SABIC Innovative Plastics Lexan® 905 PC Copolymer (Asia Pacific)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Lexan 905 resin is a high flow, opaque, flame retardant polycarbonate resin blend. It is designed with non-chlorinated, non-brominated FR systems with UL-94 listing of both V0 and 5V ratings. Its excellent processability, combined with good impact, heat and all opaque colors for aesthetics makes it an excellent candidate for thin wall applications.

Order this product through the following link:
http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-905-PC-Copolymer-Asia-Pacific.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.19 g/cc	1.19 g/cc	ASTM D792
Density	1.19 g/cc	0.0430 lb/in³	ISO 1183
Moisture Absorption	0.0700 %	0.0700 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.26 %	0.26 %	ISO 62
Linear Mold Shrinkage, Flow	0.0060 - 0.0080 cm/cm @Thickness 3.20 mm	0.0060 - 0.0080 in/in @Thickness 0.126 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.0060 - 0.0080 cm/cm @Thickness 3.20 mm	0.0060 - 0.0080 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	30 g/10 min @Load 1.20 kg, Temperature 300 °C	30 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D1238
Melt Index of Compound	29 g/10 min @Load 1.20 kg, Temperature 300 °C	29 g/10 min @Load 2.65 lb, Temperature 572 °F	MVR [cm^3/10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	50.0 MPa	7250 psi	50 mm/min; ISO 527
	51.0 MPa	7400 psi	Type I, 50 mm/min; ASTM D638
Tensile Strength, Yield	55.0 MPa	7980 psi	50 mm/min; ISO 527
	56.0 MPa	8120 psi	Type I, 50 mm/min; ASTM D638
Elongation at Break	97 %	97 %	50 mm/min; ISO 527
	102 %	102 %	Type I, 50 mm/min; ASTM D638
Elongation at Yield	5.7 %	5.7 %	Type I, 50 mm/min; ASTM D638

Mechanical Properties	Metric	English	Comments
Tensile Modulus	2.20 GPa	319 ksi	1 mm/min; ISO 527
	2.25 GPa	326 ksi	50 mm/min; ASTM D638
Flexural Yield Strength	92.0 MPa	13300 psi	2 mm/min; ISO 178
	93.0 MPa	13500 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.15 GPa	312 ksi	1.3 mm/min, 50 mm span; ASTM D790
	2.30 GPa	334 ksi	2 mm/min; ISO 178
Izod Impact, Notched	7.40 J/cm	13.9 ft-lb/in	ASTM D256
	2.30 J/cm @Temperature -30.0 °C	4.31 ft-lb/in @Temperature -22.0 °F	ASTM D256
Izod Impact, Unnotched	21.5 J/cm	40.3 ft-lb/in	ASTM D4812
	20.0 J/cm @Temperature -30.0 °C	37.5 ft-lb/in @Temperature -22.0 °F	ASTM D4812
Izod Impact, Notched (ISO)	58.0 kJ/m²	27.6 ft-lb/in²	80*10*3; ISO 180/1A
	21.0 kJ/m² @Temperature -30.0 °C	9.99 ft-lb/in² @Temperature -22.0 °F	80*10*3; ISO 180/1A
Izod Impact, Unnotched (ISO)	184 kJ/m²	87.6 ft-lb/in²	80*10*3; ISO 180/1U
	183 kJ/m² @Temperature -30.0 °C	87.1 ft-lb/in² @Temperature -22.0 °F	80*10*3; ISO 180/1U
Charpy Impact Unnotched	13.5 J/cm²	64.2 ft-lb/in²	Edgew 80*10*3 sp=62mm; ISO 179/1eU
	13.4 J/cm² @Temperature -30.0 °C	63.8 ft-lb/in² @Temperature -22.0 °F	Edgew 80*10*3 sp=62mm; ISO 179/1eU
Charpy Impact, Notched	5.00 J/cm²	23.8 ft-lb/in²	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	1.60 J/cm² @Temperature -30.0 °C	7.61 ft-lb/in² @Temperature -22.0 °F	Edgew 80*10*3 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	69.0 J @Temperature 23.0 °C	50.9 ft-lb @Temperature 73.4 °F	ASTM D3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	69.0 µm/m-°C @Temperature -40.0 - 40.0 °C	38.3 µin/in-°F @Temperature -40.0 - 104 °F	ASTM E 831
	70.0 µm/m-°C @Temperature 23.0 - 80.0 °C	38.9 µin/in-°F @Temperature 73.4 - 176 °F	ISO 11359-2
CTE, linear, Transverse to Flow	69.0 µm/m-°C @Temperature 23.0 - 80.0 °C	38.3 µin/in-°F @Temperature 73.4 - 176 °F	ISO 11359-2
	71.0 µm/m-°C @Temperature -40.0 - 40.0 °C	39.4 µin/in-°F @Temperature -40.0 - 104 °F	ASTM E 831
Deflection Temperature at 0.46 MPa (66 psi)	131 °C	268 °F	Edgew 120*10*4 sp=100mm; ISO 75/Be
	130 °C @Thickness 3.20 mm	266 °F @Thickness 0.126 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	119 °C	246 °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
	118 °C @Thickness 3.20 mm	244 °F @Thickness 0.126 in	unannealed; ASTM D648
Vicat Softening Point	136 °C	277 °F	Rate B/50; ASTM D1525
	137 °C	279 °F	Rate B/50; ISO 306
	138 °C	280 °F	Rate B/120; ISO 306
Flammability, UL94	V-1 @Thickness 0.750 mm	V-1 @Thickness 0.0295 in	UL 94
	V-0 @Thickness 1.10 mm	V-0 @Thickness 0.0433 in	UL 94
	5VB @Thickness 2.00 mm	5VB @Thickness 0.0787 in	UL 94
	5VA @Thickness 2.80 mm	5VA @Thickness 0.110 in	UL 94
Glow Wire Test	875 °C	1610 °F	IEC 60695-2-13

Thermal Properties	Metric	English	Comments
	960 °C @Thickness 2.00 mm	1760 °F @Thickness 0.0787 in	2-12

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 - 1.00e+16 ohm-cm	1.00e+15 - 1.00e+16 ohm-cm	ASTM D257
Surface Resistance	1.00e+15 - 1.00e+16 ohm	1.00e+15 - 1.00e+16 ohm	ASTM D257
Comparative Tracking Index	175 - 250 V	175 - 250 V	UL 746A

Descriptive Properties	Value	Comments
Ball Pressure Test, 125°C +/- 2°C	Pass	IEC 60695-10-2

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