

K-Resin XK44

Styrene Butadiene Copolymer (SBC)

TECHNICAL DATASHEET

DESCRIPTION

K-Resin® XK44 is an extrusion grade of K-Resin® Styrene-Butadiene Copolymer designed specifically for improved clear and tough performance with crystal polystyrene. K-Resin® XK44 allows for the addition of thermoplastic elastomers with minimal loss in clarity. Physical properties and economics can be customized via blend ratios.

FEATURES

- Excellent Clarity
- Good Stiffness and Toughness
- Good Formability
- High Surface Gloss
- Low Anisotropy
- Low Stress Whitening

APPLICATIONS

- IC Carrier Tape
- Rigid Medical Device Packaging
- Thermoformed Clam Shell Packaging
- Thermoformed Blister Packs
- Thermoformed Trays
- Portion Packages

Property, Test Condition	Standard	Unit	Values
Rheological Properties			
Melt Volume Rate, 200 °C/5 kg	ISO 1133	cm ³ /10 min	6
Mechanical Properties			
Izod Notched Impact Strength, 23 °C	ISO 180/A	kJ/m ²	4
Charpy Notched Impact Strength, 23° C	ISO 179/1eA	kJ/m ²	3
Charpy Unnotched, 23 °C	ISO 179/1eU	kJ/m ²	No Break
Tensile Stress at Yield, 23 °C	ISO 527	MPa	20
Tensile Stress at Break, 23 °C	ISO 527	MPa	20
Tensile Strain at Break, 23 °C	ISO 527	%	350
Tensile Modulus	ISO 527	MPa	800
Flexural Strength, 23 °C	ISO 178	MPa	25
Flexural Modulus, 23 °C	ISO 178	MPa	750
Hardness, Shore D	ISO 868	-	63
Thermal Properties			
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	80

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Property, Test Condition	Standard	Unit	Values
Heat Deflection Temperature A; (unannealed; 1.8 MPa)	ISO 75	°C	55
Heat Deflection Temperature B; (unannealed; 0.45 MPa)	ISO 75	°C	65
Optical Properties			
Light Transmission at 550 nm	ASTM D 1003	%	91
Haze	ASTM D 1003	%	< 2.5
Other Properties			
Density	ISO 1183	kg/m ³	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 - 220
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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or its processability. 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.