SABIC® PP 108MF10

Polypropylene Impact Copolymer

Saudi Basic Industries Corporation (SABIC)

Message:

SABIC® PP 108MF10 is a super high impact copolymer which exhibits an unmatched cold impact resistance, high flow and excellent paint adhesion characteristics. Because of this unique and well balanced property profile our customers commonly use this material for painted car bumpers. SABIC® PP 108MF10 is a designated automotive grade.

General Information					
UL YellowCard	E111275-219026				
Additive	Nucleating Agent				
Features	High Flow				
	Impact Copolymer				
	Low Temperature Impact Resistance				
	Nucleated				
	Paintable				
	Ultra High Impact Resistance				
Uses	Automotive Applications				
	Automotive Bumper				
	•				
Forms	Pellets				
Processing Method	Injection Molding				
Physical	Nominal Value	Unit	Test Method		
Specific Gravity	0.905	g/cm³	ASTM D792, ISO 1183		
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	10	g/10 min	ASTM D1238, ISO 1133		
Molding Shrinkage			Internal Method		
Flow : 24 hr	1.5	%			
24 hr	1.5	%			
Hardness	Nominal Value	Unit	Test Method		
Shore Hardness (Shore D, Injection Molded)	52		ISO 868		
Mechanical	Nominal Value	Unit	Test Method		
Tensile Modulus					
1% Secant : Injection Molded ¹	1000	MPa	ASTM D638		
Injection Molded	1000	MPa	ISO 527-2/1A/1		
Tensile Strength					
Yield, Injection Molded ²	19.0	MPa	ASTM D638		
Yield, Injection Molded	19.0	MPa	ISO 527-2/1A/50		
Tensile Elongation					

