

SABIC Innovative Plastics GELOY CR7520 ASA

Category : Polymer , Thermoplastic , ASA Polymer

Material Notes:

General purpose ASA. Excellent weatherability, good flow/aesthetics and high impact. Rated F2 by UL.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-GELOY-CR7520-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	0.0050 - 0.0070 in/in	SABIC Method
	@Thickness 3.20 mm	@Thickness 0.126 in	
Melt Flow	7.0 g/10 min	7.0 g/10 min	ASTM D1238
	@Load 10.0 kg, Temperature 220 °C	@Load 22.0 lb, Temperature 428 °F	
	13 g/10 min	13 g/10 min	ASTM D1238
	@Load 5.00 kg, Temperature 260 °C	@Load 11.0 lb, Temperature 500 °F	
	19.5 g/10 min	19.5 g/10 min	ASTM D1238
	@Load 3.80 kg, Temperature 280 °C	@Load 8.38 lb, Temperature 536 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	86	86	ASTM D785
Tensile Strength at Break	29.0 MPa	4210 psi	50 mm/min; ISO 527
	34.0 MPa	4930 psi	Type I, 50 mm/min; ASTM D638
Tensile Strength, Yield	39.0 MPa	5660 psi	50 mm/min; ISO 527
	41.0 MPa	5950 psi	Type I, 50 mm/min; ASTM D638
Elongation at Break	40 %	40 %	Type I, 50 mm/min; ASTM D638
	44 %	44 %	50 mm/min; ISO 527
Elongation at Yield	3.1 %	3.1 %	50 mm/min; ISO 527
Tensile Modulus	1.79 GPa	260 ksi	50 mm/min; ASTM D638
	2.00 GPa	290 ksi	1 mm/min; ISO 527

Mechanical Properties	Metric	English	Comments
Flexural Yield Strength	46.0 MPa	6670 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
	2.00 GPa	290 ksi	2 mm/min; ISO 178
Izod Impact, Notched	3.20 J/cm	5.99 ft-lb/in	ASTM D256
	0.580 J/cm	1.09 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Notched (ISO)	19.0 kJ/m ²	9.04 ft-lb/in ²	80*10*4; ISO 180/1A
	4.00 kJ/m ²	1.90 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	1.70 J/cm ²	8.09 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	20.0 J	14.8 ft-lb	ASTM D3763
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	35.0 J	25.8 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	84.6 µm/m-°C	47.0 µin/in-°F	ASTM E 831
	@Temperature -30.0 - 0.000 °C	@Temperature -22.0 - 32.0 °F	
	86.4 µm/m-°C	48.0 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	90.0 µm/m-°C	50.0 µin/in-°F	ASTM E 831
	@Temperature 0.000 - 100 °C	@Temperature 32.0 - 212 °F	
CTE, linear, Transverse to Flow	91.8 µm/m-°C	51.0 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
Deflection Temperature at 0.46 MPa (66 psi)	91.0 °C	196 °F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
	87.0 °C	189 °F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	

Thermal Properties	90.0 °C Metric	194 °F English	Comments
	@Thickness 6.40 mm	@Thickness 0.252 in	
Deflection Temperature at 1.8 MPa (264 psi)	80.0 °C	176 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	95.0 °C	203 °F	annealed; ASTM D648
	76.0 °C	169 °F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
	79.0 °C	174 °F	unannealed; ASTM D648
	@Thickness 6.40 mm	@Thickness 0.252 in	
Vicat Softening Point	90.0 °C	194 °F	Rate B/50; ISO 306
	99.0 °C	210 °F	Rate B/50; ASTM D1525
UL RTI, Electrical	50.0 °C	122 °F	UL 746B
UL RTI, Mechanical with Impact	50.0 °C	122 °F	UL 746B
UL RTI, Mechanical without Impact	50.0 °C	122 °F	UL 746B
Flammability, UL94	HB	HB	UL 94
	@Thickness 1.47 mm	@Thickness 0.0579 in	

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

Electrical Properties	Metric	English	Comments
Surface Resistance	>= 1.00e+15 ohm	>= 1.00e+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	

Electrical Properties	0.15 Metric	0.15 English	Comments 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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