

POLYTROPE® STR 1030EU-01 NATURAL

Enhanced TPO Polyolefin
Engineering Plastics

Product Description

POLYTROPE STR 1030EU resin is a high melt strength thermoformable TPO that provides high impact resistance & high stiffness, enabling processors and end users to reduce product weight and improve processing efficiency without sacrificing product performance. It can be extruded in smooth or textured surfaces, or co-extruded with a POLYTROPE STR enhanced polyolefin cap resin to further customize its' durability, appearance, or feel for interior and exterior applications. The capability of POLYTROPE STR 1030EU to provide an exceptionally smooth surface in extrusion and thermoforming makes it well suited to lamination processes with decorative films. It is also easily colored and is paintable by standard TPO paint systems.

General

Features	• Good Melt Strength • Low CLTE	• Low Temperature Impact Resistance • Paintable	• Recyclable Material • Weather Resistant
Automotive Specifications	• GM GMP.E/P.148		
Forms	• Pellets		
Processing Method	• Coextrusion • Extrusion	• Profile Extrusion • Sheet Extrusion	• Thermoforming

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density / Specific Gravity ¹	1.08	1.08 g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	0.45 g/10 min	0.45 g/10 min	ISO 1133
Molding Shrinkage			ISO 294-4

73°F (23°C), 24 hr, 0.125 in (3.18 mm)	0.70 to 0.90 %	0.70 to 0.90 %	
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Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Stress ² (Yield, 73°F (23°C))	3370 psi	23.2 MPa	ISO 527-2
Tensile Strain ² (Break, 451°F (233°C))	360 %	360 %	ISO 527-2
Flexural Modulus - Chord ³ (73°F (23°C))	325000 psi	2240 MPa	ISO 178

Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact - Flow			ASTM D256
-22°F (-30°C), 0.125 in (3.18 mm), Injection Molded	3.3 ft-lb/in	180 J/m	
73°F (23°C), 0.125 in (3.18 mm), Injection Molded	No Break	No Break	

Instrumented Dart Impact			ASTM D3763
-22°F (-30°C), Total Energy, Ductile Failure	355 in-lb	40.1 J	

Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Heat Deflection Temperature			ISO 75-2/Bf
66 psi (0.45 MPa), Unannealed	223 °F	106 °C	
CLTE - Flow (-22 to 212°F (-30 to 100°C))	2.3E-5 in/in/°F	4.1E-5 cm/cm/°C	ASTM E831

Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating (0.13 in (3.2 mm), All Colors)	HB	HB	UL 94

Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Gardner Gloss			ISO 2813
60°, 125 mil (3180 µm), Thermoformed, Smooth	20 to 40	20 to 40	

Additional Information	Nominal Value (English)	Nominal Value (SI)	Test Method
Heat Sag - 8 inch span, two point support (300°F (149°C), 0.13 in (3.20 mm))	0.0 in	0.00 mm	ASTM D3769



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Notes

¹ Method A

² Type 1, 2.0 in/min (50 mm/min)

³ Type 1A, 0.079 in/min (2.0 mm/min)

Notes

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