Impact Nominal Value Unit Test Method						
Impact Nominal Value Unit Test Method	Yield, Injection Molded ³	8.0	%	ASTM D638		
Charpy Notched Impact Strength ISO 179/1eA 0°C, Injection Molded No Break 23°C, Injection Molded No Break Charpy Unnotched Impact Strength (23°C) No Break Notched Izod Impact ISO 179/1eU -20°C, Injection Molded No Break ASTM D256/ 0°C, Injection Molded No Break ASTM D256/ 23°C, Injection Molded No Break ASTM D256/ -20°C, Injection Molded No Break ASTM D256/ -20°C, Injection Molded 35 kJ/m² ISO 180/1A Thermal Nominal Value Unit Test Method Vicat Softening Temperature ASTM D1525/306/A120 5° ASTM D1525/306/A120 5° 50.0 °C 306/B120 6° NOTE 1. 5.0 mm/min 2. 50 mm/min 50 mm/min 4. Rate B (120°C/h), Loading 1 (10 N) No.	Yield, Injection Molded	8.0	%	ISO 527-2/1A/50		
0°C, Injection Molded No Break 23°C, Injection Molded No Break Charpy Unnotched Impact Strength (23°C) No Break 150 179/1eU Notched Izod Impact ASTM D256/ -20°C, Injection Molded No Break ASTM D256/ 0°C, Injection Molded No Break ASTM D256/ -20°C, Injection Molded No Break ASTM D1526 -20°C, Injection Molded No Molded No Break ASTM D1526 130 °C 306/A120 5° 50.0 °C 306/B120 6° NOTE So mm/min So mm/min 50 mm/min So mm/min ASTM D1526	Impact	Nominal Value	Unit	Test Method		
23°C, Injection Molded	Charpy Notched Impact Strength			ISO 179/1eA		
Charpy Unnotched Impact Strength (23°C) No Break ISO 179/1eU Notched Izod Impact -20°C, Injection Molded No Break ASTM D256/2 0°C, Injection Molded No Break ASTM D256/2 23°C, Injection Molded No Break ASTM D256/2 -20°C, Injection Molded 35 kJ/m² ISO 180/1A Thermal Nominal Value Unit Test Method Vicat Softening Temperature 130 °C 306/A120 5° 50.0 °C 306/B120 6° NOTE 1. 5.0 mm/min 2. 50 mm/min 3. 50 mm/min 4. Rate B (120°C/h), Loading 1 (10 N)	0°C, Injection Molded	No Break				
Notched Izod Impact -20°C, Injection Molded No Break ASTM D256/4 0°C, Injection Molded No Break ASTM D256/4 23°C, Injection Molded No Break ASTM D256/4 -20°C, Injection Molded 35 kJ/m² ISO 180/1A Thermal Nominal Value Unit Test Method Vicat Softening Temperature 130 °C 306/A120 5° 50.0 °C 306/B120 6° NOTE 1. 5.0 mm/min 2. 50 mm/min 3. 50 mm/min 4. Rate B (120°C/h), Loading 1 (10 N)	23°C, Injection Molded	No Break				
-20°C, Injection Molded No Break ASTM D256/ 0°C, Injection Molded No Break ASTM D256/ 23°C, Injection Molded No Break ASTM D256/ -20°C, Injection Molded 35 kJ/m² ISO 180/1A Thermal Nominal Value Unit Test Method Vicat Softening Temperature 130 °C 306/A120 5° 50.0 °C 306/B120 6° NOTE 1. 5.0 mm/min 2. 50 mm/min 3. Rate B (120°C/h), Loading 1 (10 N)	Charpy Unnotched Impact Strength (23°C)	No Break		ISO 179/1eU		
0°C, Injection Molded No Break ASTM D256A 23°C, Injection Molded No Break ASTM D256A -20°C, Injection Molded 35 kJ/m² ISO 180/1A Thermal Nominal Value Unit Test Method Vicat Softening Temperature ASTM D1525 130 °C 306/A120 5° 50.0 °C 306/B120 6° NOTE 1. 5.0 mm/min 2. 50 mm/min 3. 50 mm/min 4. Rate B (120°C/h), Loading 1 (10 N)	Notched Izod Impact					
23°C, Injection Molded No Break ASTM D256A -20°C, Injection Molded 35 kJ/m² ISO 180/1A Thermal Nominal Value Unit Test Method ASTM D1525 ASTM D1525 130 °C ASTM D1525 306/A120 5° ASTM D1525 306/B120 6° NOTE 1. 5.0 mm/min 2. 50 mm/min 3. 50 mm/min 4. Rate B (120°C/h), Loading 1 (10 N)	-20°C, Injection Molded	No Break		ASTM D256A		
-20°C, Injection Molded 35 kJ/m² ISO 180/1A Thermal Nominal Value Unit Test Method Vicat Softening Temperature 130 °C 306/A120 5 50.0 °C 306/B120 6 NOTE 1. 5.0 mm/min 2. 50 mm/min 3. 60 mm/min 4. Rate B (120°C/h), Loading 1 (10 N)	0°C, Injection Molded	No Break		ASTM D256A, ISO 180/1A		
Thermal Nominal Value Unit Test Method Vicat Softening Temperature ASTM D1525 130 °C 306/A120 5 6 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	23°C, Injection Molded	No Break		ASTM D256A, ISO 180/1A		
Vicat Softening Temperature 130 °C 306/A120 5 °C 50.0 °C 306/B120 6 °C NOTE 1. 5.0 mm/min 2. 50 mm/min 3. 50 mm/min 4. Rate B (120°C/h), Loading 1 (10 N)	-20°C, Injection Molded	35	kJ/m²	ISO 180/1A		
ASTM D1525 306/A120 5 C 50.0 °C 306/B120 6 S NOTE 1. 5.0 mm/min 2. 50 mm/min 3. 50 mm/min 4. Rate B (120°C/h), Loading 1 (10 N)	Thermal	Nominal Value	Unit	Test Method		
130 °C 306/A120 5 °C ASTM D1525 50.0 °C 306/B120 6 °C NOTE 1. 5.0 mm/min 2. 50 mm/min 3. 50 mm/min 4. Rate B (120°C/h), Loading 1 (10 N)	Vicat Softening Temperature					
50.0 °C 306/B120 6 5 NOTE 1. 5.0 mm/min 2. 50 mm/min 3. 50 mm/min 4. Rate B (120°C/h), Loading 1 (10 N)		130	°C	ASTM D1525, ISO 306/A120 5 ⁴		
1. 5.0 mm/min 2. 50 mm/min 3. 50 mm/min 4. Rate B (120°C/h), Loading 1 (10 N)		50.0	°C	ASTM D1525, ISO 306/B120 6 ⁵		
2. 50 mm/min 3. 50 mm/min 4. Rate B (120°C/h), Loading 1 (10 N)	NOTE					
3. 50 mm/min 4. Rate B (120°C/h), Loading 1 (10 N)	1.	5.0 mm/min				
4. Rate B (120°C/h), Loading 1 (10 N)	2.	50 mm/min				
	3.	50 mm/min				
5. Rate B (120°C/h), Loading 2 (50 N)	4.	Rate B (120°C/h), Loading 1 (10 N)				
· · · · · · · · · · · · · · · · · · ·	5.	Rate B (120°C/h), Loading 2 (50 N)				

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