INEOS STYROLUTION

K-Resin KR01

Styrene Butadiene Copolymer (SBC)

TECHNICAL DATASHEET

DESCRIPTION

K-Resin® KR01 process very well in injection molding, providing good cycle times and design flexibility. Applications range from containers and packaging with living hinges to medical applications, toys, displays, overcaps and hangers. INEOS Styrolution has several grades of K-Resin® SBC tailored for your injection molded needs.

FEATURES

- Excellent Clarity
- Good Stiffness
- Good Toughness
- High Surface Gloss
- Warpage Resistance

APPLICATIONS

- Molded Boxes with Integral Hinges
- Medical Devices
- Displays
- Toys

Property, Test Condition	Standard	Unit	Values
Rheological Properties			
Melt Volume Rate, 200 °C/5 kg	ISO 1133	cm³/10 min	8.0
Mechanical Properties			
Charpy Notched Impact Strength, 23° C	ISO 179/1eA	kJ/m²	1.0
Charpy Unnotched, 23 °C	ISO 179/1eU	kJ/m²	27
Tensile Stress at Yield, 23 °C	ISO 527	MPa	33
Tensile Strain at Yield, 23 °C	ISO 527	%	2.8
Tensile Strain at Break, 23 °C	ISO 527	%	15
Tensile Modulus	ISO 527	MPa	1600
Flexural Strength, 23 °C	ISO 178	MPa	43
Flexural Modulus, 23 °C	ISO 178	MPa	1500
Hardness, Shore D	ISO 868	-	70
Thermal Properties			
Vicat Softening Temperature VST/B/50 (50N, 50 °C/h)	ISO 306	°C	65
Vicat Softening Temperature, VST/A/50 (10N, 50 °C/h)	ISO 306	°C	91
Heat Deflection Temperature, B (0.45 MPa)	ISO 75	°C	78

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Property, Test Condition	Standard	Unit	Values
Heat Deflection Temperature A; (annealed 4 h/80 °C; 1.8 MPa)	ISO 75	°C	65
Coefficient of Linear Thermal Expansion	ISO 11359	10^(-6)/°C	60-90
Optical Properties			
Refractive Index, Sodium D Line	ISO 489	-	1.57
Light Transmission at 550 nm	ASTM D 1003	%	93
Haze	ASTM D 1003	%	1.0
Other Properties			
Density	ISO 1183	kg/m³	1020
Water Absorption, Saturated at 23 °C	ISO 62	%	0.07
Processing			
Linear Mold Shrinkage	ISO 294-4	%	0.3-1.0

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

DISCLAIMER

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