Technical Data Sheet

Petrothene LP510031

High Density Polyethylene

Product Description

Petrothene LP510031 is selected by customers for use in large-part blow molding of durable goods and for deep-draw sheet extrusion / thermoforming applications. LP510031 exhibits excellent impact resistance and excellent environmental stress crack resistance.

Regulatory Status

For regulatory compliance information, see *Petrothene* LP510031 Product Stewardship Bulletin (PSB) and Safety Data Sheet (SDS).

Status	Commercial: Active
Availability	North America
Application	Industrial Packaging; Jerry Cans; Structural Parts
Market	Rigid Packaging
Processing Method	Extrusion Blow Molding; Sheet and Profile Extrusion
Attribute	High ESCR (Environmental Stress Cracking Resistance)

Typical Properties	Nominal Value	English Units	Nominal Value	SI Units	Test Method
Physical					
Melt Flow Rate, (190 °C/21.6 kg)	11.5	g/10 min	11.5	g/10 min	ASTM D1238
Density, (23 °C)	0.950	g/cm³	0.950	g/cm³	ASTM D1505
Mechanical					
Flexural Modulus, (1% Secant)	165000	psi	1140	MPa	ASTM D790
Tensile Strength at Yield	3700	psi	25.5	MPa	ASTM D638
Tensile Elongation at Break	>800	%	>800	%	ASTM D638
Environmental Stress Crack Resistance, F_{50} (100% Igepal®, Cond B)	>1000	hr	>1000	hr	ASTM D1693
Impact					
Tensile Impact Strength	>200	ft-lb/in²	>420	kJ/m²	ASTM D1822
Hardness					
Shore Hardness, (Shore D)	65		65		ASTM D2240
Thermal					
Vicat Softening Temperature	252	°F	122	°C	ASTM D1525
Low Temperature Brittleness, F_{50}	<-105	°F	<-76	°C	ASTM D746
Deflection Temperature Under Load, (66 psi, Unannealed)	163	°F	73	°C	ASTM D648