INEOS Styrolution

Novodur® ECO HD M203FC BC50

ABS

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Novodur® ECO HD M203FC BC50 acrylonitrile butadiene styrene (ABS) polymer features high surface quality and good impact strength. Novodur® HD M203FC is an injection molding grade with high flowability and well balanced properties. Medical and food contact statements are available upon request. Novodur® ECO HD M203FC BC50 is an ISCC compliant product leading to a substitution of fossil source styrene with ISCC certified bio-attributed styrene.

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	31	cm³/10min	ISO 1133
Temperature	220	°C	-
Load	10	kg	-

Mechanical Properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	2400	MPa	ISO 527
Yield stress	46	MPa	ISO 527
Yield strain	2.6	%	ISO 527
Nominal strain at break	17	%	ISO 527
Impact Strength (Charpy), +23°C	110	kJ/m²	ISO 179/1eU
Impact Strength (Charpy), -30°C	90	kJ/m²	ISO 179/1eU
Notched Impact Strength (Charpy), +23°C	16	kJ/m²	ISO 179/1eA
Notched Impact Strength (Charpy), -30°C	7	kJ/m²	ISO 179/1eA
Flexural Modulus (23°C)	2400	MPa	ISO 178
Flexural strength	70	MPa	ISO 178
Notched Impact Strength (Izod), 23°C	16	kJ/m²	ISO 180/1A
Notched Impact Strength (Izod)	7	kJ/m²	ISO 180/1A
Temperature	-30	°C	-
Ball Indentation Hardness	107	MPa	ISO 2039-1

Thermal Properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load (1.80 MPa)	94	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	98	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	99	°C	ISO 306
Coeff. of Linear Therm. Expansion, parallel	90	E-6/K	ISO 11359-1/-2
Burning Behav. at 1.5 mm Nom. Thickn.	HB	class	UL 94
Thickness tested	1.5	mm	-
UL recognition	yes	-	-
Burning Behav. at thickness h	HB	class	UL 94
Thickness tested	3.0	mm	-
UL recognition	yes	-	-

Electrical Properties	Value	Unit	Test Standard
ISO Data			
Electric Strength	35	kV/mm	IEC 60243-1
Comparative tracking index	600	-	IEC 60112

Other Properties	Value	Unit	Test Standard
ISO Data			
Water Absorption	0.95	%	Sim. to ISO 62
Density	1050	kg/m³	ISO 1183

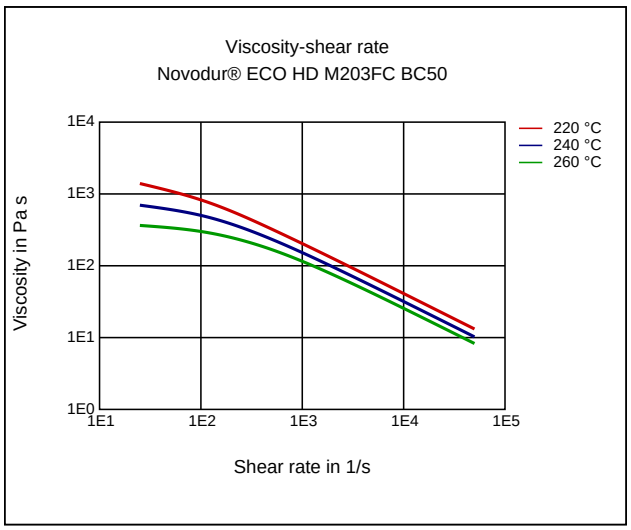
Rheological calculation properties	Value	Unit	Test Standard
ISO Data			
Density of melt	927	kg/m³	-
Thermal Conductivity of Melt	0.218	W/(m K)	-
Spec. heat capacity of melt	2900	J/(kg K)	-
Ejection temperature	90	°C	-

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	80	°C	-
Pre-drying - Time	2 - 4	h	-

