

SABIC Innovative Plastics GELOY CR7020 ASA

Category : Polymer , Thermoplastic , ASA Polymer

Material Notes:

ASA copolymer. Profile/sheet coextrusion over ABS. Excellent weatherability, good flow/aesthetics and high impact.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-GELOY-CR7020-ASA.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.06 g/cc	1.06 g/cc	ASTM D792
Moisture Absorption at Equilibrium	0.55 %	0.55 %	ASTM D570
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm @Thickness 3.20 mm	0.0050 - 0.0070 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	7.0 g/10 min @Load 10.0 kg, Temperature 220 °C	7.0 g/10 min @Load 22.0 lb, Temperature 428 °F	ASTM D1238
	13 g/10 min @Load 5.00 kg, Temperature 260 °C	13 g/10 min @Load 11.0 lb, Temperature 500 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	86	86	ASTM D785
Tensile Strength at Break	34.0 MPa	4930 psi	Type I, 50 mm/min; ASTM D638
Tensile Strength, Yield	41.0 MPa	5950 psi	Type I, 50 mm/min; ASTM D638
Elongation at Break	40 %	40 %	Type I, 50 mm/min; ASTM D638
Tensile Modulus	1.79 GPa	260 ksi	50 mm/min; ASTM D638
Flexural Yield Strength	58.0 MPa	8410 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	1.79 GPa	260 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	3.20 J/cm	5.99 ft-lb/in	ASTM D256
	0.580 J/cm @Temperature -30.0 °C	1.09 ft-lb/in @Temperature -22.0 °F	ASTM D256
Dart Drop, Total Energy	25.0 J @Temperature 23.0 °C	18.4 ft-lb @Temperature 73.4 °F	ASTM D3763

Mechanical Properties	Metric	English	Comments
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Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	84.6 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	47.0 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	ASTM E 831
	@Temperature -30.0 - 0.000 $^{\circ}\text{C}$	@Temperature -22.0 - 32.0 $^{\circ}\text{F}$	
	86.4 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	48.0 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	ASTM E 831
	@Temperature -40.0 - 40.0 $^{\circ}\text{C}$	@Temperature -40.0 - 104 $^{\circ}\text{F}$	
	90.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	50.0 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	ASTM E 831
	@Temperature 0.000 - 100 $^{\circ}\text{C}$	@Temperature 32.0 - 212 $^{\circ}\text{F}$	
CTE, linear, Transverse to Flow	91.8 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	51.0 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	ASTM E 831
	@Temperature -40.0 - 40.0 $^{\circ}\text{C}$	@Temperature -40.0 - 104 $^{\circ}\text{F}$	
Deflection Temperature at 0.46 MPa (66 psi)	87.0 $^{\circ}\text{C}$	189 $^{\circ}\text{F}$	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
	90.0 $^{\circ}\text{C}$	194 $^{\circ}\text{F}$	unannealed; ASTM D648
	@Thickness 6.40 mm	@Thickness 0.252 in	
Deflection Temperature at 1.8 MPa (264 psi)	95.0 $^{\circ}\text{C}$	203 $^{\circ}\text{F}$	annealed; ASTM D648
	76.0 $^{\circ}\text{C}$	169 $^{\circ}\text{F}$	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
	79.0 $^{\circ}\text{C}$	174 $^{\circ}\text{F}$	unannealed; ASTM D648
	@Thickness 6.40 mm	@Thickness 0.252 in	
Vicat Softening Point	99.0 $^{\circ}\text{C}$	210 $^{\circ}\text{F}$	Rate B/50; ASTM D1525
UL RTI, Electrical	50.0 $^{\circ}\text{C}$	122 $^{\circ}\text{F}$	UL 746B
UL RTI, Mechanical with Impact	50.0 $^{\circ}\text{C}$	122 $^{\circ}\text{F}$	UL 746B
UL RTI, Mechanical without Impact	50.0 $^{\circ}\text{C}$	122 $^{\circ}\text{F}$	UL 746B
Flammability, UL94	HB	HB	UL 94
	@Thickness 1.49 mm	@Thickness 0.0587 in	

Optical Properties	Metric	English	Comments
Gloss	95 %	95 %	untextured, 60 degrees; ASTM D523

Electrical Properties	Metric	English	Comments
Surface Resistance	$\geq 1.00\text{e}+15$ ohm	$\geq 1.00\text{e}+15$ ohm	ASTM D257
Dielectric Constant	3.21	3.21	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	5.2	5.2	ASTM D150
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
Dielectric Strength	15.9 kV/mm	404 kV/in	in oil; ASTM D149
	@Thickness 3.20 mm	@Thickness 0.126 in	
Dissipation Factor	0.026	0.026	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	0.15	0.15	ASTM D150
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
Comparative Tracking Index	≥ 600 V	≥ 600 V	UL 746A
Hot Wire Ignition, HWI	15 - 30 sec	15 - 30 sec	UL 746A
High Amp Arc Ignition, HAI	≥ 120 arcs	≥ 120 arcs	UL 746A

Descriptive Properties	Value	Comments
UV-light, water exposure/immersion	F2	UL 746C

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