

CAMPUS® Datasheet

Makrolon® 2805 - PC
Covestro Deutschland AG



Product Texts

- MVR (300 °C/1.2 kg) 9.0 cm³/10 min
- general purpose
- medium viscosity
- easy release

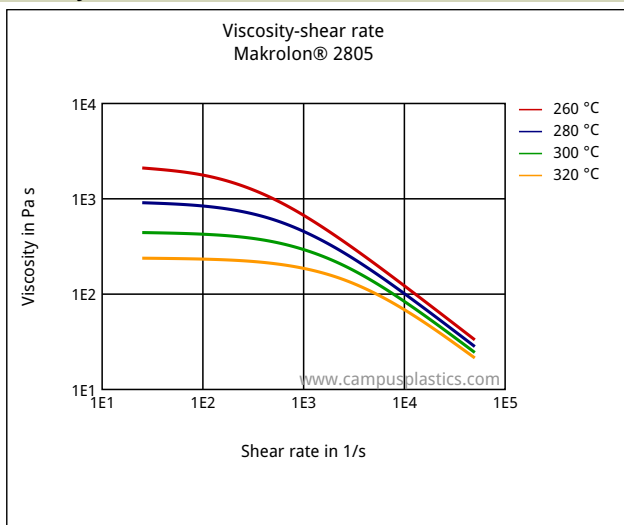
| Rheological properties | Value | Unit | Test Standard |
|---|-------|------------------------|-----------------|
| Melt volume-flow rate, MVR | 9 | cm ³ /10min | ISO 1133 |
| Temperature | 300 | °C | ISO 1133 |
| Load | 1.2 | kg | ISO 1133 |
| Molding shrinkage, parallel | 0.7 | % | ISO 294-4, 2577 |
| Molding shrinkage, normal | 0.7 | % | ISO 294-4, 2577 |
| Mechanical properties | Value | Unit | Test Standard |
| Tensile modulus | 2400 | MPa | ISO 527-1/-2 |
| Yield stress | 66 | MPa | ISO 527-1/-2 |
| Yield strain | 6.2 | % | ISO 527-1/-2 |
| Nominal strain at break | >50 | % | ISO 527-1/-2 |
| Tensile creep modulus, 1h | 2200 | MPa | ISO 899-1 |
| Tensile creep modulus, 1000h | 1900 | MPa | ISO 899-1 |
| Charpy impact strength, +23°C | N | kJ/m ² | ISO 179/1eU |
| Charpy impact strength, -30°C | N | kJ/m ² | ISO 179/1eU |
| Puncture - maximum force, +23°C | 5400 | N | ISO 6603-2 |
| Puncture - maximum force, -30°C | 6300 | N | ISO 6603-2 |
| Puncture energy, +23°C | 60 | J | ISO 6603-2 |
| Puncture energy, -30°C | 65 | J | ISO 6603-2 |
| Thermal properties | Value | Unit | Test Standard |
| Glass transition temperature, 10°C/min | 145 | °C | ISO 11357-1/-2 |
| Temp. of deflection under load, 1.80 MPa | 125 | °C | ISO 75-1/-2 |
| Temp. of deflection under load, 0.45 MPa | 137 | °C | ISO 75-1/-2 |
| Vicat softening temperature, 50°C/h 50N | 144 | °C | ISO 306 |
| Coeff. of linear therm. expansion, parallel | 65 | E-6/K | ISO 11359-1/-2 |
| Coeff. of linear therm. expansion, normal | 65 | E-6/K | ISO 11359-1/-2 |
| Burning behavior at thickness h | V-2 | class | IEC 60695-11-10 |
| Thickness tested (h) | 0.8 | mm | IEC 60695-11-10 |
| Oxygen index | 28 | % | ISO 4589-1/-2 |
| Electrical properties | Value | Unit | Test Standard |
| Relative permittivity, 100Hz | 3.1 | - | IEC 62631-2-1 |
| Relative permittivity, 1MHz | 3 | - | IEC 62631-2-1 |
| Dissipation factor, 100Hz | 5 | E-4 | IEC 62631-2-1 |
| Dissipation factor, 1MHz | 90 | 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 | 34 | kV/mm | IEC 60243-1 |
| Comparative tracking index | 250 | - | IEC 60112 |

