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Polytrope STR 1050EP-01 NAT

LyondellBasell Industries - Enhanced TPO Polyolefin

General Information

Product Description

Polytrope STR 1050EP 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. 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 1050EP 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
Uses	• Thermoforming Applications		
Forms	• Pellets		
Processing Method	• Coextrusion • Extrusion	• Profile Extrusion • Sheet Extrusion	

Properties [1]

Physical	Nominal Value	Unit	Test Method
Density	1.14	g/cm³	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)	3770	psi	ISO 527-2/1/50
Tensile Strain (Break, 73°F)	230	%	ISO 527-2/1/50
Flexural Modulus - Chord [2] (73°F)	476000	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	14	ft·lb/in	
Instrumented Dart Impact			ASTM D3763
-6°F, Total Energy, Ductile Failure	386	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)	2.2E-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