

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 liquidity		
	Good weather resistance		
	Heat resistance, medium		
	Good toughness		
Uses	Outdoor application		
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 - 0.70	%	Internal method
Flow: 3.20mm	0.40 - 0.60	%	Internal method
Transverse flow: 3.20mm	0.50 - 0.70	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	0.80	%	ISO 62
Equilibrium, 23°C, 50% RH	0.30	%	ISO 62
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
Fracture ⁴	44.0	MPa	ASTM D638
Fracture	44.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁵	4.0	%	ASTM D638
Yield	3.8	%	ISO 527-2/50

Fracture ⁶	40	%	ASTM D638
Fracture	37	%	ISO 527-2/50
Flexural Modulus			
50.0mm span ⁷	2480	MPa	ASTM D790
-- ⁸	2400	MPa	ISO 178
Flexural Stress			
--	74.0	MPa	ISO 178
Yield, 50.0mm 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			
-30°C, Total Energy	10.0	J	ASTM D3763
23°C, Total Energy	36.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, unannealed, 3.20mm	104	°C	ASTM D648
0.45 MPa, unannealed, 64.0mm span ¹³	103	°C	ISO 75-2/Bf
1.8 MPa, unannealed, 3.20mm	89.0	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm 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
Linear thermal expansion coefficient			
Flow: -40 to 40°C	7.2E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Lateral: -40 to 40°C	7.9E-5	cm/cm/°C	ASTM E831
Lateral: -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 - 98.9	°C	
Drying Time	3.0 - 4.0	hr	
Drying Time, Maximum	8.0	hr	
Suggested Max Moisture	0.040	%	
Suggested Shot Size	40 - 80	%	
Rear Temperature	232 - 249	°C	
Middle Temperature	238 - 254	°C	

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

NOTE

1.	Tensile Bar
2.	5.0 mm/min
3.	Type 1, 50mm/min
4.	Type 1, 50mm/min
5.	Type 1, 50mm/min
6.	Type 1, 50mm/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.	标准 B (120°C/h), 载荷2 (50N)

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