

## Americas Styrenics Styron® 685 Polystyrene (discontinued \*\*)

Category : Polymer , Thermoplastic , Polystyrene (PS) , Polystyrene, Heat Resistant Grade

## Material Notes:

STYRON® 685 general purpose polystyrene resin is a high heat resin used in consumer electronics and housewares. It offers excellent clarity, good moldability for use in hot runner systems. When used unmodified for the manufacture of food contact articles STYRON 685 complies with the US Food, Drug and Cosmetic Act and Food Additive Regulations 21 CFR 177.1640. The regulations should be consulted for complete details. Data provided by Dow Chemical. Americas Styrenics was formed in 2008 as a joint venture between Dow Chemical and Chevron Phillips Chemical Company. Styron was a Dow trade name before the JV formation.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Americas-Styrenics-Styron-685-Polystyrene-nbspdiscontinued-.php](http://www.lookpolymers.com/polymer_Americas-Styrenics-Styron-685-Polystyrene-nbspdiscontinued-.php)

Physical Properties	Metric	English	Comments
Density	1.04 g/cc	0.0376 lb/in <sup>3</sup>	ASTM Data
Linear Mold Shrinkage	0.0050 cm/cm	0.0050 in/in	
Melt Flow	2.2 g/10 min @Load 5.00 kg, Temperature 200 °C	2.2 g/10 min @Load 11.0 lb, Temperature 392 °F	ASTM Data

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	52.4 MPa	7600 psi	ASTM Data
Tensile Strength, Yield	52.4 MPa	7600 psi	ASTM Data
Elongation at Break	2.2 %	2.2 %	ASTM Data
Elongation at Yield	2.1 %	2.1 %	ISO Data
Tensile Modulus	3.20 GPa	464 ksi	ASTM Data
Charpy Impact Unnotched	2.00 J/cm <sup>2</sup>	9.52 ft-lb/in <sup>2</sup>	ISO Data
	2.00 J/cm <sup>2</sup>	9.52 ft-lb/in <sup>2</sup>	ISO Data, Low Temp
Charpy Impact, Notched	0.200 J/cm <sup>2</sup>	0.952 ft-lb/in <sup>2</sup>	ISO Data
	0.200 J/cm <sup>2</sup>	0.952 ft-lb/in <sup>2</sup>	ISO Data, Low Temp

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	90.0 µm/m-°C @Temperature 20.0 °C	50.0 µin/in-°F @Temperature 68.0 °F	ASTM data
Specific Heat Capacity	2.10 J/g-°C	0.502 BTU/lb-°F	

Thermal Properties	0.123 W/m-K Metric	0.854 BTU-in/hr-ft <sup>2</sup> -°F English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	96.7 °C	206 °F	Unannealed; ASTM Data
Deflection Temperature at 1.8 MPa (264 psi)	83.3 °C	182 °F	Unannealed; 101°C (214°F) annealed; ASTM Data
Vicat Softening Point	108 °C	226 °F	
Flammability, UL94	HB @Thickness 3.20 mm	HB @Thickness 0.126 in	

Optical Properties	Metric	English	Comments
Haze	1.0 %	1.0 %	
Transmission, Visible	90 %	90 %	

## Contact Songhan Plastic Technology Co.,Ltd.

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