

Novodur® HD-15

ABS

INEOS Styrolution

Novodur® HD 15 acrylonitrile butadiene styrene (ABS) polymer features high surface quality and good impact strength. Novodur® HD 15 is an easily processable ABS grade with well-balanced mechanical properties and an excellent chemical and stress cracking resistance. Medical and food contact statements are available upon request.

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	15	cm ³ /10min	ISO 1133
Temperature	220	°C	-
Load	10	kg	-

Mechanical Properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	2300	MPa	ISO 527
Yield stress	48	MPa	ISO 527
Yield strain	2.5	%	ISO 527
Nominal strain at break	10	%	ISO 527
Impact Strength (Charpy), +23°C	170	kJ/m ²	ISO 179/1eU
Impact Strength (Charpy), -30°C	90	kJ/m ²	ISO 179/1eU
Notched Impact Strength (Charpy), +23°C	14	kJ/m ²	ISO 179/1eA
Notched Impact Strength (Charpy), -30°C	6	kJ/m ²	ISO 179/1eA

Thermal Properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load (1.80 MPa)	93	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	99	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	100	°C	ISO 306
Coeff. of Linear Therm. Expansion, parallel	90	E-6/K	ISO 11359-1/-2

Electrical Properties	Value	Unit	Test Standard
ISO Data			
Electric Strength	37	kV/mm	IEC 60243-1
Comparative tracking index	600	-	IEC 60112

Other Properties	Value	Unit	Test Standard
ISO Data			
Water Absorption	1	%	Sim. to ISO 62
Humidity absorption	0.22	%	Sim. to ISO 62
Density	1050	kg/m ³	ISO 1183

Rheological calculation properties	Value	Unit	Test Standard
ISO Data			
Density of melt	940	kg/m ³	-
Thermal Conductivity of Melt	0.241	W/(m K)	-
Spec. heat capacity of melt	2230	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	220 - 260	°C	-
Mold temperature	30 - 60	°C	-

Characteristics
Processing

Injection Molding

Chemical Resistance

Radiation Resistance

Delivery form

Pellets

Certifications

Medical, Biocompatibility ISO 10993, US Pharmacopeia Class VI Approved, Drug Master File, Long term supply assurance, Food

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Special Characteristics

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

approval, Food approval 10/2011, Food Contact (FDA)

Applications

Medical

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