

Zylar 631

Methyl Methacrylate Butadiene Styrene (MBS)

TECHNICAL
DATASHEET

DESCRIPTION

Zylar® 631 is an impact modified styrene acrylic copolymer that provides a balance of clarity and toughness, with outstanding strength and rigidity. Zylar 631 also has superior processing characteristics for demanding injection molded application.

FEATURES

- Good balance of toughness, stiffness and clarity
- Low density
- Ease of processing
- Gamma & ETO sterilizable

APPLICATIONS

- Appliances and consumer goods
- Medical devices
- Toys
- Office accessories
- Industrial housings and covers
- Reusable drinkware

Property, Test Condition	Standard	Unit	Values
Rheological Properties			
Melt Volume Rate, 200 °C/5 kg	ISO 1133	cm ³ /10 min	5.8
Melt Volume Rate 220 °C/10 kg	ISO 1133	cm ³ /10 min	55
Mechanical Properties			
Izod Notched Impact Strength, 23 °C	ISO 180/A	kJ/m ²	6
Charpy Notched Impact Strength, 23° C	ISO 179/1eA	kJ/m ²	4
Charpy Unnotched, 23 °C	ISO 179/1eU	kJ/m ²	130
Tensile Stress at Yield, 23 °C	ISO 527	MPa	36
Tensile Strain at Break, 23 °C	ISO 527	%	35
Tensile Modulus	ISO 527	MPa	2000
Flexural Strength, 23 °C	ISO 178	MPa	50
Flexural Modulus, 23 °C	ISO 178	MPa	1800
Hardness, Rockwell	ISO 2039-2	R scale	70
Thermal Properties			
Vicat Softening Temperature VST/B/50 (50N, 50 °C/h)	ISO 306	°C	77

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Property, Test Condition	Standard	Unit	Values
Vicat Softening Temperature, VST/A/120 (10N, 120 °C/h)	ISO 306	°C	99
Heat Deflection Temperature A; (annealed 4 h/80 °C; 1.8 MPa)	ISO 75	°C	73
Heat Deflection Temperature B; (annealed 4 h/80 °C; 0.45 MPa)	ISO 75	°C	76
Optical Properties			
Light Transmission at 550 nm	ASTM D 1003	%	89
Haze	ASTM D 1003	%	1.5
Other Properties			
Density	ISO 1183	kg/m ³	1050
Moisture Absorption, Equilibrium 23 °C/50% RH	ISO 62	%	0.05
Processing			
Melt Temperature Range	ISO 294	°C	200 - 240
Mold Temperature Range	ISO 294	°C	25 - 55
Drying Temperature	-	°C	65
Drying Time	-	h	2

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

Zylar resins are available in bulk, 25kg bags or octabin cartons.

PROCESSING

Zylar is a low moisture absorption copolymer and in many instances processes readily without pre-drying. There are combinations of conditions that require the product to be dried, such as high humidity and heavy section molding. Two hours at 60 °C (140 °F) is adequate for most applications. Dehumidifying type driers are recommended. To obtain maximum clarity and gloss from this product, it is necessary to have a highly polished mold. Design of gates, runners and sprues can be patterned after standard practice for high-heat polystyrene. All mold surfaces must be temperature controlled at 54 °C (130 °F) for optimum clarity and surface gloss. For optimum clarity, machine cylinders, barrels, screws, valves, etc. should be thoroughly cleaned before processing. Contamination by other materials will cause streaking or haze.

PRODUCT SAFETY

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During processing of Zylar small quantities of styrene monomer may be released into the atmosphere. At styrene vapor concentrations below 20ppm 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.

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.