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

- Display Housings
- Medical Devices
- Toys
- Molded Boxes

Property, Test Condition	Standard	Unit	Values
Rheological Properties			
Melt Volume Rate, 200 °C/5 kg	ISO 1133	cm³/10 min	8
Mechanical Properties			
Izod Notched Impact Strength, 23 °C	ISO 180/A	kJ/m²	3
Charpy Notched Impact Strength, 23° C	ISO 179/1eA	kJ/m²	1.5
Charpy Unnotched, 23 °C	ISO 179/1eU	kJ/m²	30
Tensile Stress at Yield, 23 °C	ISO 527	MPa	33
Tensile Stress at Break, 23 °C	ISO 527	MPa	24
Tensile Strain at Break, 23 °C	ISO 527	%	15
Tensile Modulus	ISO 527	MPa	1600
Flexural Strength, 23 °C	ISO 178	MPa	45
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/120 (10N, 120 °C/h)	ISO 306	°C	95

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Property, Test Condition	Standard	Unit	Values
Heat Deflection Temperature A; (unannealed; 1.8 MPa)	ISO 75	°C	65
Heat Deflection Temperature B; (unannealed; 0.45 MPa)	ISO 75	°C	78
Optical Properties			
Light Transmission at 550 nm	ASTM D 1003	%	92
Haze	ASTM D 1003	%	< 1
Other Properties			
Density	ISO 1183	kg/m³	1010
Moisture Absorption, Equilibrium 23 °C/50% RH	ISO 62	%	0.07
Processing			
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

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

SUPPLY FORM

K-Resin® is supplied in pellet form and should be kept in its original containers in cool, dry place. Avoid direct exposure to sunlight. K-Resin® can be stored in silos at temperatures well below 45 °C.

PRODUCT SAFETY

During processing of K-Resin® small quantities of styrene monomer may be released into the atmosphere. At styrene vapor concentrations below 20 ppm no negative effects on health are expected. In our experience, the concentration of styrene does not exceed 1 ppm in well ventilated workplaces - that is where five to eight air changes per hour are made. For safety information please refer to our Material Safety Data Sheet for this product.

DISCLAIMER

The above mentioned data are accurate to the best of our knowledge. They are based upon reputable labs and industry standard testing methods. These are only typical values and actual product specification may deviate at industrial range. Therefore, no data in this technical data sheet shall constitute a warranty or representation regarding product features, fitness of the product for a specific purpose or application

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