

Adflex Q 402 F

Polyolefin
LyondellBasell Industries

Message:

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

General Information			
Features	Perforation resistance		
	Good tear strength		
	High pressure heating resistance		
	Heat resistance, high		
Uses	Films		
Forms	Particle		
Processing Method	Blow film		
Physical	Nominal Value	Unit	Test Method
Density	0.890	g/cm ³	ISO 1183/A
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	0.65	g/10 min	ISO 1133
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D, 15 sec)	49		ASTM D2240, ISO 868
Mechanical	Nominal Value	Unit	Test Method
Tensile Stress			ISO 527-2
Yield, 23°C	15.0	MPa	ISO 527-2
Fracture, 23°C	21.0	MPa	ISO 527-2
Tensile Strain			ISO 527-2
Yield, 23°C	27	%	ISO 527-2
Fracture, 23°C	> 800	%	ISO 527-2
Flexural Modulus (23°C)	480	MPa	ISO 178
Films	Nominal Value	Unit	Test Method
Film Thickness - Tested	50	µm	
Film Puncture Resistance (50 µm)	13.2	J/cm ³	Internal method
secant modulus			ASTM D882
MD: 50 µm, blown film	330	MPa	ASTM D882
TD: 50 µm, blown film	300	MPa	ASTM D882
Tensile Strength			ASTM D882
MD: Yield, 50 µm, blown film	18.0	MPa	ASTM D882
TD: Yield, 50 µm, blown film	15.0	MPa	ASTM D882
MD: Broken, 50 µm, blown film	68.0	MPa	ASTM D882
TD: Broken, 50 µm, blown film	48.0	MPa	ASTM D882

Tensile Elongation			ASTM D882
MD: Broken, 50 µm, blown film	670	%	ASTM D882
TD: Broken, 50 µm, blown film	870	%	ASTM D882
Dart Drop Impact (50 µm, Blown Film)	550	g	ISO 7765-1
Elmendorf Tear Strength			ISO 6383-2
MD: 50 µm, blown film	0.045	N	ISO 6383-2
TD: 50 µm, blown film	0.094	N	ISO 6383-2
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ISO 180/1A
-40°C	4.0	kJ/m ²	ISO 180/1A
23°C	60	kJ/m ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (0.45 MPa, Unannealed)	57.0	°C	ISO 75-2/B
Vicat Softening Temperature	108	°C	ISO 306/A50
Melting Temperature	164	°C	DSC
Additional Information	Nominal Value	Unit	Test Method
Heat Resistance	152	°C	Internal method

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.

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