

SABIC Innovative Plastics Gelay XTPM309 ASA+PC (Europe-Africa-Middle East)

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

Material Notes:

XTPM309 is a modified HRA170 with improved processing stability. Typical properties measured on natural material. 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-Gelay-XTPM309-ASAPC-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Density	1.16 g/cc	0.0419 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	0.20 %	0.20 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.60 % @Temperature 23.0 °C	0.60 % @Temperature 73.4 °F	ISO 62
Melt Flow	4.0 g/10 min @Load 10.0 kg, Temperature 220 °C	4.0 g/10 min @Load 22.0 lb, Temperature 428 °F	[cm ³ /10 min] Melt Volume Rate; ISO 1133
	5.0 g/10 min @Load 5.00 kg, Temperature 240 °C	5.0 g/10 min @Load 11.0 lb, Temperature 464 °F	[cm ³ /10 min] Melt Volume Rate; ISO 1133
	13 g/10 min @Load 5.00 kg, Temperature 260 °C	13 g/10 min @Load 11.0 lb, Temperature 500 °F	[cm ³ /10 min] Melt Volume Rate; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	61.0 MPa	8850 psi	50 mm/min; ISO 527
	62.0 MPa	8990 psi	5 mm/min; ISO 527
	65.0 MPa	9430 psi	Type I, 5 mm/min; ASTM D 638
	68.0 MPa	9860 psi	Type I, 50 mm/min; ASTM D 638
Tensile Strength, Yield	55.0 MPa	7980 psi	5 mm/min; ISO 527
	56.0 MPa	8120 psi	Type I, 5 mm/min; ASTM D 638
	59.0 MPa	8560 psi	50 mm/min; ISO 527
	60.0 MPa	8700 psi	Type I, 50 mm/min; ASTM D 638

Elongation at Break Mechanical Properties	$\geq 100\%$ Metric	$\geq 100\%$ English	Type I, 50 mm/min; ASTM D 638 Comments
	$\geq 100\%$	$\geq 100\%$	Type I, 5 mm/min; ASTM D 638
	$\geq 100\%$	$\geq 100\%$	5 mm/min; ISO 527
	$\geq 100\%$	$\geq 100\%$	50 mm/min; ISO 527
Elongation at Yield	5.0 %	5.0 %	5 mm/min; ISO 527
	5.0 %	5.0 %	50 mm/min; ISO 527
	5.2 %	5.2 %	Type I, 5 mm/min; ASTM D 638
	5.3 %	5.3 %	Type I, 50 mm/min; ASTM D 638
Tensile Modulus	2.33 GPa	338 ksi	5 mm/min; ASTM D 638
	2.35 GPa	341 ksi	1 mm/min; ISO 527
Flexural Yield Strength	85.0 MPa	12300 psi	2 mm/min; ISO 178
Flexural Modulus	2.25 GPa	326 ksi	2 mm/min; ISO 178
Izod Impact, Notched	0.850 J/cm @Temperature -30.0 °C	1.59 ft-lb/in @Temperature -22.0 °F	ASTM D 256
	3.45 J/cm @Temperature -20.0 °C	6.46 ft-lb/in @Temperature -4.00 °F	ASTM D 256
	5.45 J/cm @Temperature -10.0 °C	10.2 ft-lb/in @Temperature 14.0 °F	ASTM D 256
	6.35 J/cm @Temperature 0.000 °C	11.9 ft-lb/in @Temperature 32.0 °F	ASTM D 256
	6.85 J/cm @Temperature 23.0 °C	12.8 ft-lb/in @Temperature 73.4 °F	ASTM D 256
Izod Impact, Notched (ISO)	16.0 kJ/m ² @Temperature -30.0 °C	7.61 ft-lb/in ² @Temperature -22.0 °F	80*10*4; ISO 180/1A
	18.0 kJ/m ² @Temperature -20.0 °C	8.57 ft-lb/in ² @Temperature -4.00 °F	80*10*4; ISO 180/1A
	28.0 kJ/m ² @Temperature -10.0 °C	13.3 ft-lb/in ² @Temperature 14.0 °F	80*10*4; ISO 180/1A
	47.0 kJ/m ² @Temperature 0.000 °C	22.4 ft-lb/in ² @Temperature 32.0 °F	80*10*4; ISO 180/1A

Mechanical Properties	Metric	English	Comments
	35.0 kJ/m ²	26.2 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	2.40 J/cm ²	11.4 ft-lb/in ²	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	6.10 J/cm ²	29.0 ft-lb/in ²	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	80.0 µm/m-°C	44.4 µin/in-°F	ISO 11359-2
	@Temperature 23.0 - 60.0 °C	@Temperature 73.4 - 140 °F	
CTE, linear, Transverse to Flow	80.0 µm/m-°C	44.4 µin/in-°F	ISO 11359-2
	@Temperature 23.0 - 60.0 °C	@Temperature 73.4 - 140 °F	
Hot Ball Pressure Test	<= 129 °C	<= 264 °F	IEC 60695-10-2
Deflection Temperature at 0.46 MPa (66 psi)	129 °C	264 °F	Edgew 120*10*4 sp=100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	109 °C	228 °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
Vicat Softening Point	128 °C	262 °F	Rate B/50; ISO 306
	130 °C	266 °F	Rate B/120; ISO 306
	141 °C	286 °F	Rate A/50; ISO 306

Electrical Properties	Metric	English	Comments
Volume Resistivity	6.20e+15 ohm-cm	6.20e+15 ohm-cm	ASTM D 257
Surface Resistance	2.40e+16 ohm	2.40e+16 ohm	ASTM D 257
Dielectric Strength	27.1 kV/mm	688 kV/in	in oil; ASTM D 149
	@Thickness 1.60 mm	@Thickness 0.0630 in	
Dissipation Factor	0.0126	0.0126	ASTM D 150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

Descriptive Properties	Value	Comments
Ball Pressure Test, 75°C +/- 2°C	PASSES	IEC 60695-10-2

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