

SABIC® PP 4935

Polypropylene Random Copolymer

Saudi Basic Industries Corporation (SABIC)

Message:

SABIC® PP 4935 is a random copolymer with a very high molecular weight. This grade has a special stabilization package. The stabilization and particular molecular structure make it suited for use in extremely demanding applications like coolant expansion vessels in cars. The grade can be processed by injection molding. The material has a medium impact, is semi-transparent and has a good stress-whitening (low blushing) characteristic.

General Information			
Additive	Unspecified Stabilizer		
Features	Blush Resistant		
	Low Flow		
	Medium Impact Resistance		
	Random Copolymer		
	Stress Whitening Resistant		
	Ultra High Molecular Weight		
Uses	Automotive Applications		
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)	0.30	g/10 min	ASTM D1238, ISO 1133
Molding Shrinkage			Internal Method
Flow : 24 hr	1.9	%	
24 hr	1.9	%	
Hardness	Nominal Value	Unit	Test Method
Shore Hardness (Shore D, Injection Molded)	66		ISO 868
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
1% Secant ¹	1350	MPa	ASTM D638
Injection Molded	1300	MPa	ISO 527-2/1A/1
Tensile Strength			
Yield ²	22.0	MPa	ASTM D638
Yield, Injection Molded	35.0	MPa	ISO 527-2/1A/50
Tensile Elongation			
Yield ³	6.0	%	ASTM D638
Yield, Injection Molded	12	%	ISO 527-2/1A/50
Impact	Nominal Value	Unit	Test Method

Charpy Notched Impact Strength			ISO 179/1eA
0°C, Injection Molded	2.5	kJ/m ²	
23°C, Injection Molded	6.0	kJ/m ²	
Notched Izod Impact			
-20°C	20	J/m	ASTM D256A
0°C	25	J/m	ASTM D256A
23°C	400	J/m	ASTM D256A
-20°C, Injection Molded	1.5	kJ/m ²	ISO 180/1A
0°C, Injection Molded	2.5	kJ/m ²	ISO 180/1A
23°C, Injection Molded	12	kJ/m ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature			
--	145	°C	ASTM D1525, ISO 306/A120 4 ⁴
--	86.0	°C	ASTM D1525, ISO 306/B120 5 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)		
5.	Rate B (120°C/h), Loading 2 (50 N)		

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