

SABIC Innovative Plastics GELOY XP4025 ASA+PC

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

Material Notes:

Available in a wide range of colors and is recommended for unpainted exterior applications.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-GELOY-XP4025-ASAPC.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.14 g/cc	1.14 g/cc	ASTM D792
Water Absorption	0.24 % @Time 86400 sec	0.24 % @Time 24.0 hour	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
Linear Mold Shrinkage, Transverse	0.0050 - 0.0070 cm/cm @Thickness 3.20 mm	0.0050 - 0.0070 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	6.7 g/10 min @Load 10.0 kg, Temperature 220 °C	6.7 g/10 min @Load 22.0 lb, Temperature 428 °F	ASTM D1238
	18 g/10 min @Load 5.00 kg, Temperature 260 °C	18 g/10 min @Load 11.0 lb, Temperature 500 °F	ASTM D1238
	31 g/10 min @Load 3.80 kg, Temperature 280 °C	31 g/10 min @Load 8.38 lb, Temperature 536 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	114	114	ASTM D785
Tensile Strength at Break	44.0 MPa	6380 psi	50 mm/min; ISO 527
Tensile Strength, Yield	58.0 MPa	8410 psi	50 mm/min; ISO 527
	59.0 MPa	8560 psi	Type I, 50 mm/min; ASTM D638
Elongation at Break	25 %	25 %	Type I, 50 mm/min; ASTM D638
	64 %	64 %	50 mm/min; ISO 527
Elongation at Yield	4.1 %	4.1 %	50 mm/min; ISO 527

Tensile Modulus Mechanical Properties	2.50 GPa Metric	363 ksi English	1 mm/min; ISO 527 Comments
Flexural Yield Strength	75.0 MPa	10900 psi	2 mm/min; ISO 178
	88.0 MPa	12800 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.50 GPa	363 ksi	2 mm/min; ISO 178
	2.58 GPa	374 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	1.70 J/cm	3.18 ft-lb/in	ASTM D256
	0.640 J/cm	1.20 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Notched (ISO)	21.0 kJ/m ²	9.99 ft-lb/in ²	80*10*4; ISO 180/1A
	5.00 kJ/m ²	2.38 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	3.70 J/cm ²	17.6 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	33.0 J	24.3 ft-lb	ASTM D3763
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	39.0 J	28.8 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	72.0 µm/m-°C	40.0 µin/in-°F	ASTM E 831
	@Temperature -20.0 - 150 °C	@Temperature -4.00 - 302 °F	
CTE, linear, Transverse to Flow	72.0 µm/m-°C	40.0 µin/in-°F	ASTM E 831
	@Temperature -20.0 - 150 °C	@Temperature -4.00 - 302 °F	
Thermal Conductivity	0.250 W/m-K	1.74 BTU-in/hr-ft ² -°F	ASTM C177
Deflection Temperature at 0.46 MPa (66 psi)	107 °C	225 °F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
	102 °C	216 °F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Deflection Temperature at 1.8 MPa (264 psi)	93.0 °C	199 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	90.0 °C	194 °F	

Thermal Properties	Metric @ Thickness 6.40 mm	English @ Thickness 0.252 in	unannealed; ASTM D648 Comments
Vicat Softening Point	109 °C	228 °F	Rate B/50; ISO 306
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 @Thickness 1.47 mm	HB @Thickness 0.0579 in	UL 94

Optical Properties	Metric	English	Comments
Gloss	90 %	90 %	untextured, 60 degrees; ASTM D523

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