

## SABIC Innovative Plastics Geloy HRA222 ASA (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , ASA Polymer , Polycarbonate (PC) , Polycarbonate/ASA Alloy, Unreinforced

### Material Notes:

GELLOY HRA222 is a multi-purpose, chlorine and bromine free flame retardant ASA+PC alloy for injection moulding processes. Typical properties as measured on natural material. This data was supplied by SABIC-IP for the Europe-Africa-Middle East region.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-Geloy-HRA222-ASA-Europe-Africa-Middle-East.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Geloy-HRA222-ASA-Europe-Africa-Middle-East.php)

Physical Properties	Metric	English	Comments
Density	1.17 g/cc	0.0423 lb/in <sup>3</sup>	ISO 1183
Moisture Absorption at Equilibrium	0.20 %	0.20 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.60 % @Temperature 23.0 °C	0.60 % @Temperature 73.4 °F	ISO 62
Linear Mold Shrinkage, Flow	0.0040 - 0.0060 cm/cm	0.0040 - 0.0060 in/in	on tensile bar; SABIC Method
Melt Flow	13 g/10 min @Load 2.16 kg, Temperature 260 °C	13 g/10 min @Load 4.76 lb, Temperature 500 °F	[cm <sup>3</sup> /10 min] Melt Volume Rate; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	45.0 MPa	6530 psi	50 mm/min; ISO 527
	51.0 MPa	7400 psi	5 mm/min; ISO 527
	56.0 MPa	8120 psi	Type I, 50 mm/min; ASTM D 638
	66.0 MPa	9570 psi	Type I, 5 mm/min; ASTM D 638
Tensile Strength, Yield	59.0 MPa	8560 psi	Type I, 5 mm/min; ASTM D 638
	60.0 MPa	8700 psi	50 mm/min; ISO 527
	62.0 MPa	8990 psi	5 mm/min; ISO 527
	63.0 MPa	9140 psi	Type I, 50 mm/min; ASTM D 638
Elongation at Break	>= 50 %	>= 50 %	50 mm/min; ISO 527
	>= 50 %	>= 50 %	5 mm/min; ISO 527
	>= 100 %	>= 100 %	Type I, 5 mm/min; ASTM D 638
	>= 100 %	>= 100 %	Type I, 50 mm/min; ASTM D 638
Elongation at Yield			Type I, 5 mm/min; ASTM D 638

Mechanical Properties	Metric	English	Comments
	4.3 %	4.3 %	Type I, 50 mm/min; ASTM D 638
	4.3 %	4.3 %	5 mm/min; ISO 527
	4.4 %	4.4 %	50 mm/min; ISO 527
Tensile Modulus	2.52 GPa	365 ksi	1 mm/min; ISO 527
	2.59 GPa	376 ksi	5 mm/min; ASTM D 638
Flexural Yield Strength	93.0 MPa	13500 psi	2 mm/min; ISO 178
Flexural Modulus	2.51 GPa	364 ksi	2 mm/min; ISO 178
Izod Impact, Notched	2.90 J/cm @Temperature 0.000 °C	5.43 ft-lb/in @Temperature 32.0 °F	ASTM D 256
	3.85 J/cm @Temperature 23.0 °C	7.21 ft-lb/in @Temperature 73.4 °F	ASTM D 256
Izod Impact, Notched (ISO)	9.00 kJ/m <sup>2</sup> @Temperature -30.0 °C	4.28 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	80*10*4; ISO 180/1A
	12.0 kJ/m <sup>2</sup> @Temperature 0.000 °C	5.71 ft-lb/in <sup>2</sup> @Temperature 32.0 °F	80*10*4; ISO 180/1A
	17.0 kJ/m <sup>2</sup> @Temperature 23.0 °C	8.09 ft-lb/in <sup>2</sup> @Temperature 73.4 °F	80*10*4; ISO 180/1A
Charpy Impact, Notched	1.50 J/cm <sup>2</sup> @Temperature 23.0 °C	7.14 ft-lb/in <sup>2</sup> @Temperature 73.4 °F	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	69.0 μm/m-°C @Temperature -30.0 - 80.0 °C	38.3 μin/in-°F @Temperature -22.0 - 176 °F	ISO 11359-2
CTE, linear, Transverse to Flow	71.0 μm/m-°C @Temperature -30.0 - 80.0 °C	39.4 μin/in-°F @Temperature -22.0 - 176 °F	ISO 11359-2
	75.0 μm/m-°C @Temperature 23.0 - 80.0 °C	41.7 μin/in-°F @Temperature 73.4 - 176 °F	ISO 11359-2
Deflection Temperature at 0.46 MPa (66 psi)	99.0 °C	210 °F	Edgew 120*10*4 sp=100mm; ISO 75/Be

Thermal Properties Deflection Temperature at 1.8 MPa (204 psi)	Metric	English	Comments Edge: 130*10*4 sp=100mm; ISO 75/A2
Vicat Softening Point	102 °C	216 °F	Rate B/50; ISO 306
	104 °C	219 °F	Rate B/120; ISO 306
	111 °C	232 °F	Rate A/50; ISO 306
Flammability, UL94	V-2	V-2	UL 94
	@Thickness 0.800 mm	@Thickness 0.0315 in	
	V-0	V-0	UL 94
	@Thickness 2.00 mm	@Thickness 0.0787 in	
	5VB	5VB	UL 94
	@Thickness 2.30 mm	@Thickness 0.0906 in	
	5VB	5VB	UL 94 by SABIC-IP
	@Thickness 2.30 mm	@Thickness 0.0906 in	
Oxygen Index	29 %	29 %	LOI; ISO 4589
Glow Wire Test	960 °C	1760 °F	Glow Wire Flammability Index; IEC 60695-2-12
	@Thickness 1.00 mm	@Thickness 0.0394 in	

Descriptive Properties	Value	Comments
Ball Pressure Test, 75°C +/- 2°C	PASSES	IEC 60695-10-2

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