

Novodur® HD 15

Acrylonitrile Butadiene Styrene

INEOS Styrolution Group GmbH

Message:

Novodur® HD 15 is an easily processable ABS grade with well-balanced mechanical properties and an excellent chemical and stress cracking resistance

FEATURES

HD service package

Sterilizable

APPLICATIONS

Medical appliances

Inhalor housings

Insuline pens

| General Information | | | |
|---|--|------------------------|-------------|
| Features | High ESCR (Stress Cracking Resistance) Good disinfection Workability, good Good chemical resistance | | |
| Uses | Shell Medical/nursing supplies | | |
| Forms | Particle | | |
| Processing Method | Injection molding | | |
| Physical | Nominal Value | Unit | Test Method |
| Density | 1.05 | g/cm ³ | ISO 1183 |
| Melt Volume-Flow Rate (MVR) (220°C/10.0 kg) | 15.0 | cm ³ /10min | ISO 1133 |
| Molding Shrinkage | 0.40 - 0.70 | % | ISO 294-4 |
| Water Absorption | | | ISO 62 |
| Saturated, 23°C | 1.0 | % | ISO 62 |
| Equilibrium, 23°C, 50% RH | 0.22 | % | ISO 62 |
| Hardness | Nominal Value | Unit | Test Method |
| Ball Indentation Hardness | 102 | MPa | ISO 2039-1 |
| Mechanical | Nominal Value | Unit | Test Method |
| Tensile Modulus | 2300 | MPa | ISO 527-2 |
| Tensile Stress (Yield, 23°C) | 38.0 | MPa | ISO 527-2 |
| Tensile Strain (Yield, 23°C) | 2.5 | % | ISO 527-2 |
| Nominal Tensile Strain at Break (23°C) | 10 | % | ISO 527-2 |
| Impact | Nominal Value | Unit | Test Method |
| Charpy Notched Impact Strength | | | ISO 179 |
| -30°C | 6.0 | kJ/m ² | ISO 179 |
| 23°C | 14 | kJ/m ² | ISO 179 |

| | | | |
|--|----------------------|-------------------|--------------------|
| Charpy Unnotched Impact Strength | | | ISO 179 |
| -30°C | 90 | kJ/m ² | ISO 179 |
| 23°C | 170 | kJ/m ² | ISO 179 |
| Notched Izod Impact | | | ISO 180/A |
| -30°C | 6.0 | kJ/m ² | ISO 180/A |
| 23°C | 16 | kJ/m ² | ISO 180/A |
| Thermal | Nominal Value | Unit | Test Method |
| Heat Deflection Temperature ¹ | | | |
| 0.45 MPa, annealed | 99.0 | °C | ISO 75-2/B |
| 1.8 MPa, annealed | 93.0 | °C | ISO 75-2/A |
| Vicat Softening Temperature | 100 | °C | ISO 306/B50 |
| CLTE - Flow | 9.0E-5 | cm/cm/°C | ISO 11359-2 |
| Thermal Conductivity | 0.17 | W/m/K | DIN 52612 |
| Electrical | Nominal Value | Unit | Test Method |
| Surface Resistivity | 1.0E+13 | ohms | IEC 60093 |
| Volume Resistivity | 1.0E+15 | ohms·cm | IEC 60093 |
| Dielectric Strength (1.50 mm) | 37 | kV/mm | IEC 60243-1 |
| Relative Permittivity | | | IEC 60250 |
| 100 Hz | 2.90 | | IEC 60250 |
| 1 MHz | 2.80 | | IEC 60250 |
| Dissipation Factor | | | IEC 60250 |
| 100 Hz | 4.8E-3 | | IEC 60250 |
| 1 MHz | 7.9E-3 | | IEC 60250 |
| Comparative Tracking Index | 600 | V | IEC 60112 |
| Injection | Nominal Value | Unit | |
| Drying Temperature | 80 | °C | |
| Drying Time | 2.0 - 4.0 | hr | |
| Processing (Melt) Temp | 230 - 260 | °C | |
| Mold Temperature | 30 - 80 | °C | |
| NOTE | | | |
| 1. | 4h/80°C | | |

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Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

