

GELOY™ XP7550 resin

Acrylonitrile Styrene Acrylate + PC

SABIC Innovative Plastics

Message:

Injection molding ASA-PC Blend suitable for exterior applications featuring outdoor weatherability, toughness, good heat performance and excellent flow.

General Information			
Features	Good Flow		
	Good Toughness		
	Good Weather Resistance		
	Medium Heat Resistance		
Uses	Outdoor Applications		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.11	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (220°C/10.0 kg)	14	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (260°C/5.0 kg)	26.0	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal Method
Flow ¹	0.50 to 0.70	%	
Flow : 3.20 mm	0.40 to 0.60	%	
Across Flow : 3.20 mm	0.50 to 0.70	%	
Water Absorption			ISO 62
Saturation, 23°C	0.80	%	
Equilibrium, 23°C, 50% RH	0.30	%	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	109		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ²	2550	MPa	ASTM D638
--	2550	MPa	ISO 527-2/1
Tensile Strength			
Yield ³	56.0	MPa	ASTM D638
Yield	55.0	MPa	ISO 527-2/50
Break ⁴	44.0	MPa	ASTM D638
Break	44.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁵	4.0	%	ASTM D638
Yield	3.8	%	ISO 527-2/50

Break ⁶	40	%	ASTM D638
Break	37	%	ISO 527-2/50
Flexural Modulus			
50.0 mm Span ⁷	2480	MPa	ASTM D790
-- ⁸	2400	MPa	ISO 178
Flexural Stress			
--	74.0	MPa	ISO 178
Yield, 50.0 mm Span ⁹	82.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ¹⁰ (23°C)	40	kJ/m ²	ISO 179/1eA
Notched Izod Impact			
-30°C	53	J/m	ASTM D256
23°C	380	J/m	ASTM D256
-30°C ¹¹	9.0	kJ/m ²	ISO 180/1A
23°C ¹²	35	kJ/m ²	ISO 180/1A
Instrumented Dart Impact			ASTM D3763
-30°C, Total Energy	10.0	J	
23°C, Total Energy	36.0	J	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 3.20 mm	104	°C	ASTM D648
0.45 MPa, Unannealed, 64.0 mm Span ¹³	103	°C	ISO 75-2/Bf
1.8 MPa, Unannealed, 3.20 mm	89.0	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹⁴	89.0	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	105	°C	ASTM D1525, ISO 306/B50 ¹⁵
--	106	°C	ISO 306/B120
CLTE			
Flow : -40 to 40°C	7.2E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Transverse : -40 to 40°C	7.9E-5	cm/cm/°C	ASTM E831
Transverse : -40 to 40°C	7.8E-5	cm/cm/°C	ISO 11359-2
Optical	Nominal Value		Test Method
Gardner Gloss (60°, Untextured)	94		ASTM D523
Injection	Nominal Value	Unit	
Drying Temperature	87.8 to 98.9	°C	
Drying Time	3.0 to 4.0	hr	
Drying Time, Maximum	8.0	hr	
Suggested Max Moisture	0.040	%	
Suggested Shot Size	40 to 80	%	
Rear Temperature	232 to 249	°C	
Middle Temperature	238 to 254	°C	

Front Temperature	243 to 260	°C
Nozzle Temperature	238 to 254	°C
Processing (Melt) Temp	254 to 271	°C
Mold Temperature	54.4 to 71.1	°C
Back Pressure	0.345 to 1.03	MPa
Screw Speed	30 to 80	rpm
Vent Depth	0.038 to 0.076	mm

NOTE

1.	Tensile Bar
2.	5.0 mm/min
3.	Type I, 50 mm/min
4.	Type I, 50 mm/min
5.	Type I, 50 mm/min
6.	Type I, 50 mm/min
7.	1.3 mm/min
8.	2.0 mm/min
9.	1.3 mm/min
10.	80*10*4 sp=62mm
11.	80*10*4
12.	80*10*4
13.	80*10*4 mm
14.	80*10*4 mm
15.	Rate B (120°C/h), Loading 2 (50 N)

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