

K-Resin KR21

Please Select

TECHNICAL
DATASHEET

DESCRIPTION

K-Resin® KR21 is a new member of K-Resin® family of SBC materials with the properties of a thermoplastic elastomer. K-Resin® KR21 offers an exceptional high toughness. K-Resin® KR21 is mainly used for Styrenic polymers modification to enhance the impact properties and Environmental Stress Cracking Resistance (ESCR).

FEATURES

- Outstanding Toughness
- Very High Elongation at Break
- ESCR Modification
- Excellent Low Temperature Toughness
- Low Density
- Low and Adjustable Hardness

APPLICATIONS

- Impact Modification
- ESCR Improvement
- Reinforcement of Recycled ABS and HIPS
- Alternative to Plasticized PVC

Property, Test Condition	Standard	Unit	Values
Rheological Properties			
Melt Volume Rate, 200 °C/5 kg	ISO 1133	cm³/10 min	6
Mechanical Properties			
Izod Notched Impact Strength, 23 °C	ISO 180/A	kJ/m²	No Break
Charpy Notched Impact Strength, 23° C	ISO 179/1eA	kJ/m²	No Break
Charpy Unnotched, 23 °C	ISO 179/1eU	kJ/m²	No Break
Tensile Stress at Break, 23 °C	ISO 527	MPa	15
Tensile Strain at Break, 23 °C	ISO 527	%	> 500
Tensile Modulus	ISO 527	MPa	120
Flexural Strength, 23 °C	ISO 178	MPa	3
Flexural Modulus, 23 °C	ISO 178	MPa	100
Hardness, Shore D	ISO 868	-	40
Thermal Properties			
Vicat Softening Temperature, VST/A/120 (10N, 120 °C/h)	ISO 306	°C	48
Heat Deflection Temperature B; (unannealed; 0.45 MPa)	ISO 75	°C	40
Optical Properties			

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Property, Test Condition	Standard	Unit	Values
Light Transmission at 550 nm	ASTM D 1003	%	89
Haze	ASTM D 1003	%	5
Other Properties			
Density	ISO 1183	kg/m ³	990
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

Typical values for uncolored products

Please note that all processing data stated are only indicative and may vary depending on the individual processing complexities.

Please consult our local sales or technical representatives for details.

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 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.