Technical Data Sheet

Polytrope STR 1025EU-01 NATURAL

Enhanced TPO Polyolefin
LyondellBasell Industries
Engineering Plastics

Product Description
POLYTROPE STR 1025EU resin is a high melt strength thermoformable TPO that provides high impact resistance and moderate stiffness. 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 1025EU 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	• Durable • Good Melt Strength	• Good Weather Resistance • Low Temperature Impact Resistance	• 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]	0.990	0.988 g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (230°c/2.16 Kg)	1.0 g/10 min	1.0 g/10 min	ISO 1133
Mechanical	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Tensile Stress [2] (Yield, 73°f (23°c))	3290 psi	22.7 MPa	ISO 527-2
Tensile Strain [2] (Break, 451°f (233°c))	700 %	700 %	ISO 527-2
Flexural Modulus - Chord [3] (73°f (23°c))	250000 psi	1720 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	4.9 ft·lb/in	260 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	420 in·lb	47.5 J	
Thermal	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Deflection Temperature Under Load			ISO 75-2/Bf
66 Psi (0.45 Mpa), Unannealed	201 °F	93.9 °C	
CLTE - Flow (-22 To 212°f (-30 To 100°c))	5.5E-5 in/in/°F	9.9E-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.