POLYTROPE® STR 1032EU-01 NATURAL

Enhanced TPO Polyolefin

A. Schulman Inc.

Message:

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 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 | 1.13 | g/cm³ | ISO 1183 |
| Melt Mass-Flow Rate (MFR) (230°C/2.16 kg) | 0.70 | g/10 min | ISO 1133 |
| Molding Shrinkage (23°C, 24 hr, 3.18 mm) | 0.80 to 1.2 | % | ISO 294-4 |
| Mechanical | Nominal Value | Unit | Test Method |
| Tensile Stress ² (Yield, 23°C) | 23.0 | MPa | ISO 527-2 |
| Tensile Strain ³ (Break, 233°C) | 430 | % | ISO 527-2 |
| Flexural Modulus - Chord ⁴ (23°C) | 2240 | MPa | ISO 178 |
| Impact | Nominal Value | Unit | Test Method |
| Notched Izod Impact - Flow | | Ont | ASTM D256 |
| -30°C, 3.18 mm, Injection Molded | 80 | J/m | |
| 23°C, 3.18 mm, Injection Molded | No Break | 57.111 | |
| Instrumented Dart Impact (0°C, Total | | | |
| Energy, Ductile Failure) | 35.0 | J | ASTM D3763 |
| | | | |

| Heat Deflection Temperature (0.45 MPa, | | | |
|---|------------------|----------|---------------------------|
| Unannealed) | 100 | °C | ISO 75-2/Bf |
| CLTE - Flow (-30 to 100°C) | 4.3E-5 | cm/cm/°C | ASTM E831 |
| Flammability | Nominal Value | | Test Method |
| Flame Rating (3.18 mm, All Colors) | НВ | | 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 |
| Additional Information Heat Sag - 8 inch span, two point support | Nominal Value | Unit | Test Method |
| | Nominal Value | Unit | Test Method ASTM D3769 |
| Heat Sag - 8 inch span, two point support | | | |
| Heat Sag - 8 inch span, two point support (149°C, 3.20 mm) | | | |
| Heat Sag - 8 inch span, two point support (149°C, 3.20 mm) NOTE | 0.00 | | |
| Heat Sag - 8 inch span, two point support (149°C, 3.20 mm) NOTE 1. | 0.00 Method A | | |

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