

CAMPUS® Datasheet

Makrolon® 2805 - PC

Covestro Deutschland AG

Product Texts

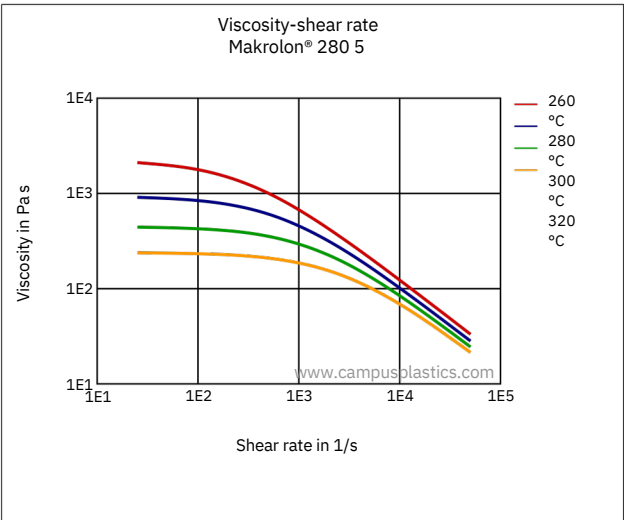
- MVR (300 °C/1.2 kg) 9.0 cm³/10 min
- general purpose
- medium viscosity
- easy release

Rheological properties	Value	Unit	Test Standard
Melt volume-flow rate, MVR	9	cm³/10min	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/m²	ISO 179/1eU
Charpy impact strength, -30°C	N	kJ/m²	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

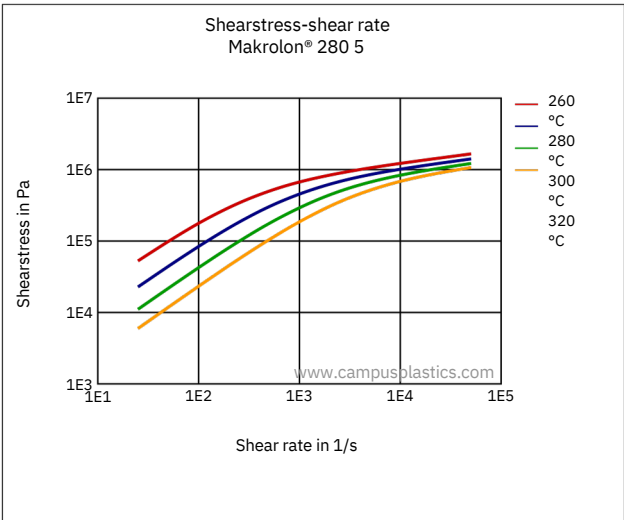
Other properties	Value	Unit	Test Standard
Water absorption	0.3	%	Sim. to ISO 62
Humidity absorption	0.12	%	Sim. to ISO 62
Density	1200	kg/m³	ISO 1183
Material specific properties	Value	Unit	Test Standard
Luminous transmittance	89	%	ISO 13468-1,
Test specimen production	Value	Unit	Test Standard
Injection 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

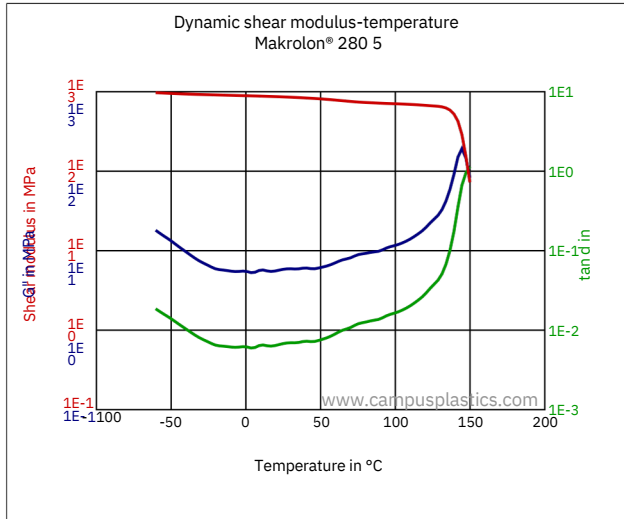
Viscosity-shear rate



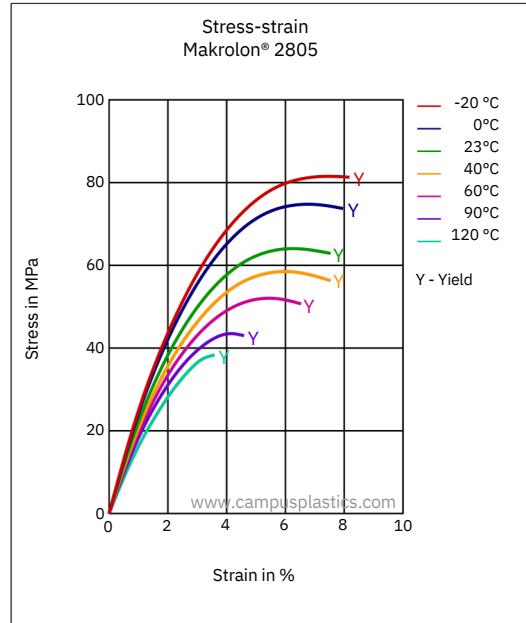
Shearstress-shear rate



