

# STAR-THERM® E B-3C

Polyamide 6

EPIC Polymers

## Message:

STAR-THERM® E B-3C is a Polyamide 6 (Nylon 6) product filled with 30% carbon fiber. It is available in Europe.

| General Information                          |                                   |                   |             |
|----------------------------------------------|-----------------------------------|-------------------|-------------|
| Filler / Reinforcement                       | Carbon Fiber,30% Filler by Weight |                   |             |
| Forms                                        | Pellets                           |                   |             |
| Physical                                     | Nominal Value                     | Unit              | Test Method |
| Density                                      | 1.28                              | g/cm <sup>3</sup> | ISO 1183    |
| Molding Shrinkage - Flow                     | 0.20                              | %                 | ISO 294-4   |
| Water Absorption (Equilibrium, 23°C, 50% RH) | 2.1                               | %                 | ISO 62      |
| Mechanical                                   | Nominal Value                     | Unit              | Test Method |
| Tensile Modulus (23°C)                       | 18500                             | MPa               | ISO 527-2   |
| Tensile Stress (Yield, 23°C)                 | 220                               | MPa               | ISO 527-2   |
| Tensile Strain (Break, 23°C)                 | 2.0                               | %                 | ISO 527-2   |
| Flexural Modulus (23°C)                      | 17000                             | MPa               | ISO 178     |
| Flexural Stress (23°C)                       | 315                               | MPa               | ISO 178     |
| Impact                                       | Nominal Value                     | Unit              | Test Method |
| Charpy Notched Impact Strength (23°C)        | 10                                | kJ/m <sup>2</sup> | ISO 179     |
| Charpy Unnotched Impact Strength (23°C)      | 50                                | kJ/m <sup>2</sup> | ISO 179     |
| Thermal                                      | Nominal Value                     | Unit              | Test Method |
| Heat Deflection Temperature                  |                                   |                   |             |
| 0.45 MPa, Unannealed                         | 215                               | °C                | ISO 75-2/B  |
| 1.8 MPa, Unannealed                          | 205                               | °C                | ISO 75-2/A  |
| CLTE - Flow (23°C)                           | 2.1E-5                            | cm/cm/°C          | ISO 7991    |
| Thermal Conductivity                         | 0.55                              | W/m/K             | ISO 22007   |
| Electrical                                   | Nominal Value                     | Unit              | Test Method |
| Surface Resistivity                          | 1.0E+2                            | ohms              | ASTM D257   |
| Extrusion                                    | Nominal Value                     | Unit              |             |
| Cylinder Zone 1 Temp.                        | 240 to 300                        | °C                |             |
| Cylinder Zone 2 Temp.                        | 250 to 300                        | °C                |             |
| Cylinder Zone 3 Temp.                        | 260 to 310                        | °C                |             |
| Cylinder Zone 4 Temp.                        | 260 to 320                        | °C                |             |

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