

GELOY™ HRA170E resin

Acrylonitrile Styrene Acrylate

SABIC Innovative Plastics Europe

Message:

GELOY HRA170E is a high heat resistant ASA+PC. It shows high impact retention, which can be positioned for various outdoor and indoor applications requiring superior heat aging properties and colour stability.

General Information			
Features	Impact resistance, high		
	Good heat aging resistance		
	Good color stability		
	Heat resistance, high		
Uses	Outdoor application		
RoHS Compliance	RoHS compliance		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	1.15	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (260°C/5.0 kg)	17.0	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow ¹	0.40 - 0.60	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	0.60	%	ISO 62
Equilibrium, 23°C, 50% RH	0.20	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	120		ISO 2039-2
Ball Indentation Hardness (H 358/30)	106	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2500	MPa	ISO 527-2/1
Tensile Stress			
Yield	55.0	MPa	ISO 527-2/5
Yield	62.0	MPa	ISO 527-2/50
Fracture	60.0	MPa	ISO 527-2/5
Fracture	62.0	MPa	ISO 527-2/50
Tensile Strain			
Yield	5.0	%	ISO 527-2/5
Yield	4.0	%	ISO 527-2/50
Fracture	130	%	ISO 527-2/5
Fracture	> 50	%	ISO 527-2/50
Flexural Modulus ²	2400	MPa	ISO 178
Flexural Stress	85.0	MPa	ISO 178

Taber Abrasion Resistance (1000 Cycles, 1000 g, CS-17 Wheel)	95.0	mg	Internal method
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ³			ISO 179/1eA
-30°C	12	kJ/m ²	ISO 179/1eA
23°C	45	kJ/m ²	ISO 179/1eA
Notched Izod Impact ⁴			ISO 180/1A
-30°C	15	kJ/m ²	ISO 180/1A
23°C	45	kJ/m ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature ⁵			
0.45 MPa, unannealed, 100 mm span	123	°C	ISO 75-2/Be
1.8 MPa, unannealed, 100 mm span	114	°C	ISO 75-2/Ae
Vicat Softening Temperature			
--	131	°C	ISO 306/B50
--	134	°C	ISO 306/B120
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
CLTE - Flow (23 to 60°C)	8.0E-5	cm/cm/°C	ISO 11359-2
Thermal Conductivity	0.20	W/m/K	ISO 8302
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms·cm	IEC 60093
Dielectric Strength (3.20 mm, in Oil)	17	kV/mm	IEC 60243-1
Relative Permittivity (1 MHz)	2.80		IEC 60250
Dissipation Factor (1 MHz)	0.013		IEC 60250
Comparative Tracking Index	225	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.6 mm, Testing by SABIC)	HB		UL 94
Glow Wire Flammability Index (3.2 mm)	750	°C	IEC 60695-2-12
Oxygen Index	22	%	ISO 4589-2
Injection	Nominal Value	Unit	
Drying Temperature	100 - 110	°C	
Drying Time	2.0 - 4.0	hr	
Suggested Max Moisture	0.020	%	
Hopper Temperature	60 - 80	°C	
Rear Temperature	230 - 260	°C	
Middle Temperature	250 - 290	°C	
Front Temperature	250 - 290	°C	
Nozzle Temperature	240 - 280	°C	
Processing (Melt) Temp	260 - 290	°C	
Mold Temperature	60 - 90	°C	
NOTE			

1.	Tensile Bar
2.	2.0 mm/min
3.	80*10*4 sp=62mm
4.	80*10*4
5.	120*10*4 mm

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

