

SABIC® PP 412MN40

Polypropylene Impact Copolymer

Saudi Basic Industries Corporation (SABIC)

Message:

A multi-purpose grade with very good flow properties, high stiffness and good impact strength. The material has a very low tendency for warpage and is suited for the production of thin wall packaging articles. Cycle times can be very short. It is formulated with a combined processing and antistatic additive package. This grade is widely applied in thin wall technical injection moulded articles and thin-walled containers, in particular where dimensional stability is important.

The product mentioned herein is in particular not tested and therefore not validated for use in pharmaceutical/medical applications.

General Information			
UL YellowCard	E111275-219027		
Additive	Antistatic		
	Processing Aid		
Features	Antistatic		
	Block Copolymer		
	Fast Molding Cycle		
	Good Dimensional Stability		
	Good Flow		
	Good Impact Resistance		
	High Stiffness		
	Low Warpage		
Uses	Thin-walled Packaging		
UL File Number	E111275		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.905	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	37	g/10 min	ASTM D1238, ISO 1133
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	95		ASTM D785
Shore Hardness (Shore D)	63		ISO 868
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
1% Secant ¹	1400	MPa	ASTM D638
--	1300	MPa	ISO 527-2/1A/1
Tensile Strength			
Yield ²	25.0	MPa	ASTM D638
Yield	25.0	MPa	ISO 527-2/1A/50

Tensile Elongation			
Yield ³	5.0	%	ASTM D638
Yield	5.0	%	ISO 527-2/1A/50
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-20°C	5.0	kJ/m ²	
0°C	7.0	kJ/m ²	
23°C	11	kJ/m ²	
Notched Izod Impact Strength			ISO 180/1A
-20°C	5.0	kJ/m ²	
0°C	6.5	kJ/m ²	
23°C	8.0	kJ/m ²	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed	90.0	°C	ASTM D648
0.45 MPa, Unannealed ⁴	85.0	°C	ISO 75-2/Bf
1.8 MPa, Unannealed	60.0	°C	ASTM D648
1.8 MPa, Unannealed ⁵	55.0	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	150	°C	ASTM D1525, ISO 306/A120 6 ⁶
--	75.0	°C	ASTM D1525, ISO 306/B120 7 ⁷
NOTE			
1.	5.0 mm/min		
2.	50 mm/min		
3.	50 mm/min		
4.	testbar 80*10*4mm		
5.	testbar 80*10*4mm		
6.	Rate B (120°C/h), Loading 1 (10 N)		
7.	Rate B (120°C/h), Loading 2 (50 N)		

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