

SABIC® PP RELY 71EK71PS

Polypropylene Impact Copolymer

Saudi Basic Industries Corporation (SABIC)

Message:

This block copolymer has a high molecular weight and is provided with a long-term heat stabilisation package. It exhibits high stiffness in combination with outstanding impact strength even at low temperatures. This material is used for extrusion of sewage pipe applications and can also be used for blow-moulding and sheet extrusion.

General Information			
Additive	Heat Stabilizer		
	Nucleating Agent		
Features	Block Copolymer		
	Good Impact Resistance		
	Heat Stabilized		
	High Molecular Weight		
	High Stiffness		
	Low Temperature Impact Resistance		
Uses	Blow Molding Applications		
	Piping		
	Sheet		
UL File Number	E111275		
Forms	Pellets		
Processing Method	Blow Molding		
	Extrusion		
	Pipe Extrusion		
	Sheet Extrusion		
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
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	95		ASTM D785
Shore Hardness (Shore D)	66		ISO 868
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
1% Secant ¹	1500	MPa	ASTM D638
--	1450	MPa	ISO 527-2/1A/1

Tensile Strength			
Yield ²	29.0	MPa	ASTM D638
Yield	28.0	MPa	ISO 527-2/1A/50
Tensile Elongation			
Yield ³	9.0	%	ASTM D638
Yield	8.0	%	ISO 527-2/1A/50
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-20°C	7.0	kJ/m ²	
0°C	20	kJ/m ²	
23°C	80	kJ/m ²	
Charpy Unnotched Impact Strength (23°C)	No Break		ISO 179/1eU
Notched Izod Impact			
-20°C	70	J/m	ASTM D256A
0°C	350	J/m	ASTM D256A
23°C	No Break		ASTM D256A, ISO 180/1A
-20°C	6.0	kJ/m ²	ISO 180/1A
0°C	35	kJ/m ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed	100	°C	ASTM D648
0.45 MPa, Unannealed ⁴	95.0	°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			
--	156	°C	ASTM D1525, ISO 306/A120 5 ⁶
--	81.0	°C	ASTM D1525, ISO 306/B120 6 ⁷
Oxidation Induction Time (200°C)	> 100	min	EN 728
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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