

# Novodur HD 15

Acrylonitrile Butadiene Styrene (ABS)

## TECHNICAL DATASHEET

### DESCRIPTION

Novodur® acrylonitrile butadiene styrene (ABS) polymers feature 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

### FEATURES

- Chemical resistance
- Sterilizable (ETO, NO<sub>2</sub>, Irradiation)

### APPLICATIONS

- Medical devices
- Medical diagnostic equipment
- Insuline pens

Property, Test Condition	Standard	Unit	Values
<b>Rheological Properties</b>			
Melt Volume Rate 220 °C/10 kg	ISO 1133	cm <sup>3</sup> /10 min	15
<b>Mechanical Properties</b>			
Charpy Notched Impact Strength, 23° C	ISO 179/1eA	kJ/m <sup>2</sup>	14
Charpy Notched Impact Strength, -30 °C	ISO 179/1eA	kJ/m <sup>2</sup>	6
Charpy Unnotched, 23 °C	ISO 179/1eU	kJ/m <sup>2</sup>	170
Charpy Unnotched, -30 °C	ISO 179/1eU	kJ/m <sup>2</sup>	90
Izod Notched Impact Strength, 23 °C	ISO 180/A	kJ/m <sup>2</sup>	16
Izod Notched Impact Strength, -30 °C	ISO 180/A	kJ/m <sup>2</sup>	6
Tensile Modulus	ISO 527	MPa	2300
Tensile Stress at Yield, 23 °C	ISO 527	MPa	48
Tensile Strain at Yield, 23 °C	ISO 527	%	2.5
Tensile Stress at Break, 23 °C	ISO 527	MPa	37
Nominal Strain at Break, 23 °C	ISO 527	%	10
Hardness, Ball Indentation	ISO 2039-1	MPa	102
<b>Thermal Properties</b>			
Vicat Softening Temperature, VST/B/120 (50N, 120 °C/h)	ISO 306	°C	102
Vicat Softening Temperature VST/B/50 (50N, 50 °C/h)	ISO 306	°C	100

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Property, Test Condition	Standard	Unit	Values
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	99
Coefficient of Linear Thermal Expansion	ISO 11359	10 <sup>-6</sup> /°C	90
Thermal Conductivity	ISO 22007-4	W/(m K)	0.17
<b>Electrical Properties</b>			
Dielectric Strength, Short Time, 1.5 mm	IEC 60243-1	kV/mm	37
Comparative Tracking Index	IEC 60112	V	600
<b>Other Properties</b>			
Density	ISO 1183	kg/m <sup>3</sup>	1050
Water Absorption, Saturated at 23 °C	ISO 62	%	1
Moisture Absorption, Equilibrium 23 °C/50% RH	ISO 62	%	0.22
<b>Processing</b>			
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