

# TPX® RT18XB

Polymethylpentene Copolymer

Mitsui Chemicals America, Inc.

## Message:

TPX® RT18XB is a Polymethylpentene Copolymer (PMP Copolymer) material. It is available in North America for fiber (spinning) extrusion, film extrusion, or injection molding.

Important attributes of TPX® RT18XB are:

Chemical Resistant

Heat Resistant

Low to No Odor/Taste

Non-Toxic

Typical applications include:

Food Contact Applications

Medical/Healthcare

General Information	
Features	Good Chemical Resistance Good Thermal Stability Low Odor Transfer Non-Toxic
Uses	Medical/Healthcare Applications
Agency Ratings	EU 2002/72/EC FDA Unspecified Rating JHOSPA Unspecified Rating
Appearance	Clear - Blue Tint
Forms	Granules
Processing Method	Fiber (Spinning) Extrusion Film Extrusion Injection Molding

Physical	Nominal Value	Unit	Test Method
Density	0.833	g/cm <sup>3</sup>	ASTM D1505
Melt Mass-Flow Rate (MFR) (260°C/5.0 kg)	26	g/10 min	ASTM D1238
Spiral Flow <sup>1</sup>	51.0	cm	Internal Method
Molding Shrinkage <sup>2</sup>			Internal Method
Flow	1.5	%	
Across Flow	1.2	%	
Water Absorption (24 hr)	< 0.010	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	87		ASTM D785
Mechanical	Nominal Value	Unit	Test Method

Tensile Modulus (23°C)	1900	MPa	ASTM D638
Tensile Strength			ASTM D638
Yield, 23°C	30.0	MPa	
Break, 23°C	25.0	MPa	
Tensile Elongation (Break, 23°C)	12	%	ASTM D638
Flexural Modulus (23°C)	1600	MPa	ASTM D790
Flexural Strength (23°C)	46.0	MPa	ASTM D790
<b>Impact</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Notched Izod Impact (23°C)	20	J/m	ASTM D256
Unnotched Izod Impact Strength (23°C)	9.0	kJ/m <sup>2</sup>	ASTM D256
<b>Thermal</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Deflection Temperature Under Load (0.45 MPa, Unannealed)	127	°C	ASTM D648
Vicat Softening Temperature	174	°C	ASTM D1525
Melting Temperature	233	°C	DSC
CLTE - Flow	1.2E-4	cm/cm/°C	ASTM D696
<b>Electrical</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Volume Resistivity	> 1.0E+16	ohms·cm	ASTM D257
Dielectric Strength	65	kV/mm	ASTM D149
Dielectric Constant	2.10		ASTM D150
<b>Optical</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Refractive Index	1.460		ASTM D542
Transmittance	94.0	%	ASTM D1003
Haze	0.70	%	ASTM D1003

#### NOTE

1. Mold Temperature: 73°C,  
Melt Temperature: 310 to 320°C
2. temperature range: 260 to 280°C

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#### Recommended distributors for this material

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