# VESTODUR® GF30-FR3

Polybutylene Terephthalate

Evonik Industries AG

## Message:

Evonik manufactures a range of polybutylene terephthalate compounds that are supplied under the registered trademark VESTODUR®. Material properties characterizing VESTODUR® compounds are:
high thermostability
high stiffness
low water absorption resulting in high dimensional stability
high hardness
good strength
good sliding friction behavior, low abrasion
good creep behavior
good electrical properties
good chemical resistance
good weathering resistance
good processability
no tendency to form stress cracks

| General Information | |
|---|---|
| UL YellowCard | E66645-248205 |
| Filler / Reinforcement | Glass Fiber,30% Filler by Weight |
| Features | Flame Retardant |
| | Good Abrasion Resistance |
| | Good Chemical Resistance |
| | Good Creep Resistance |
| | Good Dimensional Stability |
| | Good Electrical Properties |
| | Good Processability |
| | Good Strength |
| | Good Thermal Stability |
| | Good Weather Resistance |
| | High Hardness |
| | High Stiffness |
| | Low to No Water Absorption |
| Uses | Automotive Applications |
| | Fuel Lines |
| | Thin-walled Parts |
| | Wire & Cable Applications |
| Forms | Pellets |
| Processing Method | Extrusion |
| | Injection Molding |

| Physical | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Density (23°C) | 1.72 | g/cm³ | ISO 1183 |
| Melt Volume-Flow Rate (MVR) (250°C/2.16 kg) | 12.0 | cm³/10min | ISO 1133 |
| Molding Shrinkage | | | ISO 294-4 |
| Across Flow | 1.5 | % | |
| Flow | 0.30 | % | |
| Water Absorption (Saturation, 23°C) | 0.40 | % | ISO 62 |
| **Hardness** | **Nominal Value** | **Unit** | **Test Method** |
| Shore Hardness (Shore D) | 84 | | ISO 868 |
| **Mechanical** | **Nominal Value** | **Unit** | **Test Method** |
| Tensile Modulus | 11000 | MPa | ISO 527-2 |
| Tensile Stress | 140 | MPa | ISO 527-2/50 |
| Tensile Strain (Break) | 2.2 | % | ISO 527-2/50 |
| **Impact** | **Nominal Value** | **Unit** | **Test Method** |
| Charpy Notched Impact Strength | | | ISO 179/1eA |
| -30°C, Complete Break | 10 | kJ/m² | |
| 23°C, Complete Break | 10 | kJ/m² | |
| Charpy Unnotched Impact Strength | | | ISO 179/1eU |
| -30°C, Complete Break | 55 | kJ/m² | |
| 23°C, Complete Break | 55 | kJ/m² | |
| **Thermal** | **Nominal Value** | **Unit** | **Test Method** |
| Heat Deflection Temperature | | | |
| 0.45 MPa, Unannealed | 223 | °C | ISO 75-2/B |
| 1.8 MPa, Unannealed | 216 | °C | ISO 75-2/A |
| Vicat Softening Temperature | | | |
| -- | 220 | °C | ISO 306/A |
| -- | 213 | °C | ISO 306/B |
| Melting Temperature | 221 to 226 | °C | ISO 11357-3 |
| CLTE - Flow (23 to 55°C) | 4.0E-4 | cm/cm/°C | ISO 11359-2 |
| **Electrical** | **Nominal Value** | **Unit** | **Test Method** |
| Surface Resistivity | 1.0E+13 | ohms | IEC 60093 |
| Volume Resistivity (23°C) | 1.0E+15 | ohms·cm | IEC 60093 |
| Electric Strength [1] (1.00 mm, in Oil) | 27 | kV/mm | IEC 60243-1 |
| Relative Permittivity | | | IEC 60250 |
| 23°C, 100 Hz | 4.10 | | |
| 23°C, 1 MHz | 4.40 | | |
| Dissipation Factor | | | IEC 60250 |
| 23°C, 100 Hz | 3.0E-3 | | |
| 23°C, 1 MHz | 0.015 | | |
| Comparative Tracking Index | | | IEC 60112 |

| | | | |
|---|---|---|---|
| -- [2] | 225 | V | |
| Solution A | 250 | V | |
| Flammability | Nominal Value | Unit | Test Method |
| Flame Rating | | | UL 94 |
| 0.400 mm | V-0 | | |
| 0.800 mm | V-0 | | |
| 1.60 mm | V-0 | | |
| Glow Wire Flammability Index (2.00 mm) | 960 | °C | IEC 60695-2-12 |
| Glow Wire Ignition Temperature (2.00 mm) | 750 | °C | IEC 60695-2-13 |
| Oxygen Index | 34 | % | ISO 4589-2 |
| Additional Information | Nominal Value | | Test Method |
| Electrolytical Corrosion | A1 step | | IEC 60426 |
| NOTE | | | |
| 1. | K 20/P 50 | | |
| 2. | 100 Drops value | | |



## Recommended distributors for this material

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