INEOS STYROLUTION

ISCC International Sustainability & Carbon Certification

Zylar ECO 960 BC90

Methyl Methacrylate Butadiene Styrene (MBS)

TECHNICAL DATASHEET

DESCRIPTION

The product line Zylar® ECO 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 ECO 960 BC90 is the grade with the highest toughness at still high transparency. Zylar ECO 960 BC90 is an ISCC compliant product leading to a substitution of fossil source styrene and butadiene with attributed ISCC certified bio-circular styrene and butadiene.

FEATURES

- High flowability
- Impact strength
- Sterilisable(ETO,NO2,Irradiation)
- Low density

APPLICATIONS

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

Property, Test Condition	Standard	Unit	Values
Sustainability Properties			
Carbon Footprint Reduction vs Fossil-Based (3rd party validated)	ISO 14044	%	93
Attributed Content of ISCC-certified Bio-Circular Sources (min.)	-	%	90
Rheological Properties			
Melt Volume Rate, 200 °C/5 kg	ISO 1133	cm³/10 min	6
Melt Volume Rate, 220 °C/10 kg	ISO 1133	cm³/10 min	65
Mechanical Properties			
Charpy Notched Impact Strength, 23° C	ISO 179/1eA	kJ/m²	16
Izod Notched Impact Strength, 23 °C	ISO 180/A	kJ/m²	15
Tensile Modulus	ISO 527	MPa	1650
Tensile Stress at Yield, 23 °C	ISO 527	MPa	28
Tensile Strain at Yield, 23 °C	ISO 527	%	3.9
Tensile Strain at Break, 23 °C	ISO 527	%	120
Flexural Modulus, 23 °C	ISO 178	MPa	1650
Flexural Strength, 23 °C	ISO 178	MPa	45

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Property, Test Condition	Standard	Unit	Values
Hardness, Ball Indentation	ISO 2039-1	MPa	35
Hardness, Shore D	ISO 868	-	72
Thermal Properties			
Vicat Softening Temperature VST/B/50 (50N, 50 °C/h)	ISO 306	°C	60
Vicat Softening Temperature, VST/A/120 (10N, 120 °C/h)	ISO 306	°C	90
Heat Deflection Temperature A; (annealed 4 h/80 °C; 1.8 MPa)	ISO 75	°C	67
Heat Deflection Temperature B; (annealed 4 h/80 °C; 0.45 MPa)	ISO 75	°C	78
Optical Properties			
Refractive Index, Sodium D Line	ISO 489	-	1.56
Haze	ASTM D 1003	%	1.8
Light Transmission at 550 nm	ASTM D 1003	%	89
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
Drying Temperature	-	°C	65
Drying Time	-	h	2