INEOS STYROLUTION

# Zylar 550

Methyl Methacrylate Butadiene Styrene (MBS)

TECHNICAL DATASHEET

## DESCRIPTION

Zylar® 550 is an impact modified styrene acrylic copolymer that provides practical toughness, good clarity and superior processing characteristics for demanding injection molded applications.

## FEATURES

- High clarity
- High toughness
- Low density
- Gamma & ETO sterilizable
- Meets USP XXIII specifications for Class VI plastics

## 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 | cm³/10 min | 5 |
| Melt Volume Rate 220 °C/10 kg | ISO 1133 | cm³/10 min | 55 |
| **Mechanical Properties** | | | |
| Izod Notched Impact Strength, 23 °C | ISO 180/A | kJ/m² | 6 |
| Izod Unnotched Impact Strength | ISO 180 | kJ/m² | 80 |
| Charpy Notched Impact Strength, 23° C | ISO 179/1eA | kJ/m² | 4 |
| Tensile Stress at Yield, 23 °C | ISO 527 | MPa | 28 |
| Tensile Strain at Break, 23 °C | ISO 527 | % | 50 |
| Tensile Modulus | ISO 527 | MPa | 2100 |
| Flexural Strength, 23 °C | ISO 178 | MPa | 50 |
| Flexural Modulus, 23 °C | ISO 178 | MPa | 2000 |
| Hardness, Ball Indentation | ISO 2039-1 | MPa | 60 |
| **Thermal Properties** | | | |
| Vicat Softening Temperature VST/B/50 (50N, 50 °C/h) | ISO 306 | °C | 73 |
| 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; (unannealed; 1.8 MPa) | ISO 75 | °C | 70 |
| Heat Deflection Temperature B; (unannealed; 0.45 MPa) | ISO 75 | °C | 81 |
| Electrical Properties | | | |
| Optical Properties | | | |
| Refractive Index, Sodium D Line | ISO 489 | - | 1.57 |
| Light Transmission at 550 nm | ASTM D 1003 | % | 90 |
| Haze | ASTM D 1003 | % | 2 |
| Other Properties | | | |
| Density | ISO 1183 | kg/m³ | 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 |
| Rear Temperature Range | - | °C | 180 - 210 |
| Middle Temperature Range | - | °C | 185 - 220 |
| Front Temperature Range | - | °C | 190 - 225 |
| Drying Temperature | - | °C | 65 |
| Drying Time | - | h | 2 |

Typical values for uncolored products

## SUPPLY FORM

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

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## 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.

## DISCLAIMER

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