

## Zylar 650

Methyl Methacrylate Butadiene Styrene (MBS)

TECHNICAL  
DATASHEET

## DESCRIPTION

The product line Zylar® comprises blends from styrene, butadiene and methylmethacrylate copolymers (MBS). The blends are highly transparent, tough and show a good chemical resistance. Depending on the application, they can be a low density alternative for polycarbonate, PET-G or transparent ABS (MABS). The grades are suitable for medical applications, food contact statements are available upon request. Zylar®650 provides a good balance between transparency and toughness and is also available with UV package.

## FEATURES

- Balanced properties
- High flowability
- Sterilisable(ETO,NO2,Irradiation)
- Toughness
- Low density

## APPLICATIONS

- Household applications
- Food contact applications
- Medical devices
- Medical diagnostic equipment
- Toys, sports & leisure

Property, Test Condition	Standard	Unit	Values
Rheological Properties			
Melt Volume Rate, 200 °C/5 kg	ISO 1133	cm³/10 min	4
Melt Volume Rate 220 °C/10 kg	ISO 1133	cm³/10 min	45
Mechanical Properties			
Charpy Notched Impact Strength, 23° C	ISO 179/1eA	kJ/m²	2
Charpy Unnotched, 23 °C	ISO 179/1eU	kJ/m²	25
Izod Notched Impact Strength, 23 °C	ISO 180/A	kJ/m²	3
Tensile Modulus	ISO 527	MPa	2100
Tensile Stress at Yield, 23 °C	ISO 527	MPa	26
Tensile Strain at Break, 23 °C	ISO 527	%	40
Flexural Modulus, 23 °C	ISO 178	MPa	1950
Flexural Strength, 23 °C	ISO 178	MPa	48
Hardness, Shore D	ISO 868	-	78
Thermal Properties			
Vicat Softening Temperature VST/B/50 (50N, 50 °C/h)	ISO 306	°C	76
Vicat Softening Temperature, VST/A/120 (10N, 120 °C/h)	ISO 306	°C	99

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Property, Test Condition	Standard	Unit	Values
Heat Deflection Temperature A; (annealed 4 h/80 °C; 1.8 MPa)	ISO 75	°C	71
Heat Deflection Temperature B; (annealed 4 h/80 °C; 0.45 MPa)	ISO 75	°C	81
Optical Properties			
Refractive Index, Sodium D Line	ISO 489	-	1.57
Haze	ASTM D 1003	%	1.8
Light Transmission at 550 nm	ASTM D 1003	%	90
Other Properties			
Density	ISO 1183	kg/m <sup>3</sup>	1050
Water Absorption, Saturated at 23 °C	ISO 62	%	0.1
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	30 - 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.

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### 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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