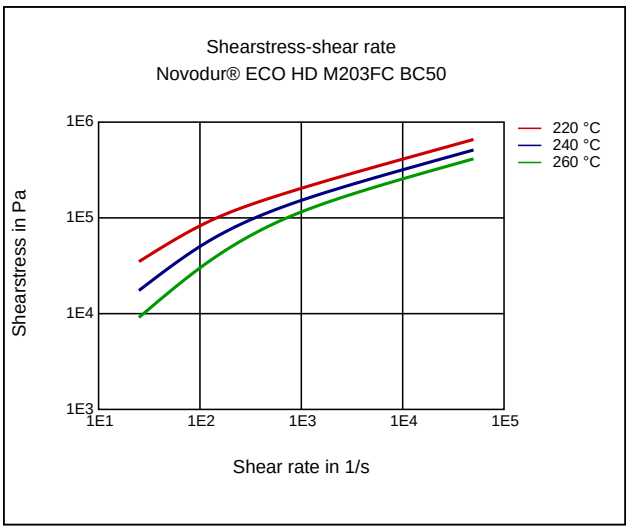
Melt temperature	230 - 260	°C	-
Mold temperature	60 - 80	°C	-

Diagrams

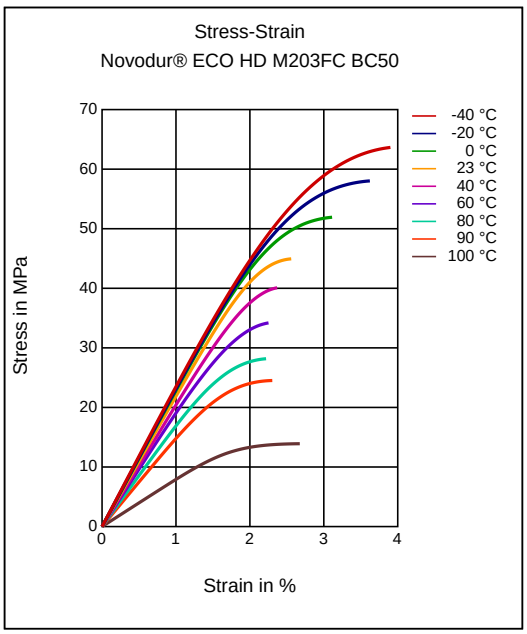
Viscosity-shear rate



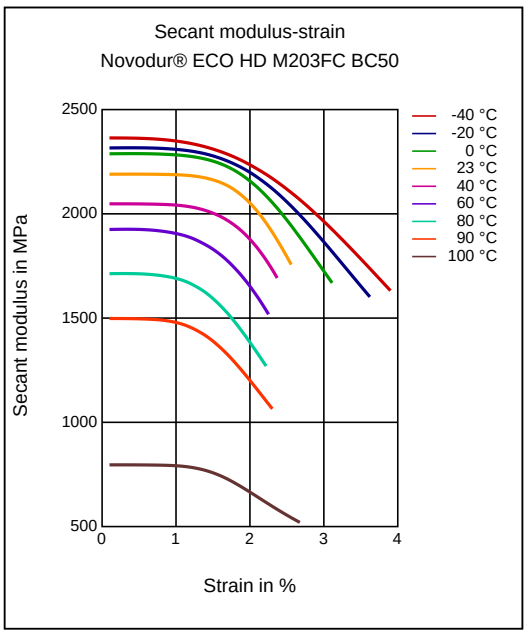
Shearstress-shear rate



Stress-strain



Secant modulus-strain



Characteristics

Processing
Injection Molding

Chemical Resistance
Radiation Resistance

Delivery form
Pellets

Certifications
Contains renewable resources, Food approval, ISCC Plus

Special Characteristics

Impact modified, Sterilizable, Ethylene Oxide (EtO) Sterilization, Gamma irradiation sterilization

Applications

Medical

Features

High Gloss, Laser Markable

Injection Molding

PREPROCESSING

Pre-drying, Temperature: 80 °C

Pre-drying, Time: 2 - 4h

PROCESSING

Melt temperature, range: 230 - 260 °C

Mold temperature, range: 60 - 80 °C

Disclaimer

Liability Exclusion
These guide values are measured and provided by the product manufacturer and have been determined on standardised test specimens and can be affected by pigmentation, mould design and processing conditions. M-Base has taken the guide values from the producer's original Technical Data Sheet. **ALBIS AND M-BASE ARE THEREFORE NOT RESPONSIBLE FOR THE ACCURACY OF THE GUIDE VALUES AND CANNOT GIVE ANY WARRANTY WITH REGARD TO THEIR CORRECTNESS.**

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