

TPX® RT31

Polymethylpentene Copolymer

Mitsui Chemicals, Inc.

Message:

TPX®RT31 is a polymethylpentene copolymer (PMP copolymer) material. This product is available in North America and is processed by film extrusion, fiber (spinning) extrusion or injection molding.

TPX®The main features of RT31 are:

Hard

odorless/tasteless channel

TPX®The typical application areas of RT31 are: food contact applications

General Information			
Features	Rigidity, high		
	The smell is low to none		
Agency Ratings	FDA not rated		
	JHOSPA not rated		
	European 2002/72/EC		
Appearance	Clear/transparent		
Forms	Particle		
Processing Method	Film extrusion		
	Fiber (spinning) extrusion		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	0.833	g/cm ³	ASTM D1505
Melt Mass-Flow Rate (MFR) (260°C/5.0 kg)	21	g/10 min	ASTM D1238
Spiral Flow ¹	51.0	cm	Internal method
Molding Shrinkage ²			Internal method
Flow	1.5	%	Internal method
Transverse flow	1.2	%	Internal method
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	ASTM D638
Fracture, 23°C	25.0	MPa	ASTM D638
Tensile Elongation (Break, 23°C)	12	%	ASTM D638
Flexural Modulus (23°C)	1600	MPa	ASTM D790

Flexural Strength (23°C)	44.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	20	J/m	ASTM D256
Unnotched Izod Impact Strength (23°C)	9.0	kJ/m ²	ASTM D256
Thermal	Nominal Value	Unit	Test Method
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
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	> 1.0E+16	ohms·cm	ASTM D257
Dielectric Strength	65	kV/mm	ASTM D149
Dielectric Constant	2.10		ASTM D150
Optical	Nominal Value	Unit	Test Method
Refractive Index	1.460		ASTM D542
Transmittance	94.0	%	ASTM D1003
Haze	0.80	%	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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