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 Flow Rate, 200 °C/5 kg	ASTM D 1238	g/10 min	5
Mechanical Properties			
Izod Notched Impact Strength, 23 °C (73 °F)	ASTM D 256	ft-lb/in	2.2
Tensile Stress at Yield, 23 °C	ASTM D 638	psi	5200
Tensile Modulus	ASTM D 638	psi x 10^3	310
Elongation, Failure	ASTM D 638	%	40
Flexural Strength, 23 °C	ASTM D 790		8800
Flexural Modulus, 23 °C	ASTM D 790	psi x 10^3	300
Hardness, Rockwell	ASTM D 785	R scale	70
Thermal Properties			
Vicat Softening Temperature, B/1 (120 °C/h, 10N)	ASTM D 1525	°F	211
Optical Properties			
Refractive Index, Sodium D Line	ASTM D 542	-	1.56
Light Transmission at 550 nm	ASTM D 1003	%	89

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Property, Test Condition	Standard	Unit	Values
Haze	ASTM D 1003	%	1.5
Other Properties			
Density (ASTM)	ASTM D 792	g/cm³	1.05
Water Absorption, Saturated at 23 °C	ASTM D 570	%	0.1
Processing			
Melt Temperature Range	-	°F	400 - 460
Mold Temperature Range	-	°F	80 - 130
Rear Temperature Range	-	°F	355 - 415
Middle Temperature Range	-	°F	365 - 425
Front Temperature Range	-	°F	375 - 435
Drying Temperature	-	°F	150
Drying Time	-	h	2
Max Service Temperature	-	°F	480

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 were 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.

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