

TECHNICAL DATA SHEET

Stanyl® TW371

Envalior
(PA46+PTFE)

Processing

Injection molding

Delivery Form

Pellets

Additives

Lubricants

Special Characteristics

Heat stabilized or stable to heat

Product Text

Product Information

Heat Stabilized, Wear and Friction Modified

ISO 1043 (PA46+PTFE)

Stanyl® TW371 is a friction-modified high heat polyamide that offers excellent wear & friction properties in combination with outstanding creep resistance, strength, stiffness and fatigue resistance especially at high temperatures in combination with cycle-time advantages and excellent flow.

| Mechanical Properties | Value | Unit | Standard |
|--|-------|-------------------|----------------|
| Tensile modulus | 3000 | MPa | ISO 527 |
| Yield stress | 90 | MPa | ISO 527 |
| Yield strain | 20 | % | ISO 527 |
| Nominal strain at break | 25 | % | ISO 527 |
| Poisson's ratio | 0.35 | | ISO 527 |
| Charpy impact strength, +23°C | N | kJ/m ² | ISO 179/1eU |
| Charpy impact strength, -30°C | 150 | kJ/m ² | ISO 179/1eU |
| Charpy notched impact strength, +23°C | 9 | kJ/m ² | ISO 179/1eA |
| Charpy notched impact strength, -30°C | 5 | kJ/m ² | ISO 179/1eA |
| Thermal Properties | Value | Unit | Standard |
| Melting temperature, 10°C/min | 295 | °C | ISO 11357-1/-3 |
| Glass transition temperature, 10°C/min | 75 | °C | ISO 11357-1/-2 |
| Temp. of deflection under load, 1.80 MPa | 190 | °C | ISO 75-1/-2 |

Stanyl® TW371

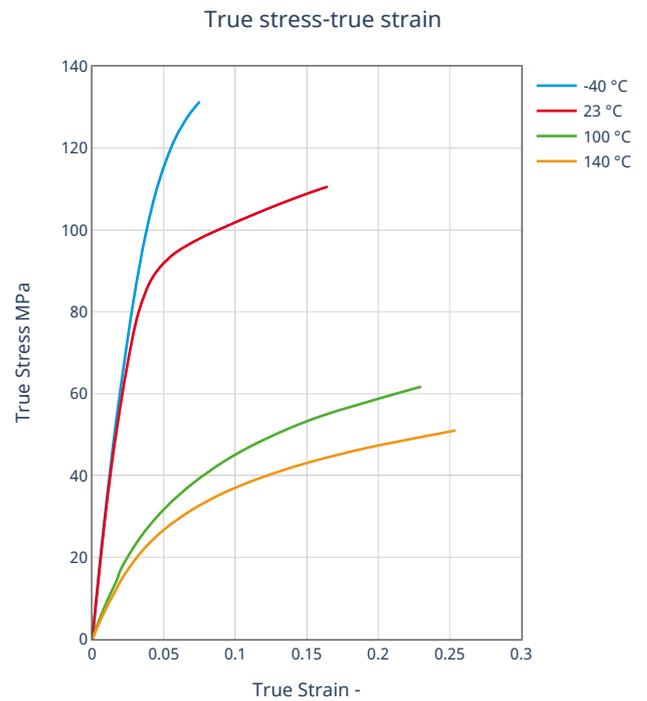
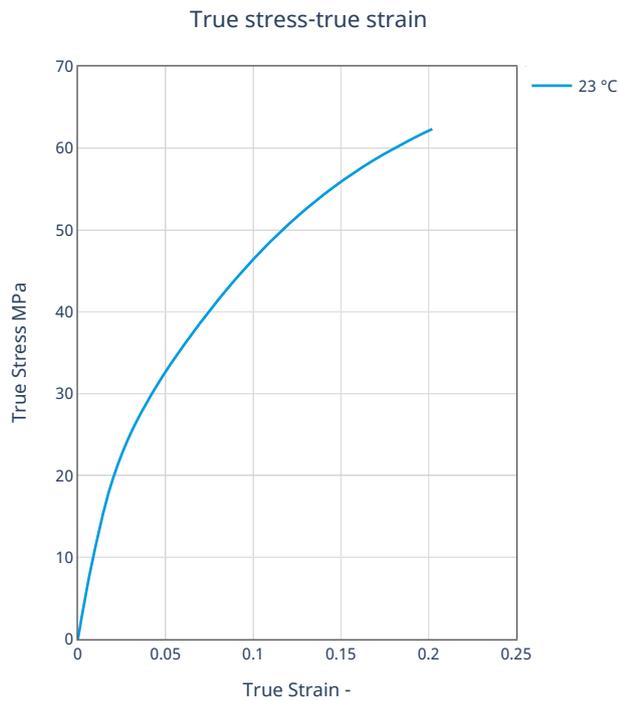
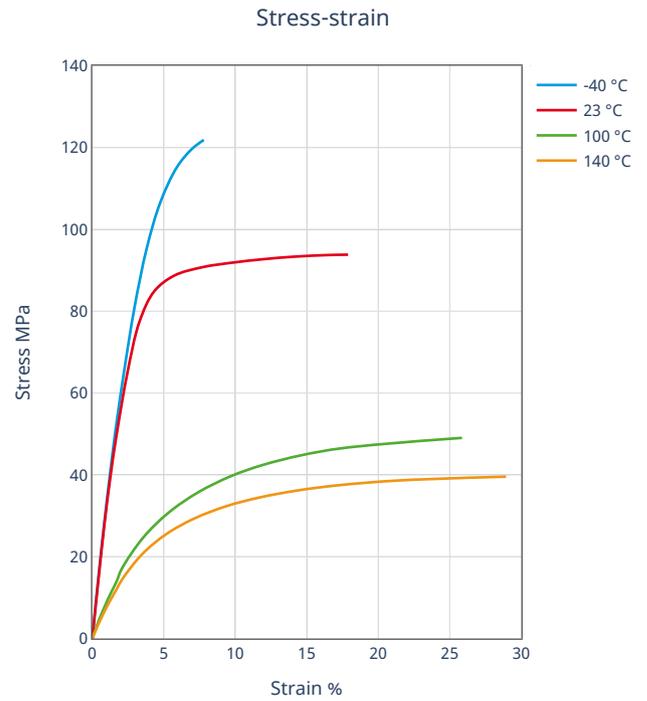
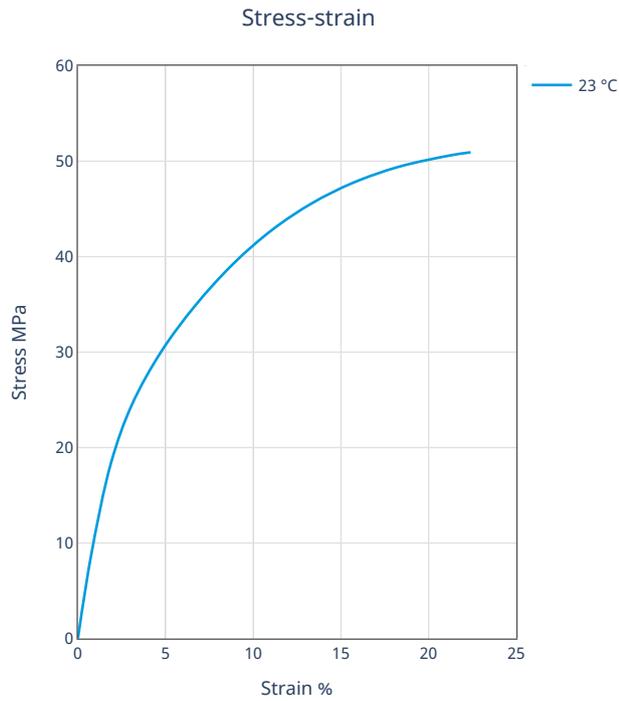
Envalior

| Thermal Properties | Value | Unit | Standard |
|---|-------|--------------------|---------------------|
| Temp. of deflection under load, 0.45 MPa | 290 | °C | ISO 75-1/-2 |
| Vicat softening temperature, B | 290 | °C | ISO 306 |
| Coeff. of linear therm. expansion, parallel | 85 | E-6/K | ISO 11359-1/-2 |
| Coeff. of linear therm. expansion, normal | 110 | 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 | mm | |
| Yellow card available | yes | | |
| Electrical Properties | Value | Unit | Standard |
| Volume resistivity | 1E12 | Ohm*m | IEC 62631-3-1 |
| Surface resistivity | 1E13 | Ohm | IEC 62631-3-2 |
| Comparative tracking index | 400 | | IEC 60112 |
| Other Properties | Value | Unit | Standard |
| Water absorption | 11.4 | % | Sim. to ISO 62 |
| Humidity absorption | 3.2 | % | Sim. to ISO 62 |
| Density | 1250 | kg/m ³ | ISO 1183 |
| Material Specific Properties | Value | Unit | Standard |
| Viscosity number | 180 | cm ³ /g | ISO 307, 1157, 1628 |

Diagrams

Stanyl® TW371

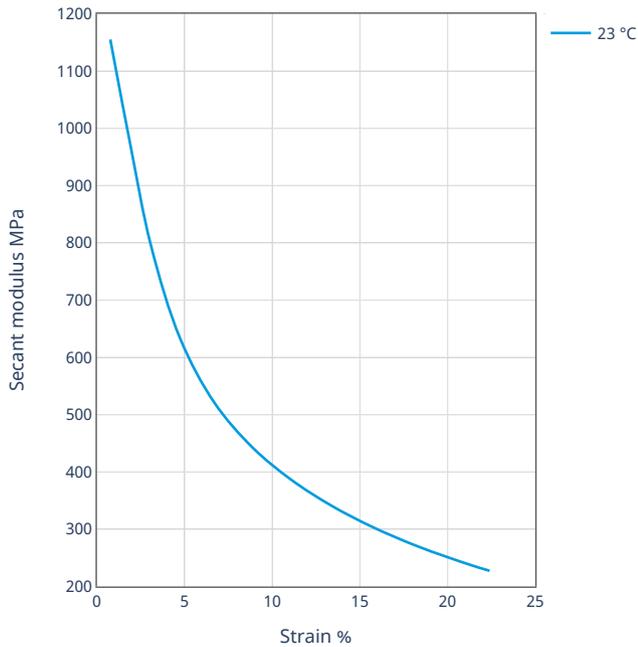
Envalior



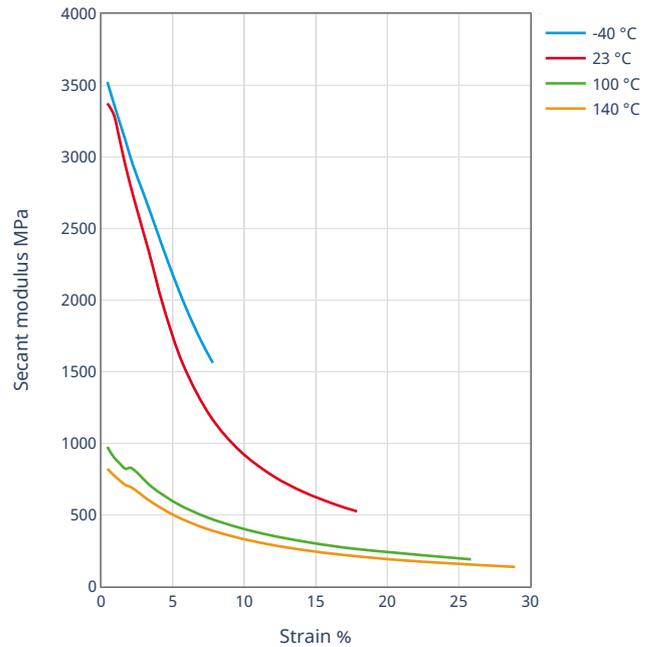
Stanyl® TW371

Envalior

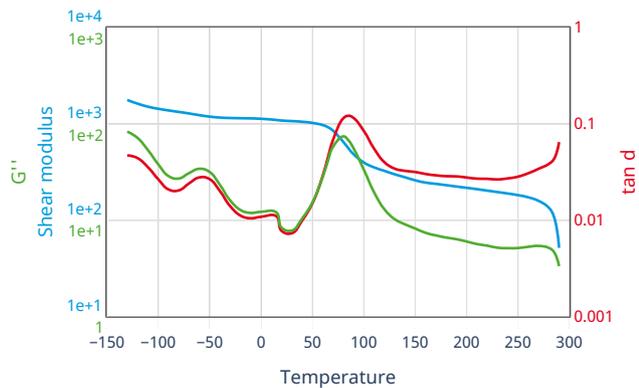
Secant modulus-strain



Secant modulus-strain



Dynamic shear modulus-temperature



Processing Information

Injection molding

Injection Molding Recommendations Stanyl® TW371 & TW371-K

Injection Molding Recommendations

Hot runner recommendations for molding high heat performance Engineering Materials

Steel recommendations for molds screws and barrels

Supporting document for Stanyl quality processing

Trouble shooting guideline for injection molding