INEOS STYROLUTION

ISCC International Sustainability & Carbon Certification

Novodur ECO P2H-AT BC50

Acrylonitrile Butadiene Styrene (ABS)

TECHNICAL DATASHEET

DESCRIPTION

Novodur® acrylonitrile butadiene styrene (ABS) polymers feature high surface quality and good impact strength. Novodur® ECO P2H-AT is a general purpose injection molding grade with enhanced chemical resistance and contains an antistatic additive.It is designed for best aesthetics: stable high gloss and smooth finish. Novodur ECO P2H-AT BC50 is an ISCC compliant product leading to a substitution of fossil source styrene with ISCC certified bio-attributed styrene.

FEATURES

- Balanced properties
- Easy processing
- Good paintability
- High gloss

APPLICATIONS

- Housings for electrical & electronic devices
- Electrical and electronic components, switches, house automation
- Coffee machines
- Vacuum cleaner housings
- Cosmetic packaging

Property, Test Condition	Standard	Unit	Values
Sustainability Properties			
Carbon Footprint Reduction vs Fossil-Based (3rd party validated)	ISO 14044	%	68
Attributed Content of ISCC-certified Bio-Circular Sources (min.)	-	%	50
Rheological Properties			
Melt Volume Rate 220 °C/10 kg	ISO 1133	cm³/10 min	37
Mechanical Properties			
Charpy Notched Impact Strength, 23° C	ISO 179/1eA	kJ/m²	18
Charpy Notched Impact Strength, -30 °C	ISO 179/1eA	kJ/m²	8
Charpy Unnotched, 23 °C	ISO 179/1eU	kJ/m²	100
Charpy Unnotched, -30 °C	ISO 179/1eU	kJ/m²	80
Izod Notched Impact Strength, 23 °C	ISO 180/A	kJ/m²	18
Izod Notched Impact Strength, -30 °C	ISO 180/A	kJ/m²	9
Tensile Modulus	ISO 527	MPa	2500
Tensile Stress at Yield, 23 °C	ISO 527	MPa	44
Tensile Strain at Yield, 23 °C	ISO 527	%	2.1
Tensile Stress at Break, 23 °C	ISO 527	MPa	32

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Property, Test Condition	Standard	Unit	Values
Tensile Strain at Break, 23 °C	ISO 527	%	> 15
Nominal Strain at Break, 23 °C	ISO 527	%	18
Flexural Modulus, 23 °C	ISO 178	MPa	2400
Flexural Strength, 23 °C	ISO 178	MPa	70
Hardness, Ball Indentation	ISO 2039-1	MPa	110
Thermal Properties			
Vicat Softening Temperature, VST/B/120 (50N, 120 °C/h)	ISO 306	°C	100
Vicat Softening Temperature VST/B/50 (50N, 50 °C/h)	ISO 306	°C	98
Heat Deflection Temperature A; (annealed 4 h/80 °C; 1.8 MPa)	ISO 75	°C	93
Heat Deflection Temperature B; (annealed 4 h/80 °C; 0.45 MPa)	ISO 75	°C	97
Coefficient of Linear Thermal Expansion	ISO 11359	10^{-6}/°C	90
Electrical Properties			
Dielectric Strength, Short Time, 1.0 mm	IEC 60243-1	kV/mm	34
Dielectric Strength, Short Time, 1.5 mm	IEC 60243-1	kV/mm	34
Comparative Tracking Index	IEC 60112	V	600
Other Properties			
Density	ISO 1183	kg/m³	1050
UL94 rating at 1.5 mm thickness	IEC 60695-11-10	-	HB
Burning rate (US-FMVSS), 2.0 mm	ISO 3795	mm/min	60
Glow wire test (GWFI), 2.0 mm	IEC 60695-2-12	°C	700
Processing			
Linear Mold Shrinkage	ISO 294-4	%	0.4 - 0.7
Melt Temperature Range	ISO 294	°C	230 - 260
Mold Temperature Range	ISO 294	°C	60 - 80
Drying Temperature	-	°C	80
Drying Time	-	h	2 - 4