

SABIC Innovative Plastics SABIC PPCOMPOUND 8620 PP

Category : Polymer , Thermoplastic , Polypropylene (PP)

Material Notes:

SABIC[®] PPcompound 8620 is a mineral filled, impact modified polypropylene TPO. This material combines scratch resistance and good flow with exterior automotive weathering stability. It was originally designed for painted or unpainted automotive bumper fascia applications where a combination of high stiffness and cold temperature ductility is required. The IMDS is 209747700.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-SABIC-PPCOMPOUND-8620-PP.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.03 g/cc	1.03 g/cc	ASTM D792
Density	1.03 g/cc	0.0372 lb/in ³	ISO 1183
Linear Mold Shrinkage, Flow	0.0040 cm/cm	0.0040 in/in	48 hrs @ 23 [°] C, flow; SABIC Method
	0.0050 cm/cm	0.0050 in/in	1 hr @ 80 [°] C, flow; SABIC Method
	0.0060 cm/cm	0.0060 in/in	30 min @ 120 [°] C, flow; SABIC Method
Linear Mold Shrinkage, Transverse	0.0070 cm/cm	0.0070 in/in	48 hrs @ 23 [°] C, xflow; SABIC Method
	0.0080 cm/cm	0.0080 in/in	1 hr @ 80 [°] C, xflow; SABIC Method
	0.0090 cm/cm	0.0090 in/in	30 min @ 120 [°] C, xflow; SABIC Method
Melt Flow	23 g/10 min @Load 2.16 kg, Temperature 230 [°] C	23 g/10 min @Load 4.76 lb, Temperature 446 [°] F	ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	54	54	ISO 868
Tensile Strength at Break	11.0 MPa	1600 psi	50 mm/min, 1A; ISO 527
	12.0 MPa	1740 psi	Type I, 50 mm/min; ASTM D638
Tensile Strength, Yield	17.0 MPa	2470 psi	Type I, 50 mm/min; ASTM D638
	17.0 MPa	2470 psi	50 mm/min; ISO 527
Elongation at Break	39 %	39 %	50 mm/min; ISO 527
	101 %	101 %	Type I, 50 mm/min; ASTM D638
Elongation at Yield	4.4 %	4.4 %	50 mm/min; ISO 527

Mechanical Properties	Metric	English	Comments
Tensile Modulus	1.68 GPa	244 ksi	1 mm/min; ISO 527
	1.90 GPa	276 ksi	50 mm/min; ASTM D638
Flexural Modulus	1.38 GPa	200 ksi	1.3 mm/min, 50 mm span; ASTM D790
	1.74 GPa	252 ksi	2 mm/min, 64mm span; ISO 178
Izod Impact, Notched	5.41 J/cm	10.1 ft-lb/in	63.5*12.7*3.2mm, Cut; ASTM D256
Izod Impact, Unnotched	NB	NB	63.5*12.7*3.2mm, Cut; ASTM D4812
Izod Impact, Notched (ISO)	49.0 kJ/m ²	23.3 ft-lb/in ²	80*10*4mm, Cut; ISO 180/1A
	6.00 kJ/m ²	2.86 ft-lb/in ²	80*10*4mm, Cut; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	25.0 kJ/m ²	11.9 ft-lb/in ²	80*10*4mm, Cut; ISO 180/1A
	@Temperature 0.000 °C	@Temperature 32.0 °F	
	5.80 J/cm ²	27.6 ft-lb/in ²	80*10*4mm, Cut; ISO 179/1eA
Dart Drop, Total Energy	0.700 J/cm ²	3.33 ft-lb/in ²	80*10*4mm, Cut; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	2.50 J/cm ²	11.9 ft-lb/in ²	80*10*4mm, Cut; ISO 179/1eA
Dart Drop, Total Energy	@Temperature 0.000 °C	@Temperature 32.0 °F	
	16.0 J	11.8 ft-lb	Instrumented Impact Energy @ peak, 6.6 m/s; ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Dart Drop, Total Energy	17.0 J	12.5 ft-lb	Instrumented Impact Energy @ peak @ 2.2 m/s; ASTM D3763
	@Temperature 0.000 °C	@Temperature 32.0 °F	
	21.0 J	15.5 ft-lb	Instrumented Impact Energy @ peak, - 30°C @ 2.2 m/s; ASTM D3763
	@Temperature -30.0 °C	@Temperature -22.0 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	41.0 Åµm/m-Å°C	22.8 Åµin/in-Å°F	ISO 11359-2
	@Temperature -30.0 - 100 Å°C	@Temperature -22.0 - 212 Å°F	

Thermal Properties	Metric 16.7 Åµm/m-Å°C	English 52.0 Åµin/in-Å°F	Comments
CTE, linear, Transverse to Flow	@Temperature -30.0 - 100 Å°C	@Temperature -22.0 - 212 Å°F	ISO 11359-2
Deflection Temperature at 0.46 MPa (66 psi)	100 Å°C	212 Å°F	80*10*4mm, Cut; ISO 75-1&2
	98.0 Å°C	208 Å°F	ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Deflection Temperature at 1.8 MPa (264 psi)	56.0 Å°C	133 Å°F	80*10*4mm, Cut; ISO 75-1&2
	52.0 Å°C	126 Å°F	ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	123 Å°C	253 Å°F	10N, 50Å°C/hr; ISO 306

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