INEOS Styrolution

ALBIS

K-Resin® KR03

SB

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K-Resin® KR03 processes very well in injection molding, providing good cycle times and design flexibility. K-Resin® KR03 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. K-Resin® KR03 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® KR03 can be blow molded in a broad range of sizes and shapes, from small pill bottles and medical drainage units, to very tall display bottles. It also can be injection blow molded into extremely high impact bottles with glass-like clarity.

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	7.5	cm³/10min	ISO 1133
Temperature	200	°C	-
Load	5	kg	-
Melt Flow Index, MFI	7.5	g/10min	ISO 1133
MFI temperature	200	°C	-
MFI load	5	kg	-

Mechanical Properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	1500	MPa	ISO 527
Yield stress	25	MPa	ISO 527
Yield strain	2.2	%	ISO 527
Nominal strain at break	>50	%	ISO 527
Impact Strength (Charpy), +23°C	no break	kJ/m²	ISO 179/1eU
Notched Impact Strength (Charpy), +23°C	2	kJ/m²	ISO 179/1eA
Flexural Modulus (23°C)	1790	MPa	ISO 178

Thermal Properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load (1.80 MPa)	61	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	76	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	60	°C	ISO 306
ASTM Data			
Vicat Temperature	85	°C	ASTM D 1525

Other Properties	Value	Unit	Test Standard
ISO Data			
Humidity absorption	0.07	%	Sim. to ISO 62
Density	1010	kg/m³	ISO 1183

Rheological calculation properties	Value	Unit	Test Standard
ISO Data			
Density of melt	907	kg/m³	-
Thermal Conductivity of Melt	0.184	W/(m K)	-
Spec. heat capacity of melt	2300	J/(kg K)	-
Ejection temperature	60	°C	-

Optical Properties	Value	Unit	Test Standard
ASTM Data			
Gloss	162	-	ASTM D 2457
Light Transmittance	92	%	ASTM D 1003

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	50	°C	-
Pre-drying - Time	3 - 4	h	-
Melt temperature	180 - 240	°C	-
Mold temperature	30 - 50	°C	-

Characteristics

Processing
Injection Molding, Sheet Extrusion, Blow Molding, Thermoforming

Features
Blending Resin, High Gloss, Copolymer

Delivery form
Pellets

Certifications
Medical, Device Master File

Special Characteristics
Transparent

Applications
Medical, Packaging

Injection Molding
As a rule, the K-Resin® granules do not have to be pre-dried. However, in the event of unfavorable storage or transportation conditions involving severe temperature fluctuations, moisture can condense on the surface of the granules and this then has to be removed in a pre-drying step. The granules should be pre-dried in a dry-air dryer for 3 to 4 hours at a temperature of about 50°C.

PROCESSING

Melt temperature, range: 180 - 240°C

Mold temperature, range: 30 - 50°C

Disclaimer