Petrothene® LP540200

High Density Polyethylene Copolymer

LyondellBasell Industries

Message:

Petrothene LP540200 is a copolymer resin designed for blown film applications. This resin offers high ESCR, stiffness, excellent appearance and bubble stability. LP540200 is recommended for high strength multi-wall sack liners and barrier sheeting. It is also useful as a blend component for improved stiffness and machinability.

General Information				
Features	Rigidity, high			
	High ESCR (Stress Cracking Resistance)			
	Copolymer			
	Compliance of Food Exposure			
Uses	Films			
	Lining			
	Mixing			
	Sheet			
Agency Ratings	FDA 21 CFR 177.1520			
Processing Method	Film extrusion			
	Blow film			
Physical	Nominal Value	Unit	Test Method	
Density	0.940	g/cm³	ASTM D1505	
Melt Mass-Flow Rate (MFR) (190°C/2.16				
kg)	0.17	g/10 min	ASTM D1238	
Environmental Stress-Cracking Resistance (F50)	> 1000	hr	ASTM D1693	
Hardness	Nominal Value	Unit	Test Method	
Durometer Hardness (Shore D)	62		ASTM D2240	
Mechanical	Nominal Value	Unit	Test Method	
Tensile Strength ¹ (Yield)	21.9	MPa	ASTM D638	
Films	Nominal Value	Unit	Test Method	
Film Thickness - Tested	51	μm		
secant modulus			ASTM D882	
1% secant, MD: 51 μm , blown film	565	MPa	ASTM D882	
1% secant, TD: 51 μm	758	MPa	ASTM D882	
Tensile Strength			ASTM D882	
MD: Yield, 51 µm, blown film	19.3	MPa	ASTM D882	
TD: Yield, 51 µm, blown film	22.8	MPa	ASTM D882	

MD: Broken, 51 µm, blown film	46.9	MPa	ASTM D882	
TD: Broken, 51 μ m, blown film	29.6	MPa	ASTM D882	
Tensile Elongation			ASTM D882	
MD: Broken, 51 µm, blown film	510	%	ASTM D882	
TD: Broken, 51 µm, blown film	680	%	ASTM D882	
Dart Drop Impact (51 µm, Blown Film)	70	g	ASTM D1709	
Elmendorf Tear Strength			ASTM D1922	
MD: 51 µm, blown film	40	g	ASTM D1922	
TD: 51 µm, blown film	1200	g	ASTM D1922	
Oxygen Permeability (51 µm, Blown Film)	2450	cm³/m²/24 hr	ASTM D3985	
Water Vapor Transmission Rate (51 µm,				
Blown Film)	5.1	g/m²/24 hr	ASTM F372	
Thermal	Nominal Value	Unit	Test Method	
Deflection Temperature Under Load (0.45				
MPa, Unannealed)	64.0	°C	ASTM D648	
Brittleness Temperature	< -76.0	°C	ASTM D746	
Vicat Softening Temperature	119	°C	ASTM D1525	
Additional Information				
Film properties obtained from 2.0 mil Blown film, 2.5:1 Blow-up ratio, Melt Temperature 390 to 410°F, 60 mil die gap.				
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