

**Pocan® ECOB4239 000000**  
**PBT-GF30 FR(17)**

Envalior

Injection Molding, 30% Glass Reinforced, Flame Retardant, Recycled Content

ISO 1043 PBT-GF30 FR(17)

| Rheological properties      | Value | Unit                   | Test Standard   |
|-----------------------------|-------|------------------------|-----------------|
| <b>ISO Data</b>             |       |                        |                 |
| Melt volume-flow rate, MVR  | 37    | cm <sup>3</sup> /10min | ISO 1133        |
| Temperature                 | 260   | °C                     | -               |
| Load                        | 5     | kg                     | -               |
| Molding shrinkage, parallel | 0.3   | %                      | ISO 294-4, 2577 |
| Molding shrinkage, normal   | 0.9   | %                      | ISO 294-4, 2577 |

| Mechanical Properties                   | Value | Unit              | Test Standard |
|-----------------------------------------|-------|-------------------|---------------|
| <b>ISO Data</b>                         |       |                   |               |
| Tensile Modulus                         | 11500 | MPa               | ISO 527       |
| Stress at Break                         | 125   | MPa               | ISO 527       |
| Strain at Break                         | 2.1   | %                 | ISO 527       |
| Impact Strength (Charpy), +23°C         | 50    | kJ/m <sup>2</sup> | ISO 179/1eU   |
| Impact Strength (Charpy), -30°C         | 50    | 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   |
| Puncture - maximum force, +23°C         | 669   | N                 | ISO 6603-2    |
| Puncture - maximum force, -30°C         | 649   | N                 | ISO 6603-2    |
| Puncture energy, +23°C                  | 2.3   | J                 | ISO 6603-2    |
| Puncture energy, -30°C                  | 2.1   | J                 | ISO 6603-2    |
| Flexural Modulus (23°C)                 | 10500 | MPa               | ISO 178       |
| Flexural strength                       | 200   | MPa               | ISO 178       |
| Notched Impact Strength (Izod), 23°C    | 10    | kJ/m <sup>2</sup> | ISO 180/1A    |
| Notched Impact Strength (Izod)          | 10    | kJ/m <sup>2</sup> | ISO 180/1A    |
| Temperature                             | -30   | °C                | -             |
| Impact Strength (Izod), 23°C            | 45    | kJ/m <sup>2</sup> | ISO 180/1U    |
| Ball Indentation Hardness               | 186   | MPa               | ISO 2039-1    |

| 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)   | 200   | °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 | 20    | E-6/K | ISO 11359-1/-2  |
| Coeff. of Linear Therm. Expansion, normal   | 90    | E-6/K | ISO 11359-1/-2  |
| Burning Behav. at 1.5 mm Nom. Thickn.       | V-0   | class | UL 94           |
| Burning Behav. 5V at Thickness h            | 5VA   | class | IEC 60695-11-20 |
| Thickness tested                            | 1.5   | mm    | -               |
| Oxygen index                                | 32    | %     | ISO 4589-1/-2   |
| Glow Wire (GWFI, Flammability Index)        | 960   | °C    | IEC 60695-2-12  |
| GWFI - thickness tested (1)                 | 0.75  | mm    | -               |
| Glow Wire Ignition Temperature)             | 725   | °C    | IEC 60695-2-13  |
| GWIT - thickness tested (1)                 | 0.75  | mm    | -               |
| Glow Wire Ignition Temperature)             | 725   | °C    | IEC 60695-2-13  |
| GWIT - thickness tested (2)                 | 1.5   | mm    | -               |
| Glow Wire Ignition Temperature)             | 725   | °C    | IEC 60695-2-13  |
| GWIT - thickness tested (3)                 | 3     | mm    | -               |

| Electrical Properties        | Value | Unit  | Test Standard |
|------------------------------|-------|-------|---------------|
| <b>ISO Data</b>              |       |       |               |
| Relative permittivity, 100Hz | 3.9   | -     | IEC 62631-2-1 |
| Relative permittivity, 1MHz  | 3.8   | -     | IEC 62631-2-1 |
| Dissipation Factor, 100Hz    | 60    | E-4   | IEC 62631-2-1 |
| Dissipation Factor, 1MHz     | 520   | E-4   | IEC 62631-2-1 |
| Volume Resistivity           | >1E13 | Ohm*m | IEC 62631-3-1 |
| Surface Resistivity          | >1E15 | Ohm   | IEC 62631-3-2 |
| Electric Strength            | 35    | kV/mm | IEC 60243-1   |

|                            |     |   |           |
|----------------------------|-----|---|-----------|
| Comparative tracking index | 275 | - | IEC 60112 |
|----------------------------|-----|---|-----------|

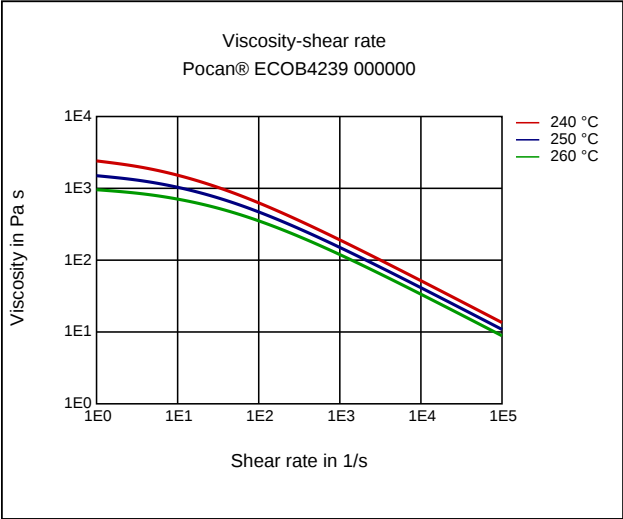
| Other Properties    | Value | Unit  | Test Standard  |
|---------------------|-------|-------|----------------|
| ISO Data            |       |       |                |
| Water Absorption    | 0.35  | %     | Sim. to ISO 62 |
| Humidity absorption | 0.1   | %     | Sim. to ISO 62 |
| Density             | 1650  | kg/m³ | ISO 1183       |
| Bulk density        | 800   | kg/m³ | -              |

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

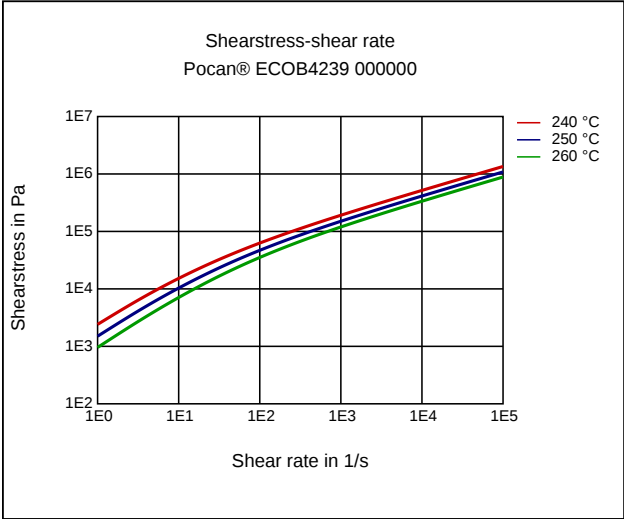
| Processing Recommendation Injection Molding | Value     | Unit | Test Standard |
|---------------------------------------------|-----------|------|---------------|
| Pre-drying - Temperature                    | 120       | °C   | -             |
| Pre-drying - Time                           | 4 - 8     | h    | -             |
| Processing humidity                         | ≤0.02     | %    | -             |
| Melt temperature                            | 240 - 260 | °C   | -             |
| Mold temperature                            | 80 - 100  | °C   | -             |

Diagrams

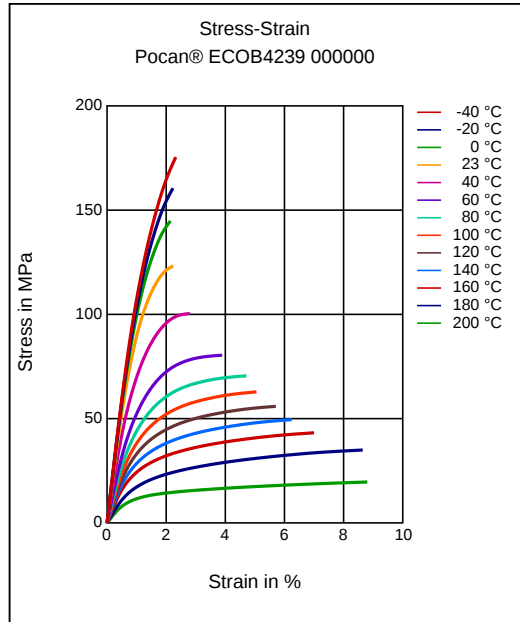
Viscosity-shear rate



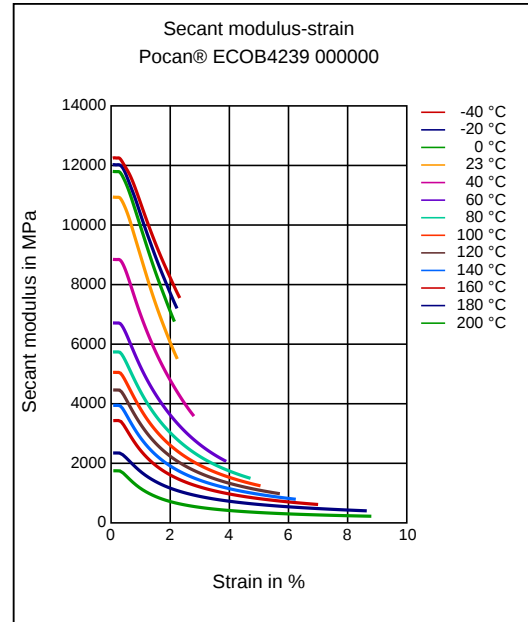
Shearstress-shear rate



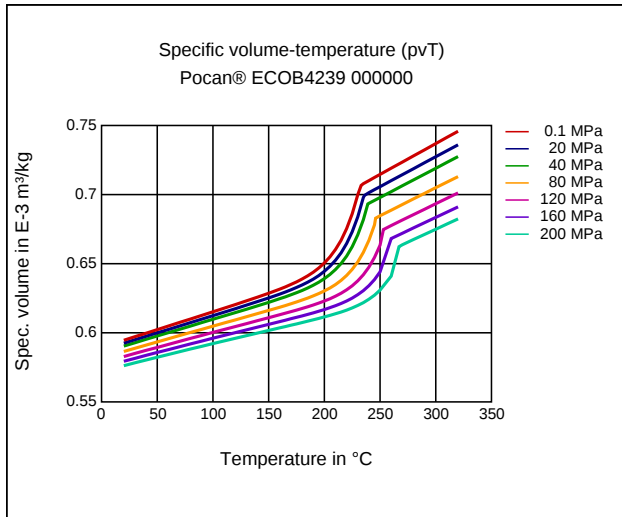
#### Stress-strain



#### Secant modulus-strain



#### Specific volume-temperature (pvT)



#### Characteristics

##### Processing

Injection Molding

##### Delivery form

Pellets

##### Additives

Release agent

##### Special Characteristics

Flame retardant

##### Certifications

Recycled Resin Content, ISCC Plus

#### Injection Molding

##### PREPROCESSING

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

#### Disclaimer

##### Liability Exclusion

These guide values are measured and provided by the product manufacturer and have been determined on standardised test specimens and can be affected by pigmentation, mould design and processing conditions. M-Base has taken the guide values from the producer's original Technical Data Sheet. **ALBIS AND M-BASE ARE THEREFORE NOT RESPONSIBLE FOR THE ACCURACY OF THE GUIDE VALUES AND CANNOT GIVE ANY WARRANTY WITH REGARD TO THEIR CORRECTNESS.**

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