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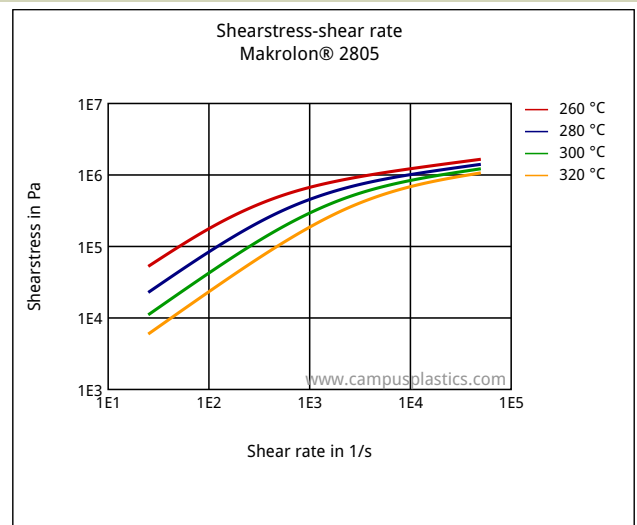
| Other properties | Value | Unit | Test Standard |
|---------------------------------------|-------|-------------------|-----------------|
| Water absorption | 0.3 | % | Sim. to ISO 62 |
| Humidity absorption | 0.12 | % | Sim. to ISO 62 |
| Density | 1200 | kg/m ³ | ISO 1183 |
| Material specific properties | Value | Unit | Test Standard |
| Luminous transmittance | 89 | % | ISO 13468-1, -2 |
| Test specimen production | Value | Unit | Test Standard |
| Injection molding, melt temperature | 300 | °C | ISO 294 |
| Injection molding, mold temperature | 80 | °C | ISO 294 |
| Injection molding, injection velocity | 200 | mm/s | ISO 294 |

