SABIC Innovative Plastics Geloy XTWM206 ASA (Europe-Africa-Middle East)

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

Material Notes:

Next generation ASA optimized for outstanding weatherability, colorability and higher heat applications requiring UV exposure resistance.This data was supplied by SABIC-IP for the Europe-Africa-Middle East region.

Order this product through the following link:
http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Geloy-XTWM206-ASA-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.09 g/cc	1.09 g/cc	ASTM D 792
Density	1.09 g/cc	0.0394 lb/in³	ISO 1183
Moisture Absorption at Equilibrium	0.20 %	0.20 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.50 % @Temperature 23.0 °C	0.50 % @Temperature 73.4 °F	ISO 62
Linear Mold Shrinkage, Flow	0.0040 - 0.0070 cm/cm	0.0040 - 0.0070 in/in	on tensile bar; SABIC Method
	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 - 0.0075 cm/cm @Thickness 3.20 mm	0.0040 - 0.0075 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	7.1 g/10 min @Load 5.00 kg, Temperature 260 °C	7.1 g/10 min @Load 11.0 lb, Temperature 500 °F	ASTM D 1238
	7.2 g/10 min @Load 3.80 kg, Temperature 280 °C	7.2 g/10 min @Load 8.38 lb, Temperature 536 °F	ASTM D 1238
	8.8 g/10 min @Load 10.0 kg, Temperature 220 °C	8.8 g/10 min @Load 22.0 lb, Temperature 428 °F	ASTM D 1238
	9.0 g/10 min @Load 5.00 kg, Temperature 260 °C	9.0 g/10 min @Load 11.0 lb, Temperature 500 °F	[cm^3/10 min] Melt Volume Rate; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	100	100	ASTM D 785

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	36.0 MPa	5220 psi	Type I, 5 mm/min; ASTM D 638
	36.0 MPa	5220 psi	50 mm/min; ISO 527
	37.0 MPa	5370 psi	Type I, 50 mm/min; ASTM D 638
Tensile Strength, Yield	43.0 MPa	6240 psi	Type I, 5 mm/min; ASTM D 638
	45.0 MPa	6530 psi	50 mm/min; ISO 527
	46.0 MPa	6670 psi	Type I, 50 mm/min; ASTM D 638
Elongation at Break	26 %	26 %	Type I, 50 mm/min; ASTM D 638
	27 %	27 %	Type I, 5 mm/min; ASTM D 638
	36 %	36 %	50 mm/min; ISO 527
Elongation at Yield	2.5 %	2.5 %	Type I, 5 mm/min; ASTM D 638
	2.7 %	2.7 %	Type I, 50 mm/min; ASTM D 638
	2.8 %	2.8 %	50 mm/min; ISO 527
Tensile Modulus	2.35 GPa	341 ksi	1 mm/min; ISO 527
	2.36 GPa	342 ksi	5 mm/min; ASTM D 638
	2.40 GPa	348 ksi	50 mm/min; ASTM D 638
Flexural Yield Strength	64.0 MPa	9280 psi	2 mm/min; ISO 178
	74.0 MPa	10700 psi	1.3 mm/min, 50 mm span; ASTM D 790
Flexural Modulus	2.38 GPa	345 ksi	2 mm/min; ISO 178
	2.45 GPa	355 ksi	1.3 mm/min, 50 mm span; ASTM D 790
Izod Impact, Notched	0.350 J/cm @Temperature -30.0 °C	0.656 ft-lb/in @Temperature -22.0 °F	ASTM D 256
	2.10 J/cm @Temperature 23.0 °C	3.93 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
	15.0 kJ/m² @Temperature 23.0 °C	7.14 ft-lb/in² @Temperature 73.4 °F	80*10*4; ISO 180/1A
	1.10 J/cm²	5.23 ft-lb/in²	V-notch Edgew 80*10*4 sp=62mm;

Mechanical Properties	Metric	English	Comments
Charpy Impact, Notched	@Temperature 23.0 °C	@Temperature 73.4 °F	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
	36.0 J @Temperature 23.0 °C	26.6 ft-lb @Temperature 73.4 °F	Instrumented Impact Total Energy; ASTM D 3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	83.0 µm/m-°C @Temperature -40.0 - 40.0 °C	46.1 µin/in-°F @Temperature -40.0 - 104 °F	ISO 11359-2
	84.0 µm/m-°C @Temperature -40.0 - 40.0 °C	46.7 µin/in-°F @Temperature -40.0 - 104 °F	ASTM E 831
CTE, linear, Transverse to Flow	94.0 µm/m-°C @Temperature -40.0 - 40.0 °C	52.2 µin/in-°F @Temperature -40.0 - 104 °F	ASTM E 831
	94.0 µm/m-°C @Temperature -40.0 - 40.0 °C	52.2 µin/in-°F @Temperature -40.0 - 104 °F	ISO 11359-2
Deflection Temperature at 0.46 MPa (66 psi)	98.0 °C	208 °F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
	97.0 °C @Thickness 3.20 mm	207 °F @Thickness 0.126 in	unannealed; ASTM D 648
Deflection Temperature at 1.8 MPa (264 psi)	84.0 °C	183 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	84.0 °C @Thickness 3.20 mm	183 °F @Thickness 0.126 in	unannealed; ASTM D 648
Vicat Softening Point	95.0 °C	203 °F	Rate B/50; ISO 306
	98.0 °C	208 °F	Rate B/50; ASTM D 1525
	99.0 °C	210 °F	Rate B/120; ISO 306
Flammability, UL94	HB @Thickness 1.50 mm	HB @Thickness 0.0591 in	UL 94

Optical Properties	Metric	English	Comments
Gloss	93 %	93 %	untextured, 60 degrees; ASTM D 523

Optical Properties	Metric	English	Comments
Descriptive Properties		Value	Comments
Ball Pressure Test, 75°C +/- 2°C		Pass85	IEC 60695-10-2
UV-light, water exposure/immersion		F1	UL 746C

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