

# K-Resin KR03E

Styrene Butadiene Copolymer (SBC)

**TECHNICAL  
DATASHEET**

## DESCRIPTION

K-Resin® KR03E process very well in injection molding, providing good cycle times and design flexibility. K-Resin® KR03E alone or in blends, can be extruded into sheet and thermoformed on conventional equipment at high output rates. The favorable economics of K-Resin® SBC, along with high productivity, have made possible tough clear disposable drinking cups, lids and other packaging applications. K-Resin® KR03E will process on most conventional equipment, allowing the molder to run a crystal clear bottle without expensive machine modifications, special molds, different screws, or dryers. K-Resin® KR03E can be blow molded in a broad range of sizes and shapes, from small pill bottles and medical drainage units, to very tall display bottles. They can also be injection blow molded into extremely high impact bottles with glass-like clarity.

## FEATURES

- Excellent Clarity
- Good Stiffness
- Good Toughness
- Good Formability
- High Surface Gloss

## APPLICATIONS

- Toys
- Clam Packaging
- Displays
- Container, Cups and Lids
- Extruded Sheets
- Blow Bottles

Property, Test Condition	Standard	Unit	Values
<b>Rheological Properties</b>			
Melt Volume Rate, 200 °C/5 kg	ISO 1133	cm <sup>3</sup> /10 min	7.5
<b>Mechanical Properties</b>			
Izod Notched Impact Strength, 23 °C	ISO 180/A	kJ/m <sup>2</sup>	3.5
Charpy Notched Impact Strength, 23° C	ISO 179/1eA	kJ/m <sup>2</sup>	2
Charpy Unnotched, 23 °C	ISO 179/1eU	kJ/m <sup>2</sup>	No Break
Tensile Stress at Yield, 23 °C	ISO 527	MPa	25
Tensile Stress at Break, 23 °C	ISO 527	MPa	17
Tensile Strain at Break, 23 °C	ISO 527	%	170
Tensile Modulus	ISO 527	MPa	1500
Flexural Strength, 23 °C	ISO 178	MPa	30
Flexural Modulus, 23 °C	ISO 178	MPa	1400

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Property, Test Condition	Standard	Unit	Values
Hardness, Shore D	ISO 868	-	63
<b>Thermal Properties</b>			
Vicat Softening Temperature VST/B/50 (50N, 50 °C/h)	ISO 306	°C	60
Vicat Softening Temperature, VST/A/120 (10N, 120 °C/h)	ISO 306	°C	88
Heat Deflection Temperature A; (annealed 4 h/80 °C; 1.8 MPa)	ISO 75	°C	61
Heat Deflection Temperature B; (annealed 4 h/80 °C; 0.45 MPa)	ISO 75	°C	76
<b>Optical Properties</b>			
Light Transmission at 550 nm	ASTM D 1003	%	91
Haze	ASTM D 1003	%	< 1.5
<b>Other Properties</b>			
Density	ISO 1183	kg/m <sup>3</sup>	1010
Moisture Absorption, Equilibrium 23 °C/50% RH	ISO 62	%	0.07
<b>Processing</b>			
Linear Mold Shrinkage	ISO 294-4	%	0.3 - 1
Melt Temperature Range	ISO 294	°C	180 - 240
Mold Temperature Range	ISO 294	°C	30 - 50