (23 °C)	ISO 527-1, -2	15	MPa
Tensile Strain at Break (23 °C)	ISO 527-1, -2	>800	%
Tensile Strain at Yield (23 °C)	ISO 527-1, -2	27	%
Flexural modulus (23 °C)	ISO 178	480	MPa
Impact			
Notched izod impact strength	ISO 180		
(- 40°C, Type 1, Notch A)		4	kJ/m ²
(23°C, Type 1, Notch A)		60	kJ/m ²
Hardness			
Shore hardness D	ISO 868/ASTM D 2240	49	
<i>Note: 15 seconds</i>			
Thermal			
Heat deflection temperature B (0.45 MPa) Unannealed	ISO 75B-1, -2	57	°C
Melting temperature	DSC	164	°C
Vicat softening temperature A/50	ISO 306	108	°C

Additional Properties

Heat Resistance, Internal Test Method: 152°C (305°F)
Puncture Resistance, Internal Test Method: 160 ft-lb/in³
Tensile Stress @ Break, MD/TD, ASTM D 882: 68/48 MPa
Tensile Strain @ Break, MD/TD, ASTM D 882: 670/870 %
Tensile Stress @ Yield, MD/TD, ASTM D 882: 18/15 MPa
Secant Modulus, MD/TD, ASTM D 882: 330/300 MPa
Dart Drop Impact, ISO 7765-1: 550 g
Elmendorf Tear Strength, MD/TD, ISO 6383-2: 440/920 g

Film property values shown were determined on 50 µm (2.0 mil) thickness blown film extruded at 238°C (460°F), 2.5:1 BUR, with a 2 mm (80 mil) die gap.

Notes

Typical properties; not to be construed as specifications.