

**Pocan® B1505 000000**

PBT

Envalior

Injection Molding, Unreinforced, Extrusion, General purpose

ISO 1043 PBT

| Rheological properties      | Value | Unit      | Test Standard   |
|-----------------------------|-------|-----------|-----------------|
| <b>ISO Data</b>             |       |           |                 |
| Melt volume-flow rate, MVR  | 16    | cm³/10min | ISO 1133        |
| Temperature                 | 250   | °C        | -               |
| Load                        | 2.16  | kg        | -               |
| Molding shrinkage, parallel | 2.1   | %         | ISO 294-4, 2577 |
| Molding shrinkage, normal   | 2.1   | %         | ISO 294-4, 2577 |

| Mechanical Properties                   | Value    | Unit  | Test Standard |
|-----------------------------------------|----------|-------|---------------|
| <b>ISO Data</b>                         |          |       |               |
| Tensile Modulus                         | 2700     | MPa   | ISO 527       |
| Yield stress                            | 60       | MPa   | ISO 527       |
| Yield strain                            | 9        | %     | ISO 527       |
| Tensile Creep Modulus, 1h               | 2200     | MPa   | ISO 899-1     |
| Tensile Creep Modulus, 1000h            | 1300     | MPa   | ISO 899-1     |
| Impact Strength (Charpy), +23°C         | no break | kJ/m² | ISO 179/1eU   |
| Impact Strength (Charpy), -30°C         | 180      | kJ/m² | ISO 179/1eU   |
| Notched Impact Strength (Charpy), +23°C | 10       | kJ/m² | ISO 179/1eA   |
| Notched Impact Strength (Charpy), -30°C | 10       | kJ/m² | ISO 179/1eA   |
| Puncture - maximum force, +23°C         | 3650     | N     | ISO 6603-2    |
| Puncture - maximum force, -30°C         | 5190     | N     | ISO 6603-2    |
| Puncture energy, +23°C                  | 22       | J     | ISO 6603-2    |
| Puncture energy, -30°C                  | 32       | J     | ISO 6603-2    |

| 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)   | 60    | °C    | ISO 75-1/-2    |
| Temp. of deflection under load (0.45 MPa)   | 150   | °C    | ISO 75-1/-2    |
| Coeff. of Linear Therm. Expansion, parallel | 120   | E-6/K | ISO 11359-1/-2 |
| Coeff. of Linear Therm. Expansion, normal   | 120   | E-6/K | ISO 11359-1/-2 |
| Burning Behav. at 1.5 mm Nom. Thickn.       | HB    | class | UL 94          |
| Thickness tested                            | 1.5   | mm    | -              |
| Oxygen index                                | 24    | %     | ISO 4589-1/-2  |

| Electrical Properties        | Value | Unit  | Test Standard |
|------------------------------|-------|-------|---------------|
| <b>ISO Data</b>              |       |       |               |
| Relative permittivity, 100Hz | 3.4   | -     | IEC 62631-2-1 |
| Relative permittivity, 1MHz  | 3.2   | -     | IEC 62631-2-1 |
| Dissipation Factor, 100Hz    | 15    | E-4   | IEC 62631-2-1 |
| Dissipation Factor, 1MHz     | 190   | 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            | 30    | kV/mm | IEC 60243-1   |
| Comparative tracking index   | 600   | -     | IEC 60112     |

| Other Properties    | Value | Unit  | Test Standard  |
|---------------------|-------|-------|----------------|
| <b>ISO Data</b>     |       |       |                |
| Water Absorption    | 0.5   | %     | Sim. to ISO 62 |
| Humidity absorption | 0.2   | %     | Sim. to ISO 62 |
| Density             | 1310  | kg/m³ | ISO 1183       |

| Material Specific Properties | Value | Unit  | Test Standard       |
|------------------------------|-------|-------|---------------------|
| <b>ISO Data</b>              |       |       |                     |
| Viscosity number             | 140   | cm³/g | ISO 307, 1157, 1628 |

