Purell PE 1840 H

Low Density Polyethylene

LyondellBasell Industries

Message:

Purell PE 1840 H is a low density polyethylene with good flexibility and delivered in pellet form. It is used by our customers mainly for small blow moulding of heathcare applications such as ampoules but also be used in film applications and injection moulding.
Without exception, all potential activities for applications in the pharmaceutical, medical device, laboratory and diagnostics area have to be discussed with the relevant Technical (P & AD) and Business contacts first.
To discuss a medical/pharmaceutical application please contact: your local Distributor or your local LyondellBasell contact.

General Information	
Features	Ethylene oxide disinfection
	Good flexibility
Uses	Films
	Blow molding applications
	Pipe fittings
	Bottle
	Small bottle
	Medical/nursing supplies
Forms	Particle
Processing Method	Blow film
	Blow molding
	Extrusion blow molding
	Injection blowing molding
	Injection molding

Physical	Nominal Value	Unit	Test Method
Density	0.919	g/cm³	ISO 1183, ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	1.5	g/10 min	ASTM D1238, ISO 1133
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness			
Shaw D	47		ASTM D2240
Shaw D	45		ISO 868
Ball Indentation Hardness (H 49/30)	15.0	MPa	ISO 2039-1
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus			
1% secant	254	MPa	ASTM D638
23°C	200	MPa	ISO 527-2
Tensile Strength			

Yield	10.8	MPa	ASTM D638
Yield, 23°C	9.00	MPa	ISO 527-2
Fracture	12.2	MPa	ASTM D638
Tensile Strain			
Yield	15	%	ISO 527-2
Fracture	670	%	ASTM D638
Flexural Modulus - 1% Secant	241	MPa	ASTM D790
Coefficient of Friction	0.75		ISO 8295
Films	**Nominal Value**	**Unit**	**Test Method**
Film Thickness - Tested	50	µm	
Film Thickness - Recommended / Available	30 to 80 µ		
Tensile Strength			ISO 527-3
MD: 50 µm, blown film	27.0	MPa	ISO 527-3
TD: 50 µm, blown film	17.0	MPa	ISO 527-3
Tensile Elongation			ISO 527-3
MD: Broken, 50 µm, blown film	200	%	ISO 527-3
TD: Broken, 50 µm, blown film	600	%	ISO 527-3
Dart Drop Impact (50 µm)	120	g	ASTM D1709
Thermal	**Nominal Value**	**Unit**	**Test Method**
Vicat Softening Temperature			
--	87.0	°C	ASTM D1525
--	88.0	°C	ISO 306/A50
Melting Temperature (DSC)	108	°C	ISO 3146
Optical	**Nominal Value**	**Unit**	**Test Method**
Gardner Gloss (60°, 50.0 µm, Blown Film)	75		ASTM D523
Gloss (20°, 50.0 µm, Blown Film)	> 20		ASTM D2457
Haze (50.0 µm, Blown Film)	< 11	%	ASTM D1003
Additional Information	**Nominal Value**	**Unit**	**Test Method**
Failure Energy (50.0 µm)	45.0	J/cm	DIN 53373
Film properties tested using 50 µm thickness blown film extruded at a melt temperature of 180°C and a blow-up ratio of 2:1.			
Extrusion	**Nominal Value**	**Unit**	
Melt Temperature	170 - 220	°C	

Recommended distributors for this material

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