



TotalEnergies

TotalEnergies Petrochemicals & Refining USA, Inc.
Polymers Americas

Polypropylene 1251

Technical Data Sheet
Polypropylene – Homopolymer
Produced in the United States

Description

Polypropylene 1251 is a syndiotactic form of copolymer polypropylene made via TotalEnergies proprietary technology in our polypropylene plant in La Porte, Texas. Syndiotactic is a lower melting, lower crystallinity form of polypropylene.

FDA: 1251 complies with FDA regulations Title 21 CFR Section 177.1520 (c) 3.1 and may be used under these provisions for food contact and packaging.

Applications: 1251 is a high melt strength grade for film and sheet constructions. However, due to its unique and interesting properties, other applications may exist.

Processing: 1251 is a lower crystallinity, narrower molecular weight distribution product than conventional polypropylene. Because of this, the material melts at a lower temperature, is more viscous, and takes longer to set up. It is slightly more tacky and elastic in nature than conventional polypropylene. It offers excellent clarity and room temperature impact.

Made to Order Grade: Two railcar minimum order; take or pay agreement required; 90-day minimum lead time

Characteristics

	Method	Unit	Typical Value
Rheological Properties			
Melt Flow	D-1238	g/10 min	2.2
Mechanical Properties			
Tensile	D-638	psi (MPa)	2,200 (15)
Elongation @ Yield (Break)	D-790	%	11 (250)
Tensile Modulus	D-638	psi (MPa)	70,000 (480)
Flexural Modulus	D-790	psi (MPa)	50,000 (340)
Izod Impact Notched @ 73°F	D-256A	ft.-lbs/in. (J/m)	12 ⁽³⁾ (640)
Thermal Properties⁽¹⁾			
Melting Point	DSC ⁽²⁾	°F (°C)	265 (130)
Other Physical Properties			
Density	D-1505	g/cc	0.88
Yellowness Index	D-1925		-3.7

- (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.
(3) Some specimens did not break

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All tests were run under laboratory conditions. ASTM (where applicable) testing procedures. The data are intended as a general guide only and do not necessarily represent results that may be obtained elsewhere. The use of TotalEnergies products must be guided by the users own methods for selection of proper formulation. TotalEnergies Petrochemicals & Refining USA Inc. disclaims any responsibility for misuse or misapplication of its products. TotalEnergies MAKES NO WARRANTY OF MERCHANTABILITY AND THERE IS NO WARRANTY THAT GOODS SUPPLIED SHALL BE FIT FOR ANY PARTICULAR PURPOSE. TotalEnergies' liability and customer's exclusive remedy for any claims arising out of sales of its products are expressly limited at customer option to replacement of non-performing goods or payment not to exceed the purchase price plus transportation charges thereon in respect to any material which damage is claimed.

Polypropylene