# Arnite® TV4 240

PBT-GF20 Envalior

## Product Texts

20% Glass Reinforced

ISO 1043 PBT-GF20

| Rheological properties | Value | Unit | Test Standard |
|---|---|---|---|
| **ISO Data** | | | |
| Melt volume-flow rate, MVR | 23 | cm³/10min | ISO 1133 |
| Temperature | 250 | °C | - |
| Load | 2.16 | kg | - |

| Mechanical properties | Value | Unit | Test Standard |
|---|---|---|---|
| **ISO Data** | | | |
| Tensile Modulus | 7200 | MPa | ISO 527 |
| Stress at break | 120 | MPa | ISO 527 |
| Strain at break | 3 | % | ISO 527 |
| Charpy impact strength, +23°C | 35 | kJ/m² | ISO 179/1eU |
| Charpy impact strength, -30°C | 35 | kJ/m² | ISO 179/1eU |
| Charpy notched impact strength, +23°C | 7 | kJ/m² | ISO 179/1eA |
| Charpy notched impact strength, -30°C | 7 | kJ/m² | ISO 179/1eA |

| Thermal properties | Value | Unit | Test Standard |
|---|---|---|---|
| **ISO Data** | | | |
| Melting temperature, 10°C/min | 225 | °C | ISO 11357-1/-3 |
| Temp. of deflection under load, 1.80 MPa | 205 | °C | ISO 75-1/-2 |
| Temp. of deflection under load, 0.45 MPa | 220 | °C | ISO 75-1/-2 |
| Coeff. of linear therm. expansion, parallel | 40 | E-6/K | ISO 11359-1/-2 |
| Coeff. of linear therm. expansion, normal | 80 | E-6/K | ISO 11359-1/-2 |
| Burning behav. at 1.5 mm nom. thickn. | HB | class | IEC 60695-11-10 |
| Thickness tested | 1.5 | mm | - |
| Yellow Card available | yes | - | - |
| Burning behav. at thickness h | HB | class | IEC 60695-11-10 |
| Thickness tested | 3.0 | mm | - |
| Yellow Card available | yes | - | - |
| Oxygen index | 20 | % | ISO 4589-1/-2 |

| Electrical properties | Value | Unit | Test Standard |
|---|---|---|---|
| **ISO Data** | | | |
| Relative permittivity, 100Hz | 3.7 | - | IEC 62631-2-1 |
| Relative permittivity, 1MHz | 3.5 | - | IEC 62631-2-1 |
| Dissipation factor, 100Hz | 20 | E-4 | IEC 62631-2-1 |
| Dissipation factor, 1MHz | 180 | E-4 | IEC 62631-2-1 |
| Volume resistivity | >1E13 | Ohm*m | IEC 62631-3-1 |
| Electric strength | 30 | kV/mm | IEC 60243-1 |
| Comparative tracking index | 400 | - | IEC 60112 |

| Other properties | Value | Unit | Test Standard |
|---|---|---|---|
| **ISO Data** | | | |
| Water absorption | 0.3 | % | Sim. to ISO 62 |
| Humidity absorption | 0.15 | % | Sim. to ISO 62 |
| Density | 1450 | kg/m³ | ISO 1183 |

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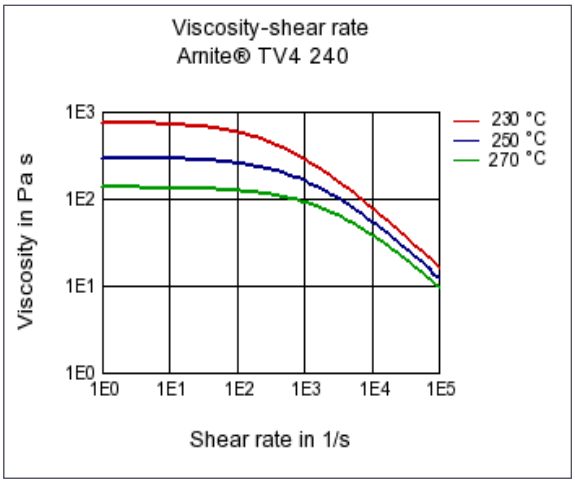
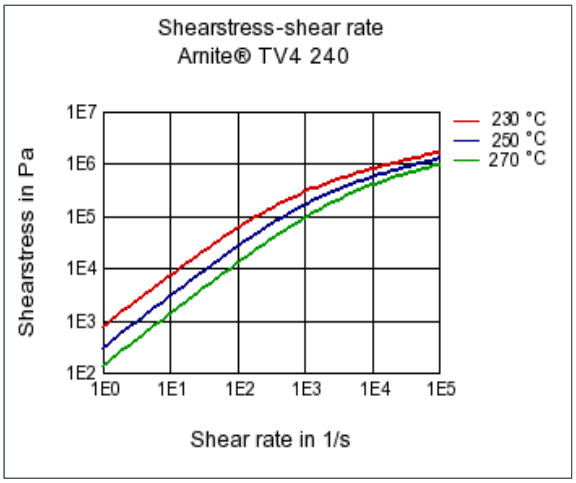
| Rheological calculation properties | Value | Unit | Test Standard |
|---|---|---|---|
| **ISO Data** | | | |
| Density of melt | 1220 | kg/m³ | - |
| Thermal conductivity of melt | 0.25 | W/(m K) | - |
| Spec. heat capacity of melt | 1850 | J/(kg K) | - |
| Eff. thermal diffusivity | 1.11E-7 | m²/s | - |

