

**Styreflex® 4G80**  
SB

INEOS Styrolution

Styreflex® 4G80 comprises thermoplastic elastomers from clear styrene butadiene copolymers (S-TPE), which are more polar than comparable SBS or SEBS grades. The grade provides a very high puncture resistance to foils in multilayer applications and increases as additive the toughness of compounds. It is easy to process and works as modifier and compatibilizer in many polymers, e.g. polyolefins. For all Styreflex® 4G80 food contact statements are available upon request. Styreflex® 4G80 is a styrene butadiene block copolymer (SBC) optimized for the extrusion of soft tubings. Styreflex® 4G80 is also offered for medical applications and is Gamma, X-ray & ETO sterilizable.

Processing/Physical Characteristics	Value	Unit	Test Standard
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**ASTM Data**

Melt Flow Index	76	g/10min	ASTM D 1238
Temperature	220	°C	-
Load	10	kg	-
Mold Shrinkage, MD	0.006	mm/mm	ASTM D 955
Density, 73°F	980	kg/m³	ASTM D 792

Rheological properties	Value	Unit	Test Standard
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**ISO Data**

Melt volume-flow rate, MVR	18	cm³/10min	ISO 1133
Temperature	200	°C	-
Load	5	kg	-

Mechanical Properties	Value	Unit	Test Standard
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**ISO Data**

Impact Strength (Charpy), +23°C	no break	kJ/m²	ISO 179/1eU
Impact Strength (Charpy), -30°C	no break	kJ/m²	ISO 179/1eU
Notched Impact Strength (Charpy), +23°C	no break	kJ/m²	ISO 179/1eA
Notched Impact Strength (Charpy), -30°C	no break	kJ/m²	ISO 179/1eA

**ASTM Data**

Tensile Modulus	68.95	MPa	ASTM D 638
Tensile Strength at Yield	2.41	MPa	ASTM D 638
Elongation at Break	500	%	ASTM D 638
Shore Hardness A (15s)	80	-	ASTM D 2240
Shore Hardness D (15s)	28	-	ASTM D 2240
Notched Impact Strength (Izod), 1/8 in	747	J/m	ASTM D 256

Thermal Properties	Value	Unit	Test Standard
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**ISO Data**

Vicat softening temperature, 50°C/h 50N	38	°C	ISO 306
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**ASTM Data**

Vicat Temperature	39.4	°C	ASTM D 1525
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Other Properties	Value	Unit	Test Standard
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**ISO Data**

Water Absorption	0.07	%	Sim. to ISO 62
Humidity absorption	0.07	%	Sim. to ISO 62
Density	980	kg/m³	ISO 1183

Optical Properties	Value	Unit	Test Standard
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**ASTM Data**

Haze	18	%	ASTM D 1003
Light Transmittance	81	%	ASTM D 1003
Index of Refraction	1.56	-	ASTM D 542

Processing Recommendation Extrusion	Value	Unit	Test Standard
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Melt temperature	170 - 240	°C	-
Mold temperature	29.4 - 43.3	°C	-

Characteristics
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## Styroflex® 4G80

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### Processing

Injection Molding, Film Extrusion, Profile Extrusion, Other Extrusion, Transfer Molding

### Features

Soft Feel, Copolymer

### Delivery form

Pellets

### Applications

Medical, Sports Equipment

### Special Characteristics

Transparent

### Injection Molding

As a rule, the Styroflex® granules do not have to be pre-dried. However, in the event of unfavorable storage or transportation conditions involving severe temperature fluctuations, moisture can condense on the surface of the granules and this then has to be removed in a pre-drying step. The granules should be pre-dried in a dry-air dryer for 3 to 4 hours at a temperature of about 50°C.

### Film Extrusion

#### PROCESSING

Blown film, Melt temperature: 170 - 190°C

Flat film, Melt temperature: 170 - 240°C