Diagrams

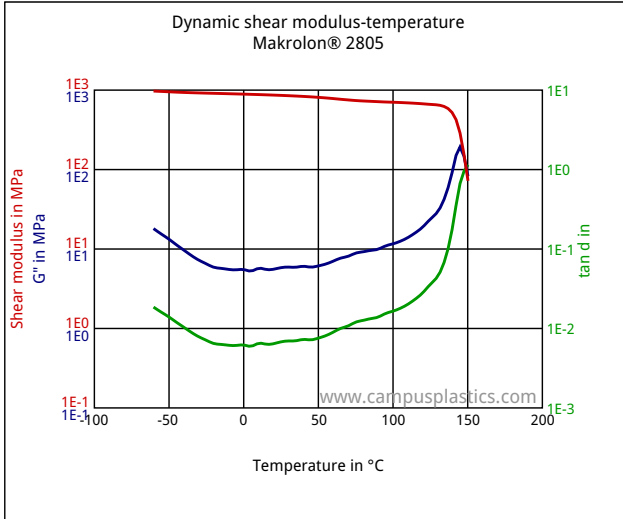
Viscosity-shear rate



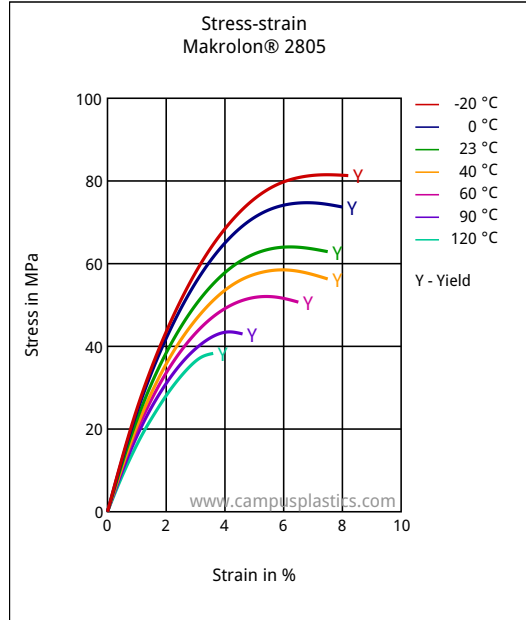
Shearstress-shear rate



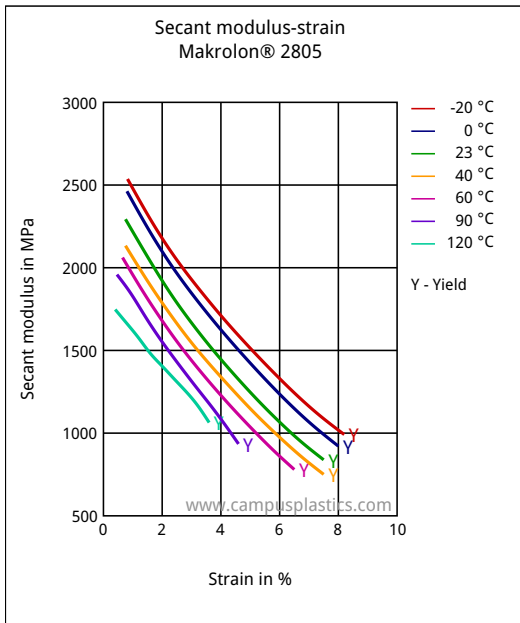
Dynamic shear modulus-temperature



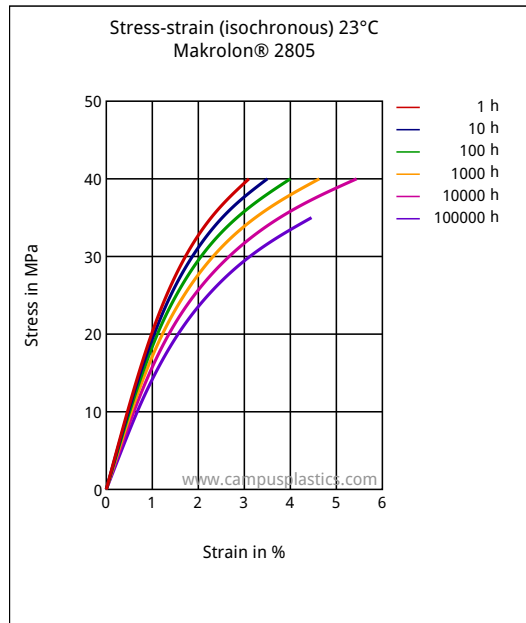
Stress-strain



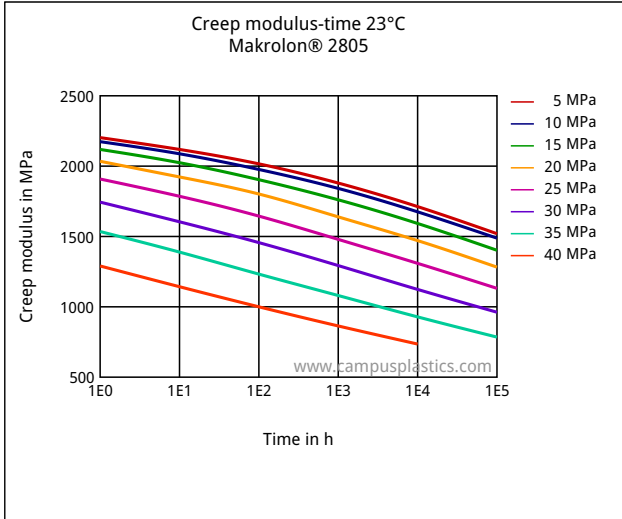
Secant modulus-strain



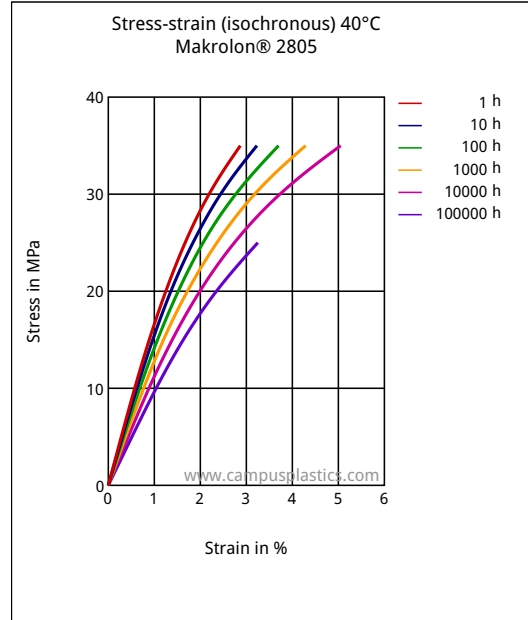
Stress-strain (isochronous) 23°C



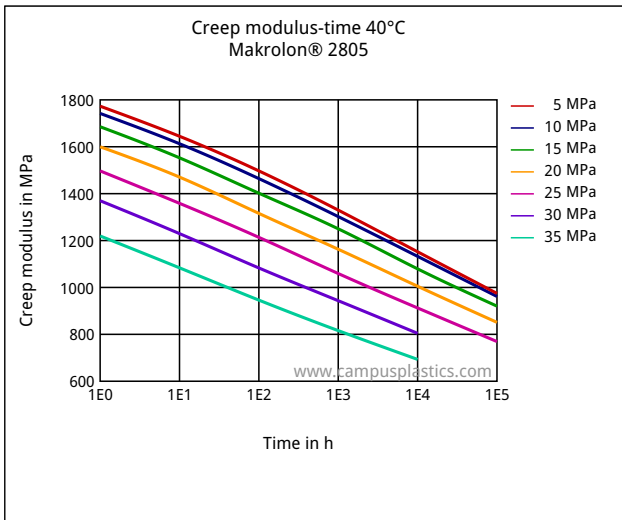
Creep modulus-time 23°C



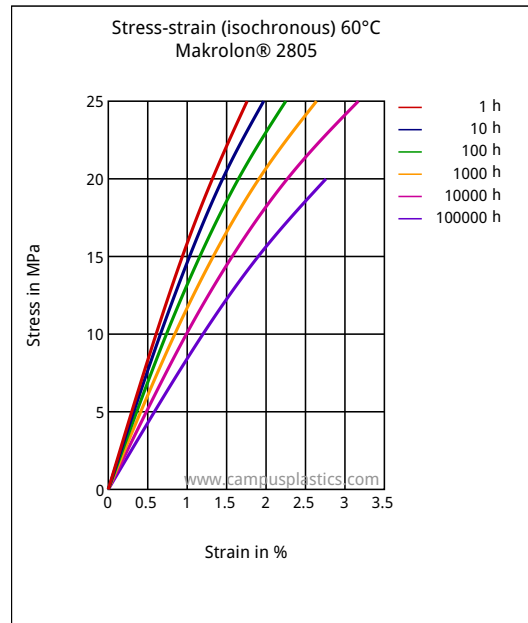
Stress-strain (isochronous) 40°C



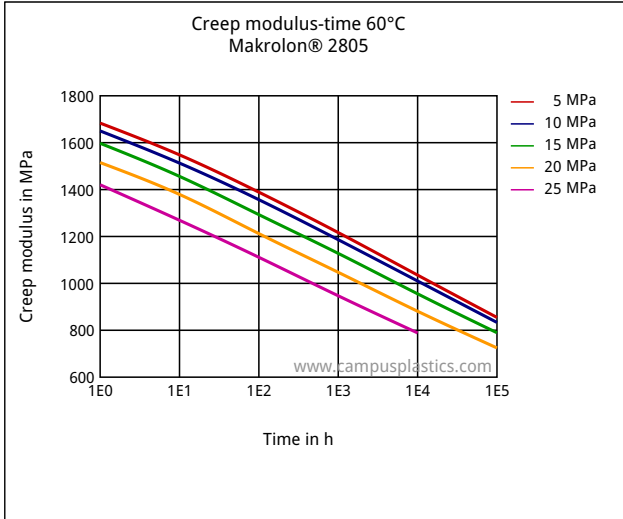
Creep modulus-time 40°C



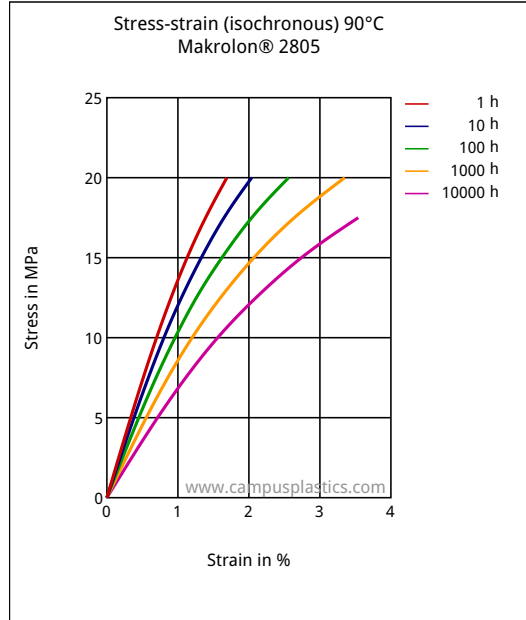
