Polypropylene 3281

Technical Data Sheet
Polypropylene – Homopolymer
Produced in the United States

TotalEnergies Petrochemicals & Refining USA, Inc.
Polymers Americas

Description

Polypropylene 3281: The high melt strength of TotalEnergies Polypropylene 3281 allows uniform draw down during processing, resulting in maximum line speeds and a good balance of physical properties.

Process Stability: Excellent polymer stability of TotalEnergies 3281 produces consistent product properties during extrusion, even with the use of regrind.

FDA: 3281 has passed USP Class VI testing and complies with all applicable FDA regulations and may be used under these provisions for food contact applications.

Applications: 3281 is recommended for sheet and strapping applications where high melt strength and high extrusion speeds are required.

Processing: 3281 resin processes on conventional extrusion equipment with typical melt temperatures of 390˚F-450˚F (200˚C-232˚C).

Characteristics

	Method	Unit	Typical Value
Rheological Properties			
Melt Flow	D-1238 Condition “L”	g/10 min	1.3
Mechanical Properties			
Tensile @ Yield	D-638	psi (MPa)	4,900 (34)
Tensile Elongation @ Yield	D-638	%	8
Tensile Modulus	D-638	psi (MPa)	220,000 (1,515)
Flexural Modulus	D-790	psi (MPa)	200,000 (1,380)
Izod Impact @ 73˚F			
Notched	D-256A	ft-lb/in (J/m)	0.8 (43)
Unnotched			30.0 (1,600)
Hardness			
Shore D	D-1706		81
Rockwell R	D-785A		90
Thermal Properties(1)			
Melting Point	DSC(2)	°F (°C)	330 (165)
Heat Deflection	D-648	°F @ 66 psi	220
		°C @ 4.64 kg/cm^2	104
Coefficient of Linear Thermal Expansion	D-696	in./in./°F x 10^{-5}	5.6
		cm/cm/°C x 10^{-5}	10
Other Physical Properties			
Density	D-1505	g/cc	0.905

(1) Data developed under laboratory conditions and are not to be used as specification, maxima or minima.
(2) MP determined with a DSC-2 Differential Scanning Calorimeter. Test procedure available upon request.

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