

POLYTROPE® STR 1050EU-01 NATURAL

Enhanced TPO Polyolefin

A. Schulman Inc.

Message:

POLYTROPE STR 1050EU 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 1050EU 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 Information			
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	Unit	Test Method
Specific Gravity ¹	1.14	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	0.50	g/10 min	ISO 1133
Molding Shrinkage (23°C, 24 hr, 3.18 mm)	0.70 to 0.90	%	ISO 294-4
Mechanical	Nominal Value	Unit	Test Method
Tensile Stress ² (Yield, 23°C)	26.0	MPa	ISO 527-2
Tensile Strain ³ (Break, 233°C)	230	%	ISO 527-2
Flexural Modulus - Chord ⁴ (23°C)	3280	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact - Flow			ASTM D256
-30°C, 3.18 mm, Injection Molded	48	J/m	
23°C, 3.18 mm, Injection Molded	750	J/m	
Instrumented Dart Impact (-21°C, Total Energy, Ductile Failure)	43.6	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method

Heat Deflection Temperature (0.45 MPa, Unannealed)	114	°C	ISO 75-2/Bf
CLTE - Flow (-30 to 100°C)	4.0E-5	cm/cm/°C	ASTM E831
Flammability	Nominal Value		Test Method
Flame Rating (3.18 mm, All Colors)	HB		UL 94
Optical	Nominal Value		Test Method
Gardner Gloss (60°, 3180 µm, Thermoformed, Smooth)	20 to 40		ISO 2813
Additional Information	Nominal Value	Unit	Test Method
Heat Sag - 8 inch span, two point support (149°C, 3.20 mm)	0.00	mm	ASTM D3769
NOTE			
1.	Method A		
2.	Type 1, 50 mm/min		
3.	Type 1, 50 mm/min		
4.	Type 1A, 2.0 mm/min		

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