

TECHNICAL DATA SHEET

# Stanyl® TC502

Envalior  
PA46-GF15

**Processing**

Injection molding

**Delivery Form**

Pellets

**Special Characteristics**

Increased electrical conductivity, Heat stabilized or stable to heat, Thermally conductive

**Applications**

Electrical and electronical

## Product Text

**Product Information**

Thermal conductive material

ISO 1043 PA46-GF15

Stanyl® TC502 is thermal conductive high heat polyamide designed for thermal management of electrical components with demanding conductivity levels.

Processing/Physical Characteristics	Value	Unit	Standard
Molding shrinkage, parallel	0.6	%	ISO 294-4, 2577
Molding shrinkage, normal	1.2	%	ISO 294-4, 2577
Mechanical Properties	Value	Unit	Standard
Tensile modulus	10000	MPa	ISO 527
Stress at break	65	MPa	ISO 527
Strain at break	1	%	ISO 527
Poisson's ratio	0.35		ISO 527
Charpy impact strength, +23°C	10	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy impact strength, -30°C	10	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, +23°C	4	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength, -30°C	4	kJ/m <sup>2</sup>	ISO 179/1eA
Thermal Properties	Value	Unit	Standard
Melting temperature, 10°C/min	295	°C	ISO 11357-1/-3

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Thermal Properties	Value	Unit	Standard
Glass transition temperature, 10°C/min	75	°C	ISO 11357-1/-2
Coeff. of linear therm. expansion, parallel	25	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	35	E-6/K	ISO 11359-1/-2

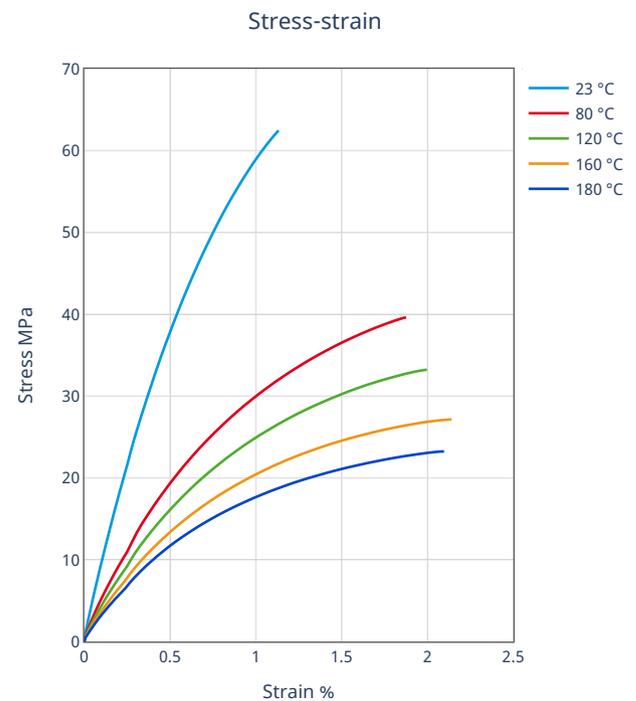
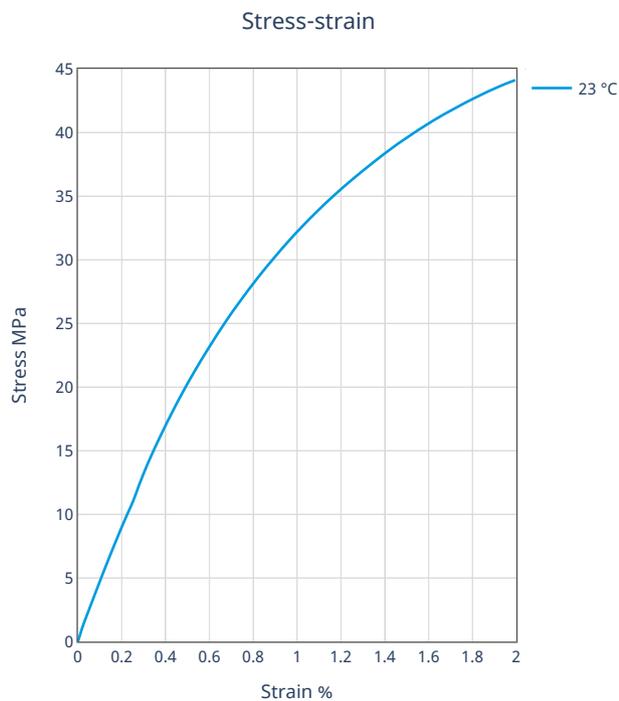
  

Electrical Properties	Value	Unit	Standard
Volume resistivity	10000	Ohm*m	IEC 62631-3-1
Surface resistivity	1E7	Ohm	IEC 62631-3-2

Other Properties	Value	Unit	Standard
Humidity absorption	1.9	%	Sim. to ISO 62
Density	1480	kg/m <sup>3</sup>	ISO 1183

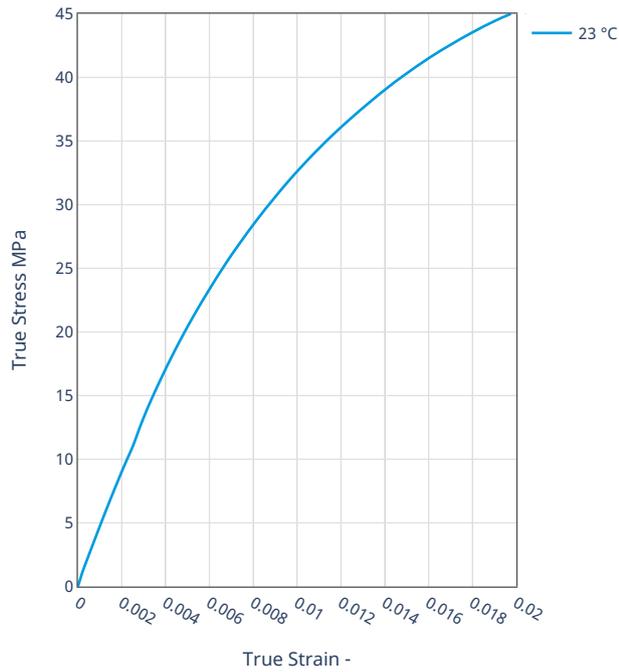
## Diagrams



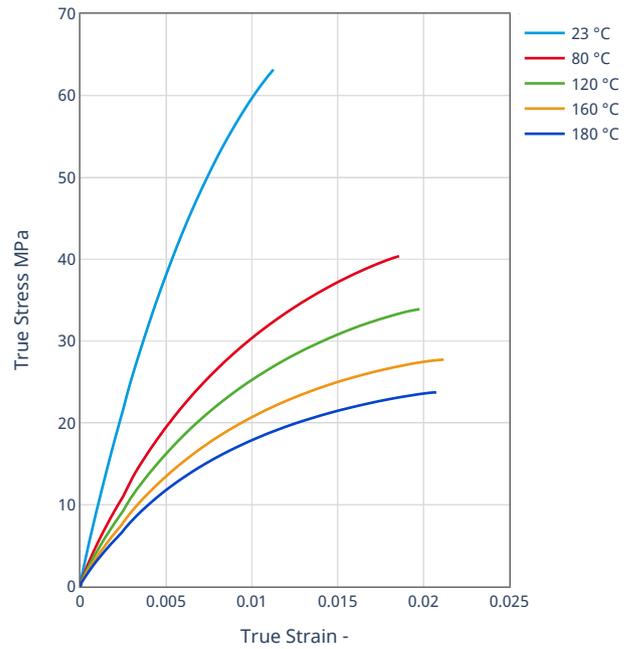
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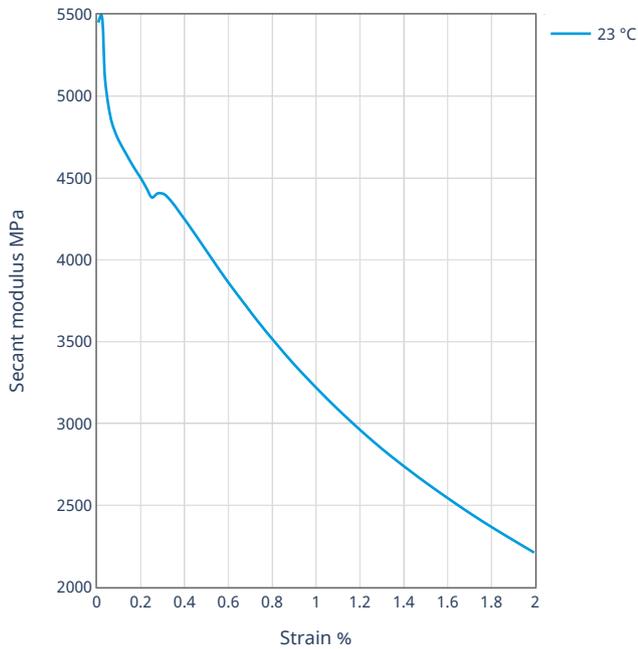
True stress-true strain



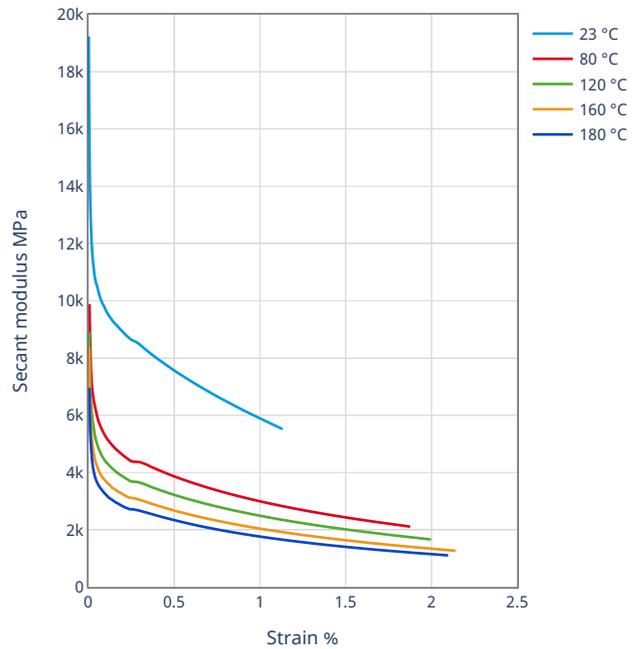
True stress-true strain



Secant modulus-strain



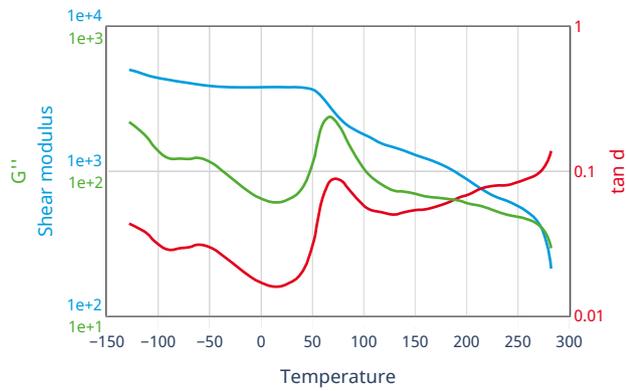
Secant modulus-strain



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Dynamic shear modulus-temperature



## Processing Information

### Injection molding

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