

Technical Data Sheet

**Polytrope STR 1032EU-01 NATURAL**

Enhanced TPO Polyolefin
LyondellBasell Industries
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

Material Status	• Commercial: Active		
Availability	• North America		
Features	• Good Melt Strength • Good Toughness	• Good Weather Resistance • Low CLTE	• Paintable • Recyclable Material
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
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
Deflection Temperature Under Load 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
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)

Notes

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

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Processing Techniques

Specific recommendations for resin type and processing conditions can only be made when the end use, required properties and fabrication equipment are known.

Product Storage and Handling

- Product should be stored in dry conditions at temperatures below 50°C and protected from UV-light
- Improper storage may bring damage to the packaging and can negatively affects on the quality of this product
- Keep material completely dry for good processing

Company Information

For further information regarding the LyondellBasell company, please visit <http://www.lyb.com/>.

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