

TECHNICAL DATA SHEET

EcoPaXX® Q-HG10

Envalior
PA410-GF50

Processing

Injection molding

Delivery Form

Granules

Additives

Release agent

Special Characteristics

Heat stabilized or stable to heat

Chemical Resistance

General chemical resistance, Hydrolytically stable

Certifications

Contains renewable resources

Product Text

Product Information

50% Glass Reinforced, Heat Stabilized

ISO 1043 PA410-GF50

EcoPaXX® Q-HG10 is a long aliphatic polyamide with excellent chemical & hydrolysis resistance for use in thermal management applications as well as other structural parts.

| Processing/Physical Characteristics | Value | Unit | Standard |
|---------------------------------------|-------|-------------------|-----------------|
| Molding shrinkage, parallel | 0.4 | % | ISO 294-4, 2577 |
| Molding shrinkage, normal | 0.8 | % | ISO 294-4, 2577 |
| Mechanical Properties | Value | Unit | Standard |
| Tensile modulus | 16000 | MPa | ISO 527 |
| Stress at break | 220 | MPa | ISO 527 |
| Strain at break | 3 | % | ISO 527 |
| Poisson's ratio | 0.35 | | ISO 527 |
| Charpy impact strength, +23°C | 80 | kJ/m ² | ISO 179/1eU |
| Charpy impact strength, -30°C | 80 | kJ/m ² | ISO 179/1eU |
| Charpy notched impact strength, +23°C | 15 | kJ/m ² | ISO 179/1eA |
| Charpy notched impact strength, -30°C | 12 | kJ/m ² | ISO 179/1eA |

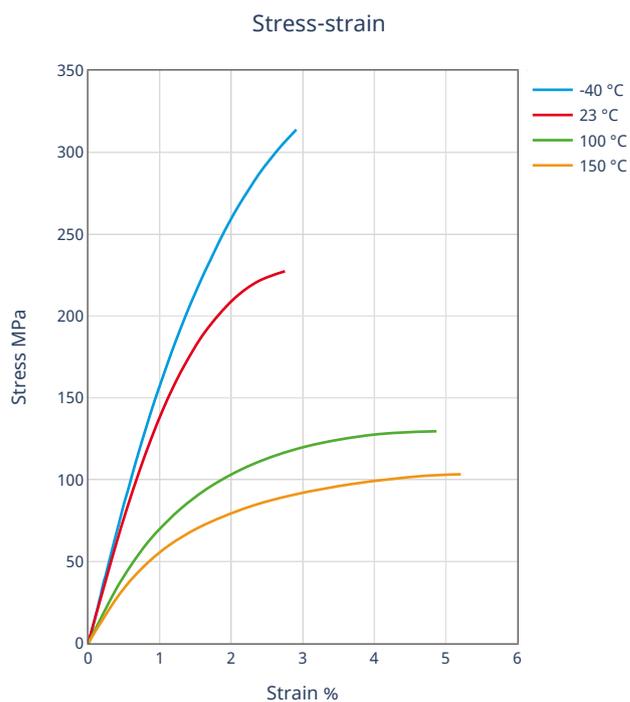
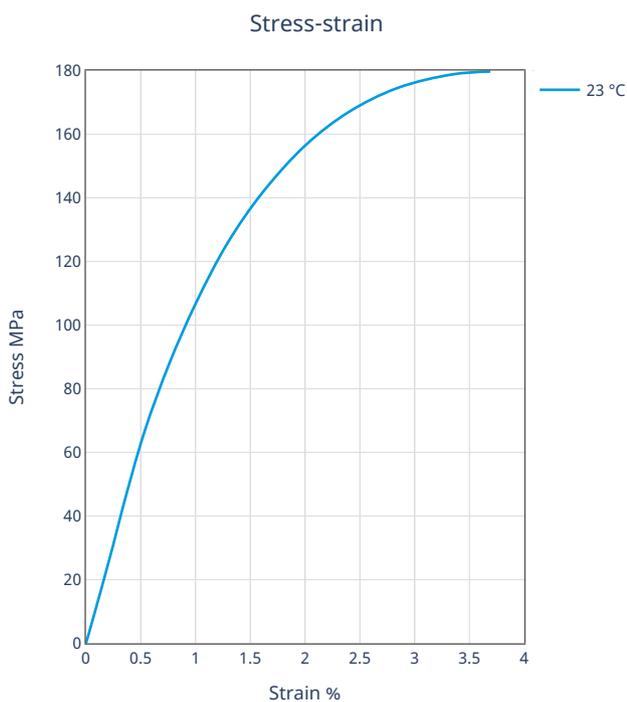
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| Thermal Properties | Value | Unit | Standard |
|---|-------|-------|----------------|
| Melting temperature, 10°C/min | 250 | °C | ISO 11357-1/-3 |
| Temp. of deflection under load, 1.80 MPa | 215 | °C | ISO 75-1/-2 |
| Temp. of deflection under load, 0.45 MPa | 245 | °C | ISO 75-1/-2 |
| Coeff. of linear therm. expansion, parallel | 14 | E-6/K | ISO 11359-1/-2 |
| Coeff. of linear therm. expansion, normal | 69 | E-6/K | ISO 11359-1/-2 |

| Other Properties | Value | Unit | Standard |
|---------------------|-------|-------------------|----------------|
| Humidity absorption | 1.1 | % | Sim. to ISO 62 |
| Density | 1520 | kg/m ³ | ISO 1183 |

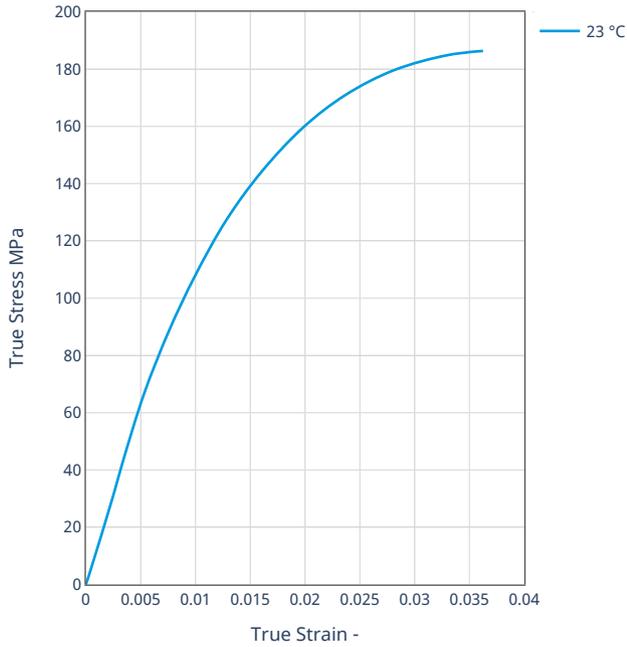
Diagrams



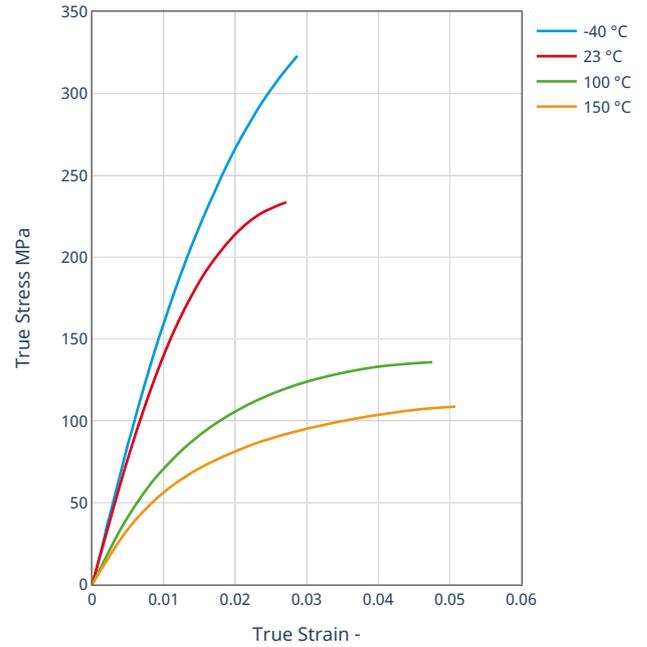
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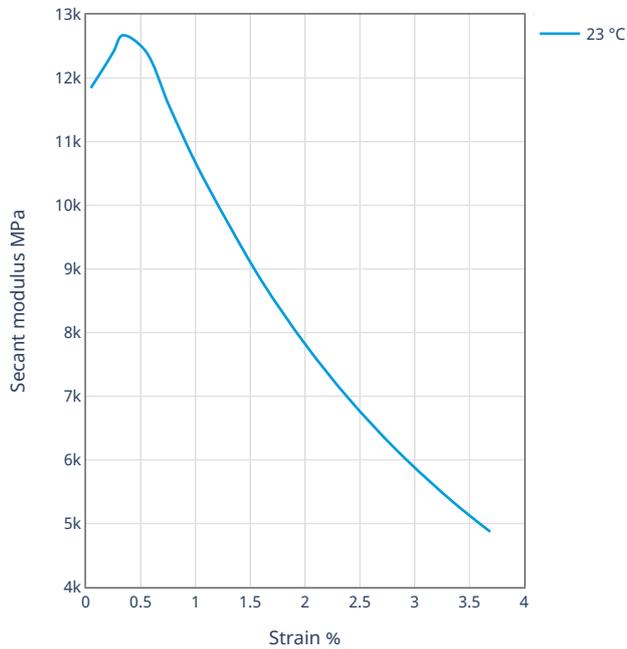
True stress-true strain



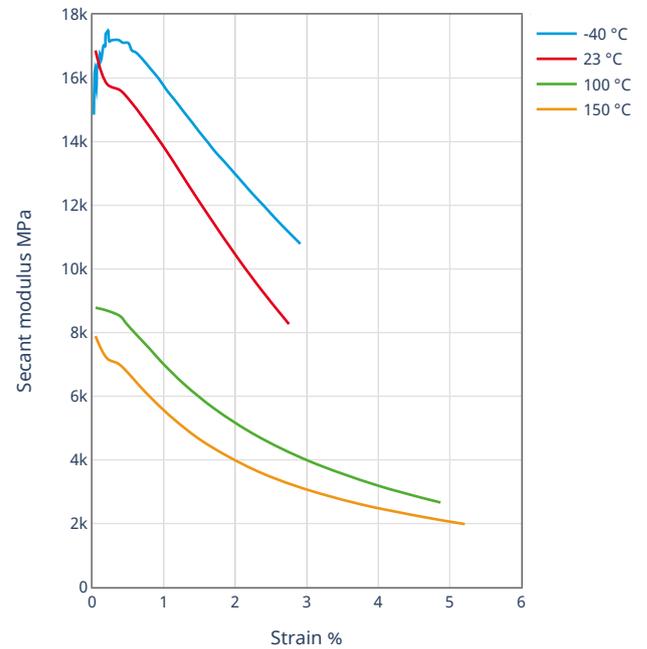
True stress-true strain



Secant modulus-strain



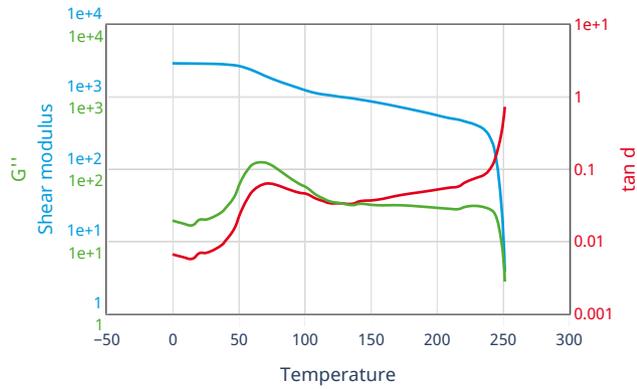
Secant modulus-strain



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Dynamic shear modulus-temperature



Processing Information

Injection molding

Injection Molding Recommendations

Steel recommendations for molds screws and barrels

Trouble shooting guideline for injection molding