

SABIC Innovative Plastics Geloy XTWM200 ASA

Category : Polymer , Thermoplastic , ASA Polymer , Acrylonitrile/Styrene/Acrylate (ASA), Unreinforced, Molded

Material Notes:

ASA resin for injection molding. Excellent flow, colorability and outdoor weathering capability. This data was supplied by SABIC-IP for the Americas region.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Geloy-XTWM200-ASA.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.10 g/cc	1.10 g/cc	ASTM D 792
Density	1.10 g/cc	0.0397 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	0.25 %	0.25 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.55 % @Temperature 23.0 °C	0.55 % @Temperature 73.4 °F	ISO 62
Linear Mold Shrinkage, Flow	0.0040 - 0.0070 cm/cm @Thickness 3.20 mm	0.0040 - 0.0070 in/in @Thickness 0.126 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.0040 - 0.0070 cm/cm @Thickness 3.20 mm	0.0040 - 0.0070 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	12 g/10 min @Load 10.0 kg, Temperature 220 °C	12 g/10 min @Load 22.0 lb, Temperature 428 °F	[cm ³ /10 min] Melt Volume Rate; ISO 1133
	13.3 g/10 min @Load 3.80 kg, Temperature 280 °C	13.3 g/10 min @Load 8.38 lb, Temperature 536 °F	ASTM D 1238
	15 g/10 min @Load 10.0 kg, Temperature 220 °C	15 g/10 min @Load 22.0 lb, Temperature 428 °F	ASTM D 1238
	18 g/10 min @Load 5.00 kg, Temperature 260 °C	18 g/10 min @Load 11.0 lb, Temperature 500 °F	ASTM D 1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	103	103	ASTM D 785
Tensile Strength at Break	34.0 MPa	4930 psi	50 mm/min; ISO 527

Mechanical Properties	35.0 MPa Metric	5080 psi English	Type I, 50 mm/min; ASTM D 638 Comments
Tensile Strength, Yield	47.0 MPa	6820 psi	50 mm/min; ISO 527
	50.0 MPa	7250 psi	Type I, 50 mm/min; ASTM D 638
Elongation at Break	20 %	20 %	Type I, 50 mm/min; ASTM D 638
	28 %	28 %	50 mm/min; ISO 527
Elongation at Yield	2.8 %	2.8 %	Type I, 50 mm/min; ASTM D 638
	2.8 %	2.8 %	50 mm/min; ISO 527
Tensile Modulus	2.39 GPa	347 ksi	5 mm/min; ASTM D 638
	2.52 GPa	365 ksi	50 mm/min; ASTM D 638
	2.70 GPa	392 ksi	1 mm/min; ISO 527
Flexural Yield Strength	72.0 MPa	10400 psi	2 mm/min; ISO 178
	75.0 MPa	10900 psi	1.3 mm/min, 50 mm span; ASTM D 790
Flexural Modulus	2.45 GPa	355 ksi	2 mm/min; ISO 178
	2.57 GPa	373 ksi	1.3 mm/min, 50 mm span; ASTM D 790
Izod Impact, Notched	0.240 J/cm @Temperature -30.0 °C	0.450 ft-lb/in @Temperature -22.0 °F	ASTM D 256
	0.650 J/cm @Temperature 23.0 °C	1.22 ft-lb/in @Temperature 73.4 °F	ASTM D 256
Izod Impact, Notched (ISO)	3.00 kJ/m² @Temperature -30.0 °C	1.43 ft-lb/in² @Temperature -22.0 °F	80*10*4; ISO 180/1A
	9.00 kJ/m² @Temperature 23.0 °C	4.28 ft-lb/in² @Temperature 73.4 °F	80*10*4; ISO 180/1A
Charpy Impact, Notched	1.00 J/cm² @Temperature 23.0 °C	4.76 ft-lb/in² @Temperature 73.4 °F	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
Impact Test	3.00 J @Temperature -30.0 °C	2.21 ft-lb @Temperature -22.0 °F	Instrumented Impact Total Energy; ASTM D 3763
	40.0 J @Temperature 23.0 °C	29.5 ft-lb @Temperature 73.4 °F	Instrumented Impact Total Energy; ASTM D 3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	88.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	48.9 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	ASTM E 831
	@Temperature -40.0 - 40.0 $^{\circ}\text{C}$	@Temperature -40.0 - 104 $^{\circ}\text{F}$	
	88.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	48.9 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	ISO 11359-2
	@Temperature -40.0 - 40.0 $^{\circ}\text{C}$	@Temperature -40.0 - 104 $^{\circ}\text{F}$	
CTE, linear, Transverse to Flow	95.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	52.8 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	ASTM E 831
	@Temperature -40.0 - 40.0 $^{\circ}\text{C}$	@Temperature -40.0 - 104 $^{\circ}\text{F}$	
	95.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	52.8 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	ISO 11359-2
	@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 $^{\circ}\text{F}$	Flatw 80*10*4 sp=64mm; ISO 75/Bf
	86.0 $^{\circ}\text{C}$	187 $^{\circ}\text{F}$	unannealed; ASTM D 648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Deflection Temperature at 1.8 MPa (264 psi)	78.0 $^{\circ}\text{C}$	172 $^{\circ}\text{F}$	Flatw 80*10*4 sp=64mm; ISO 75/Af
	77.0 $^{\circ}\text{C}$	171 $^{\circ}\text{F}$	unannealed; ASTM D 648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	88.0 $^{\circ}\text{C}$	190 $^{\circ}\text{F}$	Rate B/50; ISO 306
	93.0 $^{\circ}\text{C}$	199 $^{\circ}\text{F}$	Rate B/120; ISO 306
	95.0 $^{\circ}\text{C}$	203 $^{\circ}\text{F}$	Rate B/50; ASTM D 1525
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 D 523

Descriptive Properties	Value	Comments
Ball Pressure Test, 75 $^{\circ}\text{C}$ +/- 2 $^{\circ}\text{C}$	NA	IEC 60695-10-2
UV-light, water exposure/immersion	F1	UL 746C

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