

GELOY™ HRA170D resin

Acrylonitrile Styrene Acrylate + PC

SABIC Innovative Plastics Europe

Message:

GELOY HRA170D resin is a PC-ASA blend with permanent antistatic behavior. It is typically used in applications that require antidust properties and high impact retention. GELOY HRA170D resin is typically used in various outdoor and indoor applications requiring superior heat aging properties and colour stability.

General Information			
Features	Antistatic		
	Good Color Stability		
	Good Heat Aging Resistance		
	Good Impact Resistance		
Uses	Outdoor Applications		
RoHS Compliance	RoHS Compliant		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.16	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR)			
220°C/10.0 kg	8.5	g/10 min	ASTM D1238
260°C/5.0 kg	30	g/10 min	ASTM D1238
220°C/10.0 kg	8.0	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR)			ISO 1133
220°C/10.0 kg	8.00	cm ³ /10min	
260°C/5.0 kg	29.0	cm ³ /10min	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (L-Scale)	57		ISO 2039-2
Shore Hardness (Shore D)	77		ISO 868
Ball Indentation Hardness (H 358/30)	63.0	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2160	MPa	ASTM D638
--	2150	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	50.0	MPa	ASTM D638
Yield ³	54.0	MPa	ASTM D638
Yield	51.0	MPa	ISO 527-2/5
Yield	54.0	MPa	ISO 527-2/50
Break ⁴	58.0	MPa	ASTM D638
Break ⁵	59.0	MPa	ASTM D638

Break	65.0	MPa	ISO 527-2/5
Break	58.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁶	5.0	%	ASTM D638
Yield ⁷	5.0	%	ASTM D638
Yield	130	%	ISO 527-2/5
Yield	5.0	%	ISO 527-2/50
Break ⁸	160	%	ASTM D638
Break ⁹	140	%	ASTM D638
Break	130	%	ISO 527-2/50
Flexural Modulus ¹⁰	2100	MPa	ISO 178
Flexural Stress	80.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ¹¹			ISO 179/1eA
-30°C	17	kJ/m ²	
23°C	45	kJ/m ²	
Notched Izod Impact			
-30°C	140	J/m	ASTM D256
23°C	450	J/m	ASTM D256
-30°C ¹²	14	kJ/m ²	ISO 180/1A
23°C ¹³	45	kJ/m ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed, 64.0 mm Span ¹⁴	127	°C	ISO 75-2/Bf
1.8 MPa, Unannealed, 3.20 mm	106	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹⁵	104	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	137	°C	ISO 306/A50
--	138	°C	ISO 306/A120
--	121	°C	ISO 306/B50
--	122	°C	ISO 306/B120
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+13	ohms	IEC 60093
Injection	Nominal Value	Unit	
Drying Temperature	85.0 to 95.0	°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	230 to 250	°C	
Middle Temperature	235 to 255	°C	
Front Temperature	245 to 260	°C	

Nozzle Temperature	235 to 255	°C
Processing (Melt) Temp	255 to 270	°C
Mold Temperature	60.0 to 85.0	°C
Back Pressure	0.300 to 1.00	MPa
Screw Speed	30 to 80	rpm
Vent Depth	0.038 to 0.076	mm

NOTE

1.	5.0 mm/min
2.	Type I, 5.0 mm/min
3.	Type I, 50 mm/min
4.	Type I, 5.0 mm/min
5.	Type I, 50 mm/min
6.	Type I, 5.0 mm/min
7.	Type I, 50 mm/min
8.	Type I, 5.0 mm/min
9.	Type I, 50 mm/min
10.	2.0 mm/min
11.	80*10*4 sp=62mm
12.	80*10*4
13.	80*10*4
14.	80*10*4 mm
15.	80*10*4 mm

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