

**Pocan® BF4215 000000**  
**PBT-GF12 FR(17)**

Envalior

Injection Molding, 12% Glass Reinforced, Flame Retardant

ISO 1043 PBT-GF12 FR(17)

| Rheological properties      | Value | Unit                   | Test Standard   |
|-----------------------------|-------|------------------------|-----------------|
| <b>ISO Data</b>             |       |                        |                 |
| Melt volume-flow rate, MVR  | 21    | cm <sup>3</sup> /10min | ISO 1133        |
| Temperature                 | 260   | °C                     | -               |
| Load                        | 2.16  | kg                     | -               |
| Molding shrinkage, parallel | 0.8   | %                      | ISO 294-4, 2577 |
| Molding shrinkage, normal   | 1.1   | %                      | ISO 294-4, 2577 |

| Mechanical Properties                   | Value | Unit              | Test Standard |
|-----------------------------------------|-------|-------------------|---------------|
| <b>ISO Data</b>                         |       |                   |               |
| Tensile Modulus                         | 6000  | MPa               | ISO 527       |
| Stress at Break                         | 100   | MPa               | ISO 527       |
| Strain at Break                         | 2.5   | %                 | ISO 527       |
| Tensile Creep Modulus, 1h               | 5500  | MPa               | ISO 899-1     |
| Tensile Creep Modulus, 1000h            | 5000  | MPa               | ISO 899-1     |
| Impact Strength (Charpy), +23°C         | 25    | kJ/m <sup>2</sup> | ISO 179/1eU   |
| Impact Strength (Charpy), -30°C         | 25    | kJ/m <sup>2</sup> | ISO 179/1eU   |
| Notched Impact Strength (Charpy), +23°C | 10    | kJ/m <sup>2</sup> | ISO 179/1eA   |
| Notched Impact Strength (Charpy), -30°C | 10    | kJ/m <sup>2</sup> | ISO 179/1eA   |

| Thermal Properties                          | Value | Unit  | Test Standard  |
|---------------------------------------------|-------|-------|----------------|
| <b>ISO Data</b>                             |       |       |                |
| Melting Temperature (10°C/min)              | 225   | °C    | ISO 11357-1/-3 |
| Temp. of deflection under load (1.80 MPa)   | 185   | °C    | ISO 75-1/-2    |
| Temp. of deflection under load (0.45 MPa)   | 210   | °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   | 100   | E-6/K | ISO 11359-1/-2 |
| Burning Behav. at 1.5 mm Nom. Thickn.       | V-0   | class | UL 94          |
| Thickness tested                            | 1.5   | mm    | -              |
| Oxygen index                                | 32    | %     | ISO 4589-1/-2  |

| Electrical Properties        | Value | Unit  | Test Standard |
|------------------------------|-------|-------|---------------|
| <b>ISO Data</b>              |       |       |               |
| Relative permittivity, 100Hz | 3.6   | -     | IEC 62631-2-1 |
| Relative permittivity, 1MHz  | 3.4   | -     | IEC 62631-2-1 |
| Dissipation Factor, 100Hz    | 40    | E-4   | IEC 62631-2-1 |
| Dissipation Factor, 1MHz     | 190   | E-4   | IEC 62631-2-1 |
| Surface Resistivity          | >1E15 | Ohm   | IEC 62631-3-2 |
| Electric Strength            | 29    | kV/mm | IEC 60243-1   |
| Comparative tracking index   | 200   | -     | IEC 60112     |

| Other Properties    | Value | Unit              | Test Standard  |
|---------------------|-------|-------------------|----------------|
| <b>ISO Data</b>     |       |                   |                |
| Water Absorption    | 0.3   | %                 | Sim. to ISO 62 |
| Humidity absorption | 0.1   | %                 | Sim. to ISO 62 |
| Density             | 1530  | kg/m <sup>3</sup> | ISO 1183       |

| Test specimen production            | Value | Unit | Test Standard |
|-------------------------------------|-------|------|---------------|
| <b>ISO Data</b>                     |       |      |               |
| Injection Molding, melt temperature | 250   | °C   | ISO 294       |
| Injection Molding, mold temperature | 80    | °C   | ISO 294       |

| Processing Recommendation Injection Molding | Value     | Unit | Test Standard |
|---------------------------------------------|-----------|------|---------------|
| Pre-drying - Temperature                    | 120       | °C   | -             |
| Pre-drying - Time                           | 4 - 8     | h    | -             |
| Processing humidity                         | ≤0.02     | %    | -             |
| Melt temperature                            | 240 - 260 | °C   | -             |

