

Polytrope STR 1040EU-01 NATURAL

LyondellBasell Industries - Enhanced TPO Polyolefin

General Information

Product Description

Polytrope STR 1040EU resin is a high melt strength thermoformable TPO that balances impact resistance and high stiffness, enabling processors and end users to reduce product weight and improve processing efficiency without sacrificing product performance. The attractive performance features of Polytrope STR 1040EU resin uniquely positions it as an economically favorable option to traditional engineered resins. 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 1040EU 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	<ul style="list-style-type: none"> • Good Melt Strength • Good Weather Resistance 	<ul style="list-style-type: none"> • Low CLTE • Low Temperature Impact Resistance 	<ul style="list-style-type: none"> • Paintable • Recyclable Material
Uses	<ul style="list-style-type: none"> • Thermoforming Applications 		
Forms	<ul style="list-style-type: none"> • Pellets 		
Processing Method	<ul style="list-style-type: none"> • Coextrusion • Extrusion 	<ul style="list-style-type: none"> • Profile Extrusion • Sheet Extrusion 	

Properties¹

Physical	Nominal Value	Unit	Test Method
Density	1.09	g/cm ³	ISO 1183/A
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	0.50	g/10 min	ISO 1133
Mechanical	Nominal Value	Unit	Test Method
Tensile Stress (Yield, 73°F)	3730	psi	ISO 527-2/1/50
Tensile Strain (Break, 73°F)	320	%	ISO 527-2/1/50
Flexural Modulus - Chord ² (73°F)	400000	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact - Flow			ASTM D256
-22°F, 0.125 in, Injection Molded	0.90	ft-lb/in	
73°F, 0.125 in, Injection Molded	17	ft-lb/in	
Instrumented Dart Impact			ASTM D3763
-22°F, Total Energy, Ductile Failure	360	in-lb	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	237	°F	ISO 75-2/Bf
CLTE - Flow (-22 to 212°F)	2.3E-5	in/in/°F	ASTM E831
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.13 in)	HB		UL 94
Optical	Nominal Value	Unit	Test Method
Gloss ³ (60°, 125 mil, Thermoformed)	20 to 40		ISO 2813
Additional Information	Nominal Value	Unit	Test Method
Heat Sag - 8 inch span, two point support (300°F, 0.13 in)	0.0	in	ASTM D3769

Notes

¹ Typical properties: these are not to be construed as specifications.

² Type 1A, 0.079 in/min

³ Smooth