

Styrolux® 3G46 is a clear styrene-butadiene copolymer (SBC) developed specifically for sheet- and film extrusion and for thermoformed articles. Styrolux® 3G46 is designed for improved performance in blends with general-purpose polystyrene, providing parts with an excellent balance of transparency and toughness.

Suggested applications include the whole array of food and non-food packaging like blister packs, drink cups, caps and lids, deli-trays and sheeting.

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	12	cm ³ /10min	ISO 1133
Temperature	200	°C	-
Load	5	kg	-

Mechanical Properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	1550	MPa	ISO 527-1/-2
Yield stress	27	MPa	ISO 527-1/-2
Yield strain	2	%	ISO 527-1/-2
Nominal strain at break	>50	%	ISO 527-1/-2
Charpy impact strength (+23°C)	no break	kJ/m ²	ISO 179/1eU
Charpy notched impact strength (+23°C)	3	kJ/m ²	ISO 179/1eA

Thermal Properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load (1.80 MPa)	58	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	75	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	51	°C	ISO 306
Burning behav. at 1.5 mm nom. thickn.	HB	class	UL 94
Thickness tested	1.6	mm	-
Burning behav. at thickness h	HB	class	UL 94
Thickness tested	3.2	mm	-

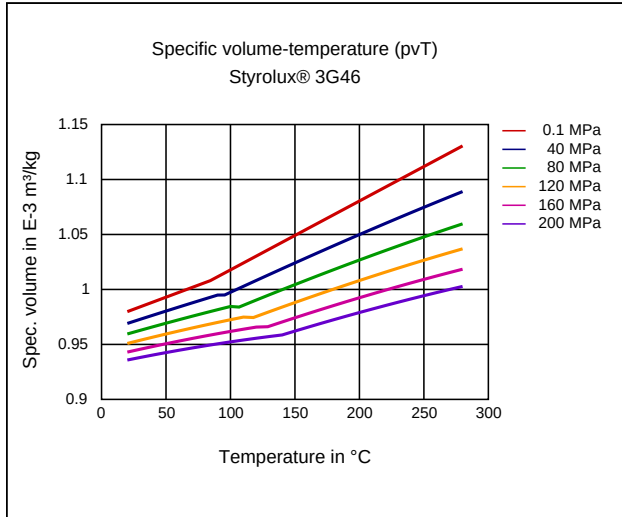
Electrical Properties	Value	Unit	Test Standard
ISO Data			
Relative permittivity, 100Hz	2.5	-	IEC 60250
Relative permittivity, 1MHz	2.5	-	IEC 60250
Volume resistivity	>1E13	Ohm*m	IEC 60093
Surface resistivity	1E15	Ohm	IEC 60093

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	1020	kg/m ³	ISO 1183

Rheological calculation properties	Value	Unit	Test Standard
ISO Data			
Density of melt	910	kg/m ³	-
Thermal conductivity of melt	0.16	W/(m K)	-
Spec. heat capacity of melt	2300	J/(kg K)	-
Ejection temperature	71	°C	-

Diagrams

Specific volume-temperature (pvT)



Characteristics

Processing

Injection Molding, Film Extrusion, Sheet Extrusion, Blow Molding

Injection Molding

PROCESSING

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

injection molding, Melt temperature, recommended: 220 °C

injection molding, Mold temperature, range: 30 - 50 °C

injection molding, Mold temperature, recommended: 40 °C

Film extrusion

PROCESSING

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

Disclaimer

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