

SABIC® PP PHC27-90

Polypropylene Impact Copolymer

Saudi Basic Industries Corporation (SABIC)

Message:

This grade combines very high impact resistance, also at low temperatures, with a good stiffness and offers very good flow properties. Due to its narrow molecular weight distribution and very low tendency to warp, it is highly suitable for injection moulding of crates & boxes, suitcase shells and automotive parts. This grade is UV-stabilised and also available in a general purpose additive package.

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

General Information			
UL YellowCard	E111275-219029		
Additive	UV Stabilizer		
Features	Block Copolymer		
	Good Flow		
	Good Stiffness		
	Good UV Resistance		
	Low Temperature Impact Resistance		
	Low Warpage		
	Narrow Molecular Weight Distribution		
	Ultra High Impact Resistance		
Uses	Automotive Applications		
	Crates		
	Luggage		
UL File Number	E111275		
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)	14	g/10 min	ASTM D1238, ISO 1133
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	85		ASTM D785
Shore Hardness (Shore D)	60		ISO 868
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
1% Secant ¹	1050	MPa	ASTM D638
--	1000	MPa	ISO 527-2/1A/1
Tensile Strength			
Yield ²	21.0	MPa	ASTM D638

Yield	21.0	MPa	ISO 527-2/1A/50
Tensile Elongation			
Yield ³	6.0	%	ASTM D638
Yield	6.0	%	ISO 527-2/1A/50
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-20°C	8.0	kJ/m ²	
0°C	15	kJ/m ²	
23°C	60	kJ/m ²	
Charpy Unnotched Impact Strength (23°C)	No Break		ISO 179/1eU
Notched Izod Impact			
-20°C	100	J/m	ASTM D256A
0°C	180	J/m	ASTM D256A
23°C	No Break		ASTM D256A, ISO 180/1A
-20°C	9.0	kJ/m ²	ISO 180/1A
0°C	13	kJ/m ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed	85.0	°C	ASTM D648
0.45 MPa, Unannealed ⁴	80.0	°C	ISO 75-2/Bf
1.8 MPa, Unannealed	55.0	°C	ASTM D648
1.8 MPa, Unannealed ⁵	50.0	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	145	°C	ASTM D1525, ISO 306/A120 6 ⁶
--	65.0	°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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