### Diagrams

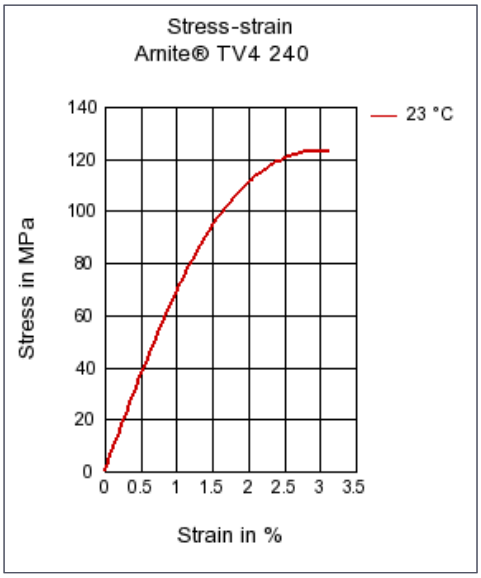
#### Viscosity-shear rate



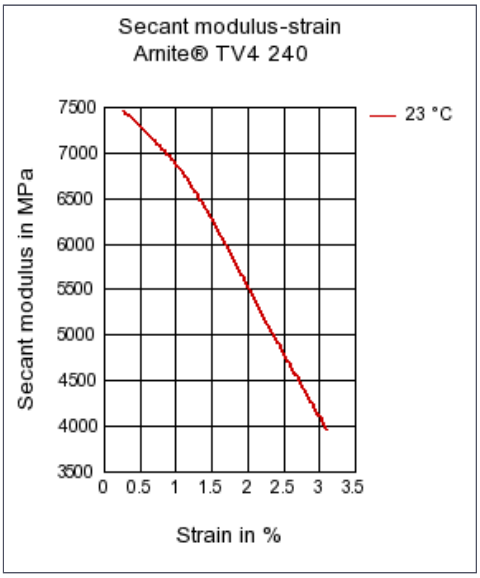

#### Shearstress-shear rate



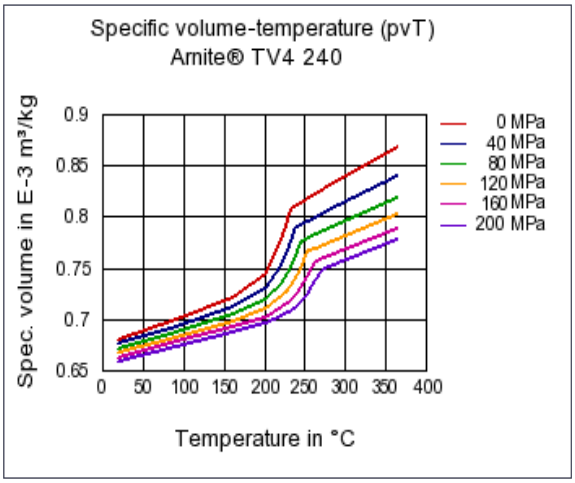

#### Stress-strain




#### Secant modulus-strain



## Specific volume-temperature (pvT)




## Characteristics

**Processing**
Injection Molding

**Additives**
Release agent

**Delivery form**
Pellets

## Other text information

### Injection Molding

Injection Molding Recommendations
Steel recommendations for molds screws and barrels
Supporting document for Stanyl quality processing

## Chemical Media Resistance

### Alcohols

- Methanol (23°C)
- Ethanol (23°C)

### Hydrocarbons

- Toluene (23°C)

### Ethers

- Diethyl ether (23°C)

### Other

- Water (23°C)