

# STYRON™ 685F

General Purpose Polystyrene Resin

Trinseo

Message:

STYRON™ 685F is a general purpose polystyrene resin with high heat resistance, high stiffness and strength. It is recommended for both extrusion and injection molding applications.

Main Characteristics:

High heat

Applications:

Foam sheet

Household ware

Complies with

U.S. FDA 21 CFR 177.1640

Consult Regulations for details.

General Information			
Features	High Heat Resistance		
	High Stiffness		
	High Strength		
Uses	General Purpose		
	Sheet		
Agency Ratings	FDA 21 CFR 177.1640 2		
Forms	Pellets		
Processing Method	Extrusion		
	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.04	g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	2.2	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.40 to 0.70	%	ASTM D955
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			ASTM D638
Yield, Compression Molded	41.4	MPa	
Yield, Injection Molded	55.2	MPa	
Break, Compression Molded	41.4	MPa	
Break, Injection Molded	55.2	MPa	
Tensile Elongation			ASTM D638
Break, Compression Molded	1.0	%	
Break, Injection Molded	2.0	%	
Flexural Modulus			ASTM D790
Compression Molded	3100	MPa	

Injection Molded	3240	MPa	
Flexural Strength			ASTM D790
Compression Molded	72.4	MPa	
Injection Molded	103	MPa	
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ASTM D256
23°C, Compression Molded	11	J/m	
23°C, Injection Molded	21	J/m	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
1.8 MPa, Unannealed	81.0	°C	
1.8 MPa, Annealed	101	°C	
Vicat Softening Temperature	108	°C	ASTM D1525
CLTE - Flow	7.6E-5	cm/cm/°C	ASTM D696

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#### Recommended distributors for this material

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