

POLYTROPE® STR 1032EU-01 NATURAL

Enhanced TPO Polyolefin
Engineering Plastics

Product Description

POLYTROPE STR 1032EU resin is a cost efficient, high melt strength thermoformable TPO material that provides an economical balance of impact resistance and stiffness similar to ABS, but provides the benefits of dimensional stability, chemical and weathering resistance characteristic of TPO materials. 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 1032EU 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 • Good Toughness	• Low CLTE • Paintable	• Recyclable Material • Weather Resistant
Forms	• Pellets		
Processing Method	• Coextrusion • Extrusion	• Profile Extrusion • Sheet Extrusion	• Thermoforming

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density / Specific Gravity ¹	1.13	1.13 g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	0.70 g/10 min	0.70 g/10 min	ISO 1133
Molding Shrinkage 73°F (23°C), 24 hr, 0.125 in (3.18 mm)	0.80 to 1.2 %	0.80 to 1.2 %	ISO 294-4

Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Stress ² (Yield, 73°F (23°C))	3340 psi	23.0 MPa	ISO 527-2
Tensile Strain ² (Break, 451°F (233°C))	430 %	430 %	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 -22°F (-30°C), 0.125 in (3.18 mm), Injection Molded	1.5 ft·lb/in	80 J/m	ASTM D256
73°F (23°C), 0.125 in (3.18 mm), Injection Molded	No Break	No Break	
Instrumented Dart Impact 32°F (0°C), Total Energy, Ductile Failure	310 in·lb	35.0 J	ASTM D3763

Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Heat Deflection Temperature 66 psi (0.45 MPa), Unannealed	212 °F	100 °C	ISO 75-2/Bf
CLTE - Flow (-22 to 212°F (-30 to 100°C))	2.4E-5 in/in/°F	4.3E-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 60°, 125 mil (3180 µm), Thermoformed, Smooth	20 to 40	20 to 40	ISO 2813

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

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)

