

Styrolux® 693D

Styrene Butadiene Block Copolymer

INEOS Styrolution Group GmbH

Message:

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.

General Information			
Additive	Antiblock		
Features	Antiblocking		
	Block Copolymer		
	Medium Clarity		
	Ultra High Toughness		
Uses	Blending		
	Containers		
	Cups		
	Film		
	Food Packaging		
	Packaging		
	Toys		
Appearance	Clear/Transparent		
Forms	Pellets		
Processing Method	Blown Film		
	Injection Molding		
	Thermoforming		
Multi-Point Data	Viscosity vs. Shear Rate (ISO 11403-2)		
Physical	Nominal Value	Unit	Test Method
Density	1.01	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (200°C/5.0 kg)	12.5	cm ³ /10min	ISO 1133
Molding Shrinkage	0.30 to 1.0	%	ISO 294-4
Water Absorption (Saturation, 23°C)	0.070	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Shore Hardness (Shore D)	64		ISO 868
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	1300	MPa	ISO 527-2
Tensile Stress (Yield, 23°C)	22.0	MPa	ISO 527-2

Tensile Strain (Yield, 23°C)	2.2	%	ISO 527-2
Nominal Tensile Strain at Break (23°C)	260	%	ISO 527-2
Flexural Modulus	1400	MPa	ISO 178
Flexural Stress			
5.0% Strain	32.0	MPa	
--	32.0	MPa	ISO 178
Films	Nominal Value	Unit	Test Method
Tensile Elongation - MD (Break)	260	%	
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	5.0	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (23°C)	No Break		ISO 179
Notched Izod Impact Strength			ISO 180/A
-30°C	2.5	kJ/m ²	
23°C	3.5	kJ/m ²	
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Annealed	72.0	°C	ISO 75-2/B
1.8 MPa, Annealed	59.0	°C	ISO 75-2/A
Vicat Softening Temperature			
--	76.0	°C	ISO 306/A50
--	48.0	°C	ISO 306/B50
CLTE - Flow	6.0E-5 to 9.0E-5	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+15	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms·cm	IEC 60093
Dielectric Constant (100 Hz)	2.50		IEC 60250
Dissipation Factor			IEC 60250
100 Hz	3.0E-4		
1 MHz	8.0E-4		
Comparative Tracking Index	600	V	IEC 60112
Optical	Nominal Value	Unit	Test Method
Refractive Index	1.570		ISO 489
Transmittance (550 nm)	89.0	%	ASTM D1003
Haze	2.0	%	ASTM D1003
Injection	Nominal Value	Unit	
Processing (Melt) Temp	180 to 250	°C	
Mold Temperature	20.0 to 40.0	°C	

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