

SABIC® PC FL405 resin

Polycarbonate
SABIC Innovative Plastics

Message:

Various weight reductions at 0.250" (6.38 mm) wall. Impact resistant, superior processing, excellent surface. UL94 V-0 at 0.120

General Information			
Features	Excellent appearance		
	Impact resistance, good		
	Foamable property		
	Workability, good		
Processing Method	Foam treatment		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			ASTM D792
-- ¹	1.08	g/cm ³	ASTM D792
--	1.20	g/cm ³	ASTM D792
Molding Shrinkage - Flow (6.40 mm)	0.60 - 0.80	%	Internal method
Water Absorption			ASTM D570
24 hr	0.14	%	ASTM D570
Equilibrium, 23°C	0.31	%	ASTM D570
Foam - Physical ²	10	%	Internal method
Foam - Mechanical ³	10	%	Internal method
Foam - Impact ⁴	10	%	Internal method
Foam - Thermal ⁵	10	%	Internal method
Foam - Electrical ⁶	20	%	Internal method
Foam - Flame Class Minimum Density	1.060	g/cm ³	Internal method
Radiant Panel Listing (UL)	YES		
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (6.40 mm)	2100	MPa	ASTM D638
Tensile Strength (Yield, 6.35 mm)	54.5	MPa	ASTM D638
Tensile Elongation (Break, 6.35 mm)	7.2	%	ASTM D638
Flexural Modulus (6.40 mm)	2480	MPa	ASTM D790
Flexural Strength (Yield, 6.40 mm)	86.2	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Unnotched Izod Impact (23°C)	2700	J/m	ASTM D4812
Dart Drop Impact (23°C)	61.0	J	Internal method
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, unannealed, 6.40mm	138	°C	ASTM D648

1.8 MPa, unannealed, 6.40mm	127	°C	ASTM D648
CLTE - Flow (-40 to 95°C)	6.7E-5	cm/cm/°C	ASTM E831
Specific Heat	1340	J/kg/°C	ASTM C351
RTI Elec	80.0	°C	UL 746
RTI Imp	80.0	°C	UL 746
RTI	80.0	°C	UL 746

Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.1E+17	ohms	ASTM D257
Volume Resistivity	3.5E+17	ohms·cm	ASTM D257
Dielectric Constant			ASTM D150
100 Hz	2.42		ASTM D150
1 MHz	2.43		ASTM D150
Dissipation Factor			ASTM D150
100 Hz	1.1E-3		ASTM D150
1 MHz	4.4E-3		ASTM D150

Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
3.05 mm	V-0		UL 94
6.10 mm	5VA		UL 94
Oxygen Index	39	%	ASTM D2863

Additional Information

Structural Foam Molding - Blowing Agent, Chemical System: FLC298
 Structural Foam Molding - Blowing Agent, Physical System: Nitrogen Gas
 Structural Foam Molding - Concentration Range (Blowing Agent): 3 - 5 %
 Structural Foam Molding - Drying Temperature (Blowing Agent): 104 °C
 Structural Foam Molding - Drying Temperature (Resin): 121 °C
 Structural Foam Molding - Drying Time (Blowing Agent): 4 hrs
 Structural Foam Molding - Drying Time (Resin): 3 - 4 hrs
 Structural Foam Molding - Drying Time (Resin, Cumulative): 48 hrs
 Structural Foam Molding - Front Temperature: 277 - 299 °C
 Structural Foam Molding - Melt Temperature: 274 - 299 °C
 Structural Foam Molding - Middle Temperature: 277 - 299 °C
 Structural Foam Molding - Mold Temperature: 71 - 93 °C
 Structural Foam Molding - Nozzle Temperature: 265 - 288 °C
 Structural Foam Molding - Rear Temperature: 271 - 293 °C
 Structural Foam Molding - Recommended Concentration (Blowing Agent): 1.5 %

NOTE

1. Foam molded
2. 6.4 mm wt reduction
3. 6.4 mm wt reduction
4. 6.4 mm wt reduction
5. 6.4 mm wt reduction
6. 6.4 mm wt reduction

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