

SABIC Innovative Plastics GELOY CR8510 ASA

Category : Polymer , Thermoplastic , ASA Polymer

Material Notes:

ASA with outstanding UV exposure performance for both exterior and interior applications. F1 Rated.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-GELOY-CR8510-ASA.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.08 g/cc	1.08 g/cc	ASTM D792
Density	1.07 g/cc	0.0387 lb/in ³	ISO 1183
Moisture Absorption	0.200 %	0.200 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.50 %	0.50 %	ISO 62
Linear Mold Shrinkage, Flow	0.0050 - 0.0080 cm/cm @Thickness 3.20 mm	0.0050 - 0.0080 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	6.3 g/10 min @Load 10.0 kg, Temperature 220 °C	6.3 g/10 min @Load 22.0 lb, Temperature 428 °F	ASTM D1238
	7.8 g/10 min @Load 3.80 kg, Temperature 280 °C	7.8 g/10 min @Load 8.38 lb, Temperature 536 °F	ASTM D1238
	11 g/10 min @Load 5.00 kg, Temperature 260 °C	11 g/10 min @Load 11.0 lb, Temperature 500 °F	ASTM D1238
Melt Index of Compound	6.0 g/10 min @Load 10.0 kg, Temperature 220 °C	6.0 g/10 min @Load 22.0 lb, Temperature 428 °F	MVR [cm ³ /10 min]; ISO 1133
	10 g/10 min @Load 5.00 kg, Temperature 260 °C	10 g/10 min @Load 11.0 lb, Temperature 500 °F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	93	93	ASTM D785
Tensile Strength at Break	33.0 MPa	4790 psi	Type I, 50 mm/min; ASTM D638
	35.0 MPa	5080 psi	50 mm/min; ISO 527

Tensile Strength, Yield Mechanical Properties	40.0 MPa Metric	5800 psi English	Type I, 50 mm/min; ASTM D638 Comments
	43.0 MPa	6240 psi	50 mm/min; ISO 527
Elongation at Break	19 %	19 %	50 mm/min; ISO 527
	60 %	60 %	Type I, 50 mm/min; ASTM D638
Elongation at Yield	3.3 %	3.3 %	50 mm/min; ISO 527
	3.6 %	3.6 %	Type I, 50 mm/min; ASTM D638
Tensile Modulus	1.97 GPa	286 ksi	5 mm/min; ASTM D638
	2.04 GPa	296 ksi	1 mm/min; ISO 527
	2.07 GPa	300 ksi	50 mm/min; ASTM D638
Flexural Yield Strength	64.0 MPa	9280 psi	2 mm/min; ISO 178
	68.0 MPa	9860 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.06 GPa	299 ksi	2 mm/min; ISO 178
	2.17 GPa	315 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	4.00 J/cm	7.49 ft-lb/in	ASTM D256
	0.600 J/cm	1.12 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Notched (ISO)	15.0 kJ/m ²	7.14 ft-lb/in ²	80*10*4; ISO 180/1A
	6.00 kJ/m ²	2.86 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	1.40 J/cm ²	6.66 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	4.00 J	2.95 ft-lb	ASTM D3763
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	30.0 J	22.1 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	84.0 μm/m-°C	46.7 μin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	

Thermal Properties	84.0 µm/m-°C Metric	46.7 µin/in-°F English	Comments ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
CTE, linear, Transverse to Flow	95.0 µm/m-°C	52.8 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	95.0 µm/m-°C	52.8 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
Hot Ball Pressure Test	<= 98.0 °C	<= 208 °F	IEC 60695-10-2
Deflection Temperature at 0.46 MPa (66 psi)	103 °C	217 °F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
	103 °C	217 °F	
	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	88.0 °C	190 °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
	89.0 °C	192 °F	
	90.0 °C	194 °F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	98.0 °C	208 °F	Rate B/50; ASTM D1525
	102 °C	216 °F	Rate B/50; ISO 306
	105 °C	221 °F	Rate B/120; ISO 306
Flammability, UL94	HB	HB	UL 94
	@Thickness 1.50 mm	@Thickness 0.0591 in	

Optical Properties	Metric	English	Comments
Gloss	94 %	94 %	untextured, 60 degrees; ASTM D523

Electrical Properties	Metric	English	Comments
Dielectric Strength	26.1 kV/mm	663 kV/in	in oil; IEC 60243-1
	@Thickness 1.50 mm	@Thickness 0.0591 in	
Dissipation Factor	0.018	0.018	ASTM D150
	@Frequency 100000 Hz	@Frequency 100000 Hz	
	0.026	0.026	ASTM D150

Electrical Properties	@Frequency 1.00e+6 Metric Hz	@Frequency 1.00e+6 English Hz	Comments
Comparative Tracking Index	600 V	600 V	IEC 60112

Descriptive Properties	Value	Comments
UV-light, water exposure/immersion	F1	UL 746C

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