

TPX™ MBZ230(A)

Polymethylpentene Copolymer

Mitsui Chemicals America, Inc.

Message:

TPX™MBZ230(A) is a polymethylpentene copolymer (PMP copolymer) material. This product is available in North America and is processed by extrusion or injection molding.

General Information			
Appearance	Opacity		
Forms	Particle		
Processing Method	Extrusion		
	Injection molding		

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.10	g/cm ³	Internal method
Melt Mass-Flow Rate (MFR) (260°C/5.0 kg)	57	g/10 min	Internal method
Spiral Flow ¹	48.0	cm	Internal method
Molding Shrinkage ²			Internal method
Flow: 2.00mm	1.5	%	Internal method
Transverse flow: 2.00mm	1.1	%	Internal method
Water Absorption (Saturation)	0.040	%	ASTM D570

Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	84		ASTM D785

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ³ (23°C, Injection Molded)	2250	MPa	ASTM D638
Tensile Strength ⁴			ASTM D638
Yield, 23°C, injection molding	27.0	MPa	ASTM D638
Fracture, 23°C, injection molding	26.0	MPa	ASTM D638
Tensile Elongation ⁵ (Break, 23°C, Injection Molded)	20	%	ASTM D638
Flexural Modulus ⁶ (mm, injection molding, 51.0mm span)	1820	MPa	ASTM D790
Flexural Strength ⁷ (mm, injection molding, 51.0mm span)	40.0	MPa	ASTM D790

Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (Injection Molded)	99	J/m	ASTM D256
Unnotched Izod Impact ⁸ (23°C, Injection Molded)	56	J/m	ASTM D4812

Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load ⁹ (0.45 MPa, Unannealed, 6.35 mm)	145	°C	ASTM D648
Vicat Softening Temperature	162	°C	ASTM D1525 ¹⁰

Peak Crystallization Temperature (DSC)	233	°C	ASTM D3418
CLTE - Flow (-10 to 160°C)	1.3E-4	cm/cm/°C	Internal method
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity ¹¹ (2.00 mm)	> 1.0E+16	ohms·cm	ASTM D257
Dielectric Strength ¹² (2.00 mm)	28	kV/mm	ASTM D149
Dielectric Constant ¹³ (2.00 mm, 1 MHz)	2.38		ASTM D150
Injection	Nominal Value	Unit	
Rear Temperature	270	°C	
Middle Temperature	280	°C	
Front Temperature	300	°C	
Mold Temperature	20 - 60	°C	
Injection Pressure	30.0 - 40.0	MPa	
Holding Pressure	30.0	MPa	
Injection instructions			
Zone 4 Temperature: 300°C			
Extrusion	Nominal Value	Unit	
Cylinder Zone 1 Temp.	280	°C	
Cylinder Zone 2 Temp.	290	°C	
Cylinder Zone 3 Temp.	290	°C	
Cylinder Zone 4 Temp.	290	°C	
Adapter Temperature	290	°C	
Die Temperature	290	°C	
NOTE			
1.	Mold temperature: 73°C, melt temperature: 310°C		
2.	260 to 280°C		
3.	Type 4, 50mm/min		
4.	Type 4, 50mm/min		
5.	Type 4, 50mm/min		
6.	1.3 mm/min		
7.	1.3 mm/min		
8.	Partial Break		
9.	120°C/hr		
10.	速率 A (50°C/h), 压力1 (10N)		
11.	Injection Molded		
12.	Injection Molded		
13.	Injection Molded		

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