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 similiar 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	• 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/cm³	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			ASTM D256
-22°f (-30°c), 0.125 In (3.18 Mm), Injection Molded	1.5 ft·lb/in	80 J/m	
73°f (23°c), 0.125 In (3.18 Mm), Injection Molded	No Break	No Break	
Instrumented Dart Impact			ASTM D3763
32°f (0°c), Total Energy, Ductile Failure	310 in·lb	35.0 J	
Thermal	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Deflection Temperature Under Load			ISO 75-2/Bf
66 Psi (0.45 Mpa), Unannealed	212 °F	100 °C	
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			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

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.