

# K-Resin KR05

Styrene Butadiene Copolymer (SBC)

## TECHNICAL DATASHEET

### DESCRIPTION

K-Resin® KR05 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. INEOS Styrolution has several grades of K-Resin® SBC tailored for your sheet extrusion needs. K-Resin® KR05 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® SBC are 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 Formability
- Good Toughness
- High Surface Gloss

### APPLICATIONS

- Bottles
- Molded Boxes and Containers
- Medical Devices
- Portion Packages
- Blister Packaging

Property, Test Condition	Standard	Unit	Values
<b>Rheological Properties</b>			
Melt Volume Rate, 200 °C/5 kg	ISO 1133	cm³/10 min	7.5
<b>Mechanical Properties</b>			
Charpy Notched Impact Strength, 23° C	ISO 179/1eA	kJ/m²	2
Tensile Stress at Yield, 23 °C	ISO 527	MPa	25
Tensile Strain at Yield, 23 °C	ISO 527	%	2.2
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	1500
Hardness, Shore D	ISO 868	-	63
<b>Thermal Properties</b>			
Vicat Softening Temperature VST/B/50 (50N, 50 °C/h)	ISO 306	°C	53
Vicat Softening Temperature, VST/A/50 (10N, 50 °C/h)	ISO 306	°C	85
Heat Deflection Temperature, B (0.45 MPa)	ISO 75	°C	76

# K-Resin KR05

Styrene Butadiene Copolymer (SBC)

## TECHNICAL DATASHEET

Property, Test Condition	Standard	Unit	Values
Heat Deflection Temperature A; (annealed 4 h/80 °C; 1.8 MPa)	ISO 75	°C	61
Coefficient of Linear Thermal Expansion	ISO 11359	10 <sup>-6</sup> /°C	60 - 90
<b>Optical Properties</b>			
Refractive Index, Sodium D Line	ISO 489	-	1.57
Light Transmission at 550 nm	ASTM D 1003	%	92
Haze	ASTM D 1003	%	< 0.9
<b>Other Properties</b>			
Density	ISO 1183	kg/m <sup>3</sup>	1020
Water Absorption, Saturated at 23 °C	ISO 62	%	0.07
<b>Processing</b>			
Linear Mold Shrinkage	ISO 294-4	%	0.3 - 1

The nominal properties herein are typical of the product but do not reflect normal testing variance and therefore should not be used for specification purposes. Values are rounded.

The nominal properties herein are typical of the product but do not reflect normal testing variance and therefore should not be used for specification purposes. Values are rounded.\n(Tensile Yield Strength/Tensile Elongation @ Break) = Type 1 @ 2 in/min (

## DISCLAIMER

The aforementioned data shall constitute the agreed contractual quality of the product sold by INEOS Styrolution at the time of passing of risk. INEOS Styrolution does not make any further warranty, representation or guarantee of any kind, express or implied, regarding the suitability of the product for any particular purpose or application and INEOS Styrolution disclaims all liability in connection therewith. The customer himself is required to verify whether or not the product is suitable for the further processing or application intended and whether or not the product complies with the relevant statutory requirements. Unless explicitly and individually otherwise agreed in writing, INEOS Styrolution's sole and exclusive liability with respect to its products is set forth in INEOS Styrolution's General Terms and Conditions for Sale.