

Styrolux® 693D is a clear styrene-butadiene copolymer (SBC) with a well balanced combination of toughness and clarity. Styrolux® 693D is mainly used for thermoformed articles, especially in blends with general-purpose polystyrene. Styrolux® 693D contains a microcrystalline wax which acts as an antiblock providing processing benefits but decreases the printability.

Major applications include: food and non-food packagings, thermoformed transparent containers and cups for cold beverages, thermoformed lids, toys, boxes.

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	12.5	cm ³ /10min	ISO 1133
Temperature	200	°C	-
Load	5	kg	-

Mechanical Properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	1300	MPa	ISO 527-1/-2
Yield stress	22	MPa	ISO 527-1/-2
Yield strain	2.2	%	ISO 527-1/-2
Nominal strain at break	>50	%	ISO 527-1/-2
Tensile creep modulus, 1000h	490	MPa	ISO 899-1
Charpy impact strength (+23°C)	no break	kJ/m ²	ISO 179/1eU
Charpy notched impact strength (+23°C)	5	kJ/m ²	ISO 179/1eA

Thermal Properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load (1.80 MPa)	59	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	72	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	48	°C	ISO 306
Burning behav. at 1.5 mm nom. thickn.	HB	class	UL 94
Thickness tested	1.5	mm	-
Burning behav. at thickness h	HB	class	UL 94
Thickness tested	3.2	mm	-
Coeff. of linear therm. expansion, parallel	75	E-6/K	ISO 11359-1/-2

Electrical Properties	Value	Unit	Test Standard
ISO Data			
Relative permittivity, 100Hz	2.5	-	IEC 60250
Relative permittivity, 1MHz	2.5	-	IEC 60250
Dissipation factor, 100Hz	3	E-4	IEC 60250
Dissipation factor, 1MHz	8	E-4	IEC 60250
Volume resistivity	>1E13	Ohm*m	IEC 60093
Surface resistivity	1E15	Ohm	IEC 60093
Comparative tracking index	600	-	IEC 60112

Other Properties	Value	Unit	Test Standard
ISO Data			
Water absorption	0.07	%	Sim. to ISO 62
Humidity absorption	0.07	%	Sim. to ISO 62
Density	1010	kg/m ³	ISO 1183

Test specimen production	Value	Unit	Test Standard
ISO Data			
Injection Molding, melt temperature	230	°C	ISO 294
Injection Molding, mold temperature	50	°C	ISO 10724
Injection Molding, injection velocity	200	mm/s	ISO 294

Characteristics

Processing

Injection Molding, Film Extrusion, Sheet Extrusion, Other Extrusion, Blow Molding

Injection Molding

PROCESSING

injection molding, Melt temperature, range: 180 - 250 °C

injection molding, Mold temperature, range: 20 - 40 °C

Film extrusion

PROCESSING

Extrusion, Blown film, Melt temperature: 180 °C

Extrusion, Flat film, Melt temperature: 190 - 230 °C

Other extrusion

PROCESSING

Extrusion, Pipes, Melt temperature: 230 °C

Sheet extrusion

PROCESSING

Extrusion, Plates, Melt temperature: 190 °C

Disclaimer

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