

# 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 Flow Rate, 200 °C/5 kg	ASTM D 1238	g/10 min	7.5
<b>Mechanical Properties</b>			
Instrumented Dart Impact (total energy)	ASTM D 3763	in-lbs	354
Tensile Stress at Yield, 23 °C	ASTM D 638	psi	3800
Tensile Strain at Break, 23 °C	ASTM D 638	%	230
Flexural Strength, 23 °C	ASTM D 790	psi	5400
Flexural Modulus, 23 °C	ASTM D 790	psi x 10 <sup>9</sup>	260,350
Hardness, Shore D	ASTM D 2240	-	63
<b>Thermal Properties</b>			
Vicat Softening Temperature, B/1 ( 120 °C/h, 10N)	ASTM D 1525	°F	185
DTUL @ 264 psi - Annealed	ASTM D 648	°F	144
<b>Optical Properties</b>			
Light Transmission at 550 nm	ASTM D 1003	%	92
Gardner Gloss (mold temperature 100°F)	ASTM D 2457	%	162

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Property, Test Condition	Standard	Unit	Values
<b>Other Properties</b>			
Density	ASTM D 792	-	1.01
Moisture Absorption	ASTM D 570	%	0.09

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.

[Tensile Yield Strength/Tensile Elongation @ Break] = Type 1 @ 2 in/min (50 mm/min)

[Flexural Modulus/Flexural Yield Strength] = 0.125 in (3.2 mm) specimen @ 0.5 in/sec (1.27 cm/min)

[Instrumented Impact Total Energy] = 0.125 in (3.2 mm) specimen @ 150 in/sec (381 cm/sec) impact rate

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