Technical Data Sheet

Petrothene LP540200

High Density Polyethylene

Product Description

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

Application	Bags & Pouches; Food Packaging Film; Lamination Film; Secondary Packaging; Shrink Film; Wire & Cable
Market	Flexible Packaging; Rigid Packaging; Wire & Cable
Processing Method	Blown Film; Sheet and Profile Extrusion; Wire & Cable
Attribute	General Purpose; High Tensile Strength

Typical Properties	Nominal Value	English Units	Nominal Value	SI Units	Test Method
Physical					
Melt Flow Rate, (190 °C/2.16 kg)	0.17	g/10 min	0.17	g/10 min	ASTM D1238
Density, (23 °C)	0.940	g/cm³	0.940	g/cm³	ASTM D1505
Mechanical					
Tensile Strength at Yield	3180	psi	21.9	MPa	ASTM D638
Environmental Stress Crack Resistance, F_{50}	>1000	hr	>1000	hr	ASTM D1693
Film					
Dart Drop Impact Strength, F50	70	g	70	g	ASTM D1709
Tensile Strength at Break					
MD	6800	psi	46.9	MPa	ASTM D882
TD	4300	psi	29.6	MPa	ASTM D882
Tensile Strength at Yield					
MD	2800	psi	19.3	MPa	ASTM D882
TD	3300	psi	22.8	MPa	ASTM D882
Tensile Elongation at Break					
MD	510	%	510	%	ASTM D882
TD	680	%	680	%	ASTM D882
Secant Modulus					
MD	82000	psi	565	MPa	ASTM D882
TD	110000	psi	758	MPa	ASTM D882
Elmendorf Tear Strength					
MD	40	g	40	g	ASTM D1922
TD	1150	g	1150	g	ASTM D1922
Hardness					

Shore Hardness, (Shore D)	62		62		ASTM D2240
Thermal					
Vicat Softening Temperature	246	°F	119	°C	ASTM D1525
Low Temperature Brittleness	<-105	°F	<-76	°C	ASTM D746
Deflection Temperature Under Load, (66 psi, Unannealed)	147	°F	64	°C	ASTM D648

Notes

Mechanical tensile properties were run on a Type IV specimen.

Data obtained from 2.0 mil film produced on a blown film line with a 60 mil die gap, 2.5:1 BUR, and 410-430 °F (210-220 °C) melt extrusion temperature.

These are typical property values not to be construed as specification limits.

Processing Techniques

Specific recommendations for resin type and processing conditions can only be made when the end use, required properties and fabrication equipment are known.

General Extrusion Conditions

Company Information

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