

# Novodur® HH-112

Acrylonitrile Butadiene Styrene

Styrolution

## Message:

Novodur HH-112 is a high heat injection molding grade. It provides extraordinary heat resistance combined with enhanced stiffness.

| General Information                          |                         |                        |             |
|----------------------------------------------|-------------------------|------------------------|-------------|
| UL YellowCard                                | E108538-508117          |                        |             |
| Features                                     | High Heat Resistance    |                        |             |
|                                              | High Stiffness          |                        |             |
| Uses                                         | Automotive Applications |                        |             |
|                                              | Housings                |                        |             |
| Forms                                        | Pellets                 |                        |             |
| Processing Method                            | Injection Molding       |                        |             |
| Physical                                     | Nominal Value           | Unit                   | Test Method |
| Density                                      | 1.05                    | g/cm <sup>3</sup>      | ISO 1183    |
| Melt Volume-Flow Rate (MVR)                  |                         |                        | ISO 1133    |
| 200°C/21.6 kg                                | 6.00                    | cm <sup>3</sup> /10min |             |
| 220°C/10.0 kg                                | 6.00                    | cm <sup>3</sup> /10min |             |
| Molding Shrinkage                            | 0.40 to 0.70            | %                      | ISO 294-4   |
| Water Absorption (Equilibrium, 23°C, 50% RH) | 0.25                    | %                      | ISO 62      |
| Hardness                                     | Nominal Value           | Unit                   | Test Method |
| Ball Indentation Hardness                    | 114                     | MPa                    | ISO 2039-1  |
| Mechanical                                   | Nominal Value           | Unit                   | Test Method |
| Tensile Modulus                              | 2700                    | MPa                    | ISO 527-2   |
| Tensile Stress (Yield, 23°C)                 | 58.0                    | MPa                    | ISO 527-2   |
| Tensile Strain (Yield, 23°C)                 | 3.1                     | %                      | ISO 527-2   |
| Nominal Tensile Strain at Break (23°C)       | 8.0                     | %                      | ISO 527-2   |
| Flexural Modulus                             | 2700                    | MPa                    | ISO 178     |
| Flexural Stress                              | 81.0                    | MPa                    | ISO 178     |
| Impact                                       | Nominal Value           | Unit                   | Test Method |
| Charpy Notched Impact Strength               |                         |                        | ISO 179     |
| -30°C                                        | 5.0                     | kJ/m <sup>2</sup>      |             |
| 23°C                                         | 12                      | kJ/m <sup>2</sup>      |             |
| Charpy Unnotched Impact Strength             |                         |                        | ISO 179     |
| -30°C                                        | 80                      | kJ/m <sup>2</sup>      |             |
| 23°C                                         | 140                     | kJ/m <sup>2</sup>      |             |

| Thermal                                  | Nominal Value | Unit     | Test Method |
|------------------------------------------|---------------|----------|-------------|
| Heat Deflection Temperature              |               |          |             |
| 0.45 MPa, Annealed                       | 113           | °C       | ISO 75-2/B  |
| 1.8 MPa, Annealed                        | 109           | °C       | ISO 75-2/A  |
| Vicat Softening Temperature              |               |          |             |
| --                                       | 118           | °C       | ISO 306/A50 |
| --                                       | 112           | °C       | ISO 306/B50 |
| CLTE - Flow                              | 9.0E-5        | cm/cm/°C | ISO 11359-2 |
| Thermal Conductivity                     | 0.17          | W/m/K    | DIN 52612   |
| Maximum Service Temperature              | 90            | °C       |             |
| Injection Velocity                       | 200           | mm/sec   |             |
| Electrical                               | Nominal Value | Unit     | Test Method |
| Volume Resistivity                       | 1.0E+15       | ohms·cm  | IEC 60093   |
| Electric Strength <sup>1</sup> (1.50 mm) | 41            | kV/mm    | IEC 60243-1 |
| Comparative Tracking Index               | 600           | V        | IEC 60112   |
| Injection                                | Nominal Value | Unit     |             |
| Drying Temperature                       | 80.0          | °C       |             |
| Drying Time                              | 2.0 to 4.0    | hr       |             |
| Processing (Melt) Temp                   | 230 to 270    | °C       |             |
| Mold Temperature                         | 40.0 to 60.0  | °C       |             |
| NOTE                                     |               |          |             |

1. Short Time

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