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Mold temperature

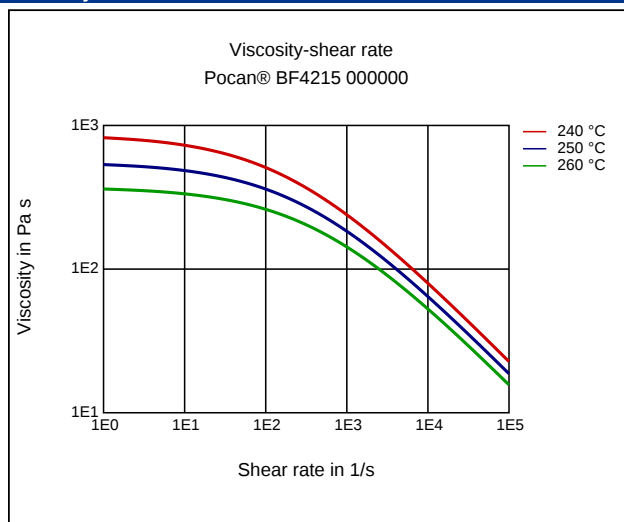
80 - 100

°C

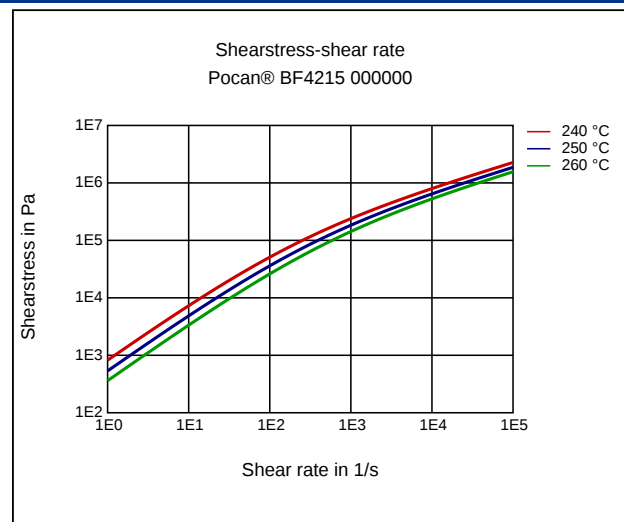
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## Diagrams

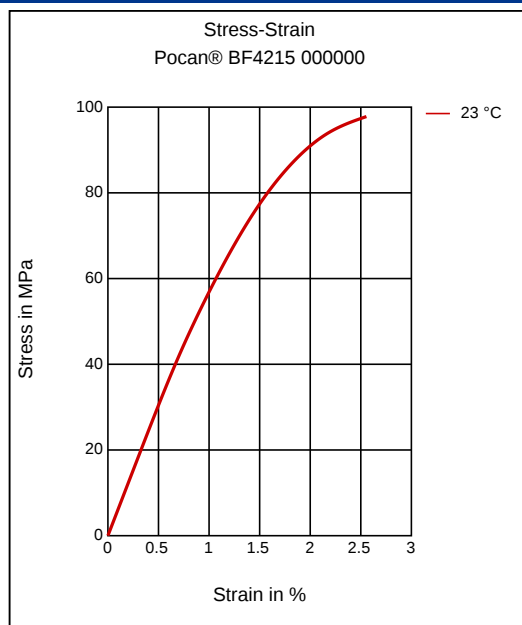
### Viscosity-shear rate



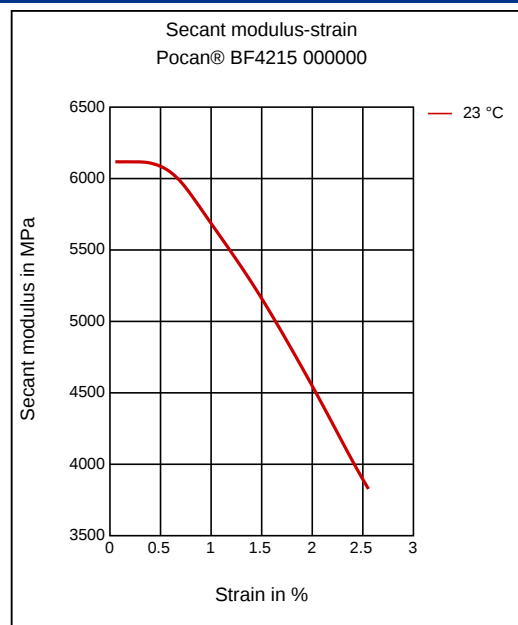
### Shearstress-shear rate



### Stress-strain



### Secant modulus-strain



## Characteristics

### Processing

Injection Molding

### Delivery form

Pellets

### Injection Molding

PREPROCESSING

### Special Characteristics

Flame retardant, Heat aging stabilized

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Residual moisture content: 0.00 - 0.02 %  
Drying temperature circulating air dryer: 120 °C

Drying time circulating air dryer: 4 - 8 h

**PROCESSING**

Melt temperature (Tmin - Tmax): 240 - 260 °C

Mold temperature: 80 - 100 °C

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