

Goodfellow TPX® RT31XB Injection Molding Grade Polymethylpentene

Category : Polymer , Thermoplastic , Polymethylpentene (PMP) , Polymethylpentene, Molded

Material Notes:

This grade is highly recommended for injection molding; also for film and fiber extrusion. TPX® is semi-crystalline, transparent, very light and - for a polyolefin - expensive. It has good release characteristics and good high frequency electrical and valuable acoustic/ultrasonic properties. Applications include medical and laboratory apparatus, microwave components and cookware and electronic components. Information provided by Goodfellow. TPX® is a trademark of Mitsui.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Goodfellow-TPX-RT31XB-Injection-Molding-Grade-Polymethylpentene.php

Physical Properties	Metric	English	Comments
Density	0.833 g/cc	0.0301 lb/in ³	ASTM D1505
Water Absorption	<= 0.010 %	<= 0.010 %	ASTM D570
Linear Mold Shrinkage, Flow	0.015 cm/cm	0.015 in/in	MCI Method 2
Linear Mold Shrinkage, Transverse	0.012 cm/cm	0.012 in/in	MCI Method 2
Melt Flow	21 g/10 min @Load 5.00 kg, Temperature 260 °C	21 g/10 min @Load 11.0 lb, Temperature 500 °F	ASTM D1238
Spiral Flow	51.0 cm	20.1 in	MCI Method 1

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	87	87	ASTM D785
Tensile Strength	30.0 MPa	4350 psi	ASTM D638
Tensile Strength, Yield	30.0 MPa	4350 psi	ASTM D638
Elongation at Break	12 %	12 %	ASTM D638
Tensile Modulus	1.90 GPa	276 ksi	ASTM D638
Flexural Strength	44.0 MPa	6380 psi	ASTM D790
Flexural Modulus	1.60 GPa	232 ksi	ASTM D790
Izod Impact, Notched	0.200 J/cm	0.375 ft-lb/in	ASTM D256
Izod Impact, Unnotched (ISO)	9.00 kJ/m ²	4.28 ft-lb/in ²	

Thermal Properties	Metric	English	Comments
CTE, linear	117 µm/m-°C	65.0 µin/in-°F	ASTM E831

Thermal Properties	Metric	English	Comments
Melting Point	233 °C	451 °F	DSC Peak, JIS K7121
Deflection Temperature at 0.46 MPa (66 psi)	127 °C	261 °F	ASTM D648
Vicat Softening Point	174 °C	345 °F	ASTM D1525

Optical Properties	Metric	English	Comments
Refractive Index	1.46	1.46	ASTM D542
Haze	0.80 %	0.80 %	ASTM D1003
Transmission, Visible	94 %	94 %	ASTM D1003

Electrical Properties	Metric	English	Comments
Volume Resistivity	$\geq 1.00 \times 10^{16}$ ohm-cm	$\geq 1.00 \times 10^{16}$ ohm-cm	ASTM D257
Dielectric Constant	2.1	2.1	ASTM D150
Dielectric Strength	65.0 kV/mm	1650 kV/in	ASTM D149

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