## Pocan® B1505 000000

PBT

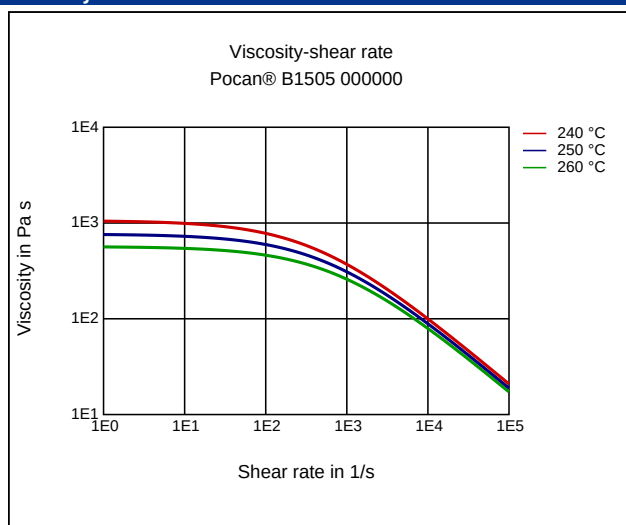
Envalior

| 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       |

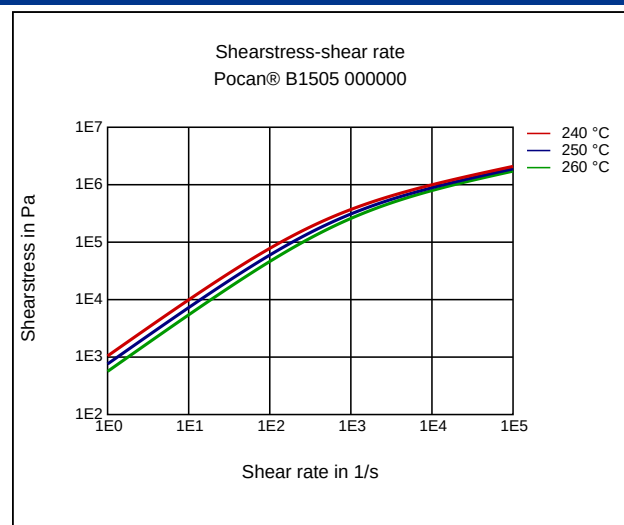
| Processing Recommendation Injection Molding | Value     | Unit | Test Standard |
|---------------------------------------------|-----------|------|---------------|
| Pre-drying - Temperature                    | 120       | °C   | -             |
| Pre-drying - Time                           | 4 - 8     | h    | -             |
| Processing humidity                         | ≤0.02     | %    | -             |
| Melt temperature                            | 250 - 260 | °C   | -             |
| Mold temperature                            | 80 - 100  | °C   | -             |

## Diagrams

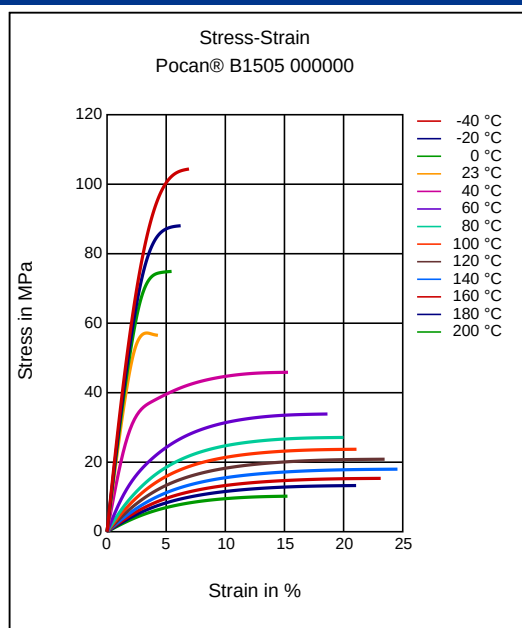
### Viscosity-shear rate



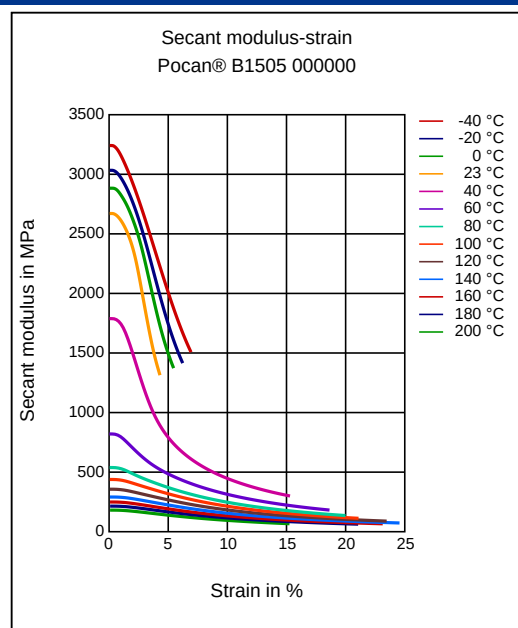
### Shearstress-shear rate



### Stress-strain



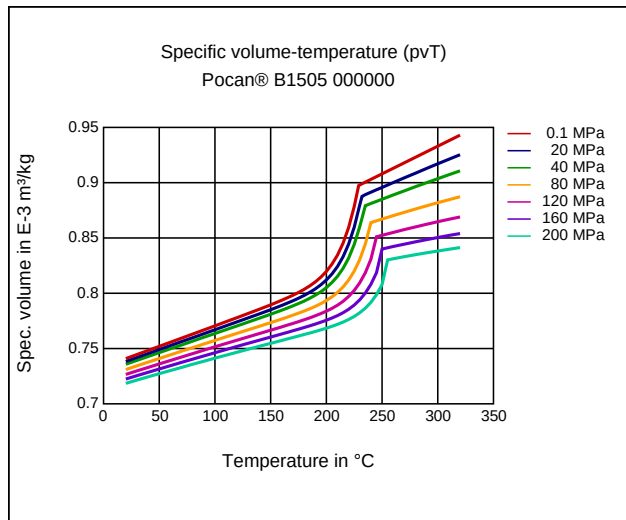
### Secant modulus-strain



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**Specific volume-temperature (pvT)**



**Characteristics**

**Processing**

Injection Molding, Other Extrusion

**Additives**

Lubricants, Release agent

**Delivery form**

Pellets

**Special Characteristics**

Heat aging stabilized

**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): 250 - 260 °C

Mold temperature: 80 - 100 °C