Stress-strain (isochronous) 60°C



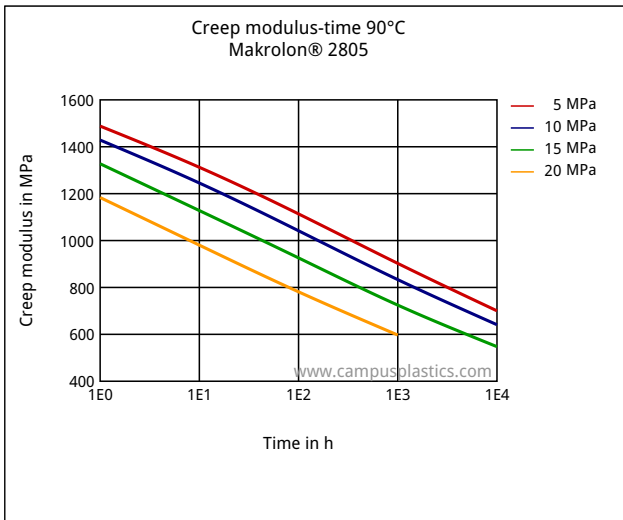
Creep modulus-time 60°C



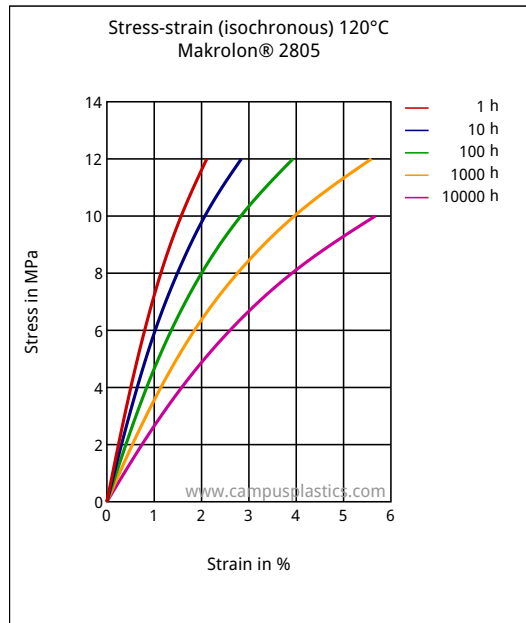
Stress-strain (isochronous) 90°C



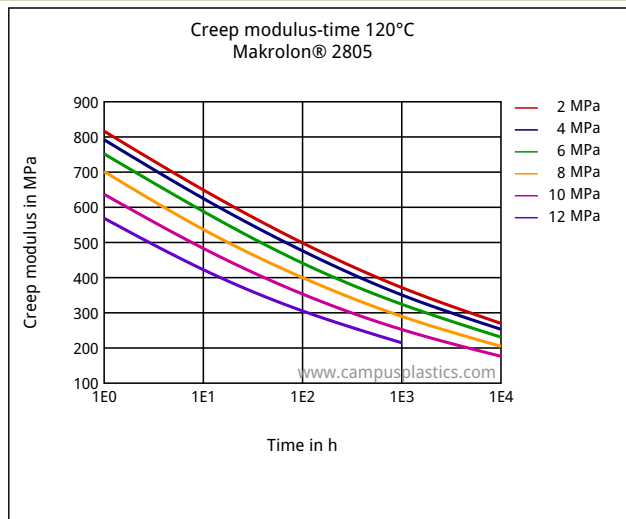
Creep modulus-time 90°C



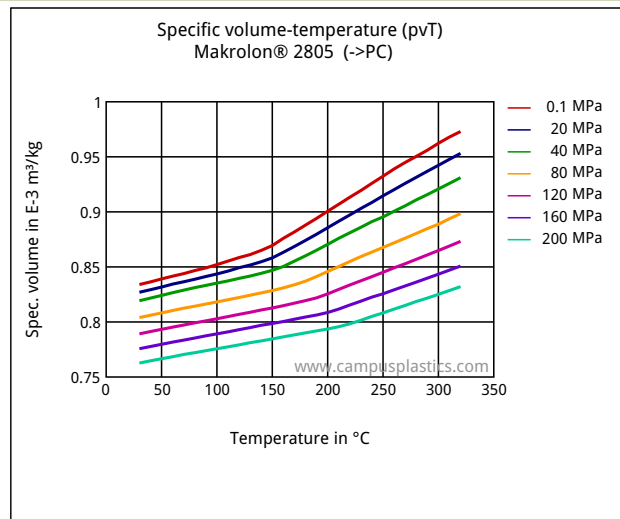
Stress-strain (isochronous) 120°C



Creep modulus-time 120°C



Specific volume-temperature (pvT)



Characteristics

Special Characteristics

Transparent

Regional Availability

North America, Europe, Asia Pacific, Near East/Africa

Other text information

Injection molding

PREPROCESSING

Max. Water content: 0.01 - 0.02 %

Drying temperature: 120 °C

Drying time:

Circulating air drying oven (50 % fresh air) 4-8 h

Fresh air dryer (high speed dryer) 2-4 h

Dry air dryer 2-3 h

PROCESSING

Melt temperature: 280-320 °C

Mold temperature: 80-100 °C

Use open nozzle.

Typical value

These values are typical values only. Unless explicitly agreed in written form, they do not constitute a binding material specification or warranted values. Values may be affected by the design of the mold/die, the processing conditions and coloring/pigmentation of the product. Unless specified to the contrary, the property values given have been established on standardized test specimens at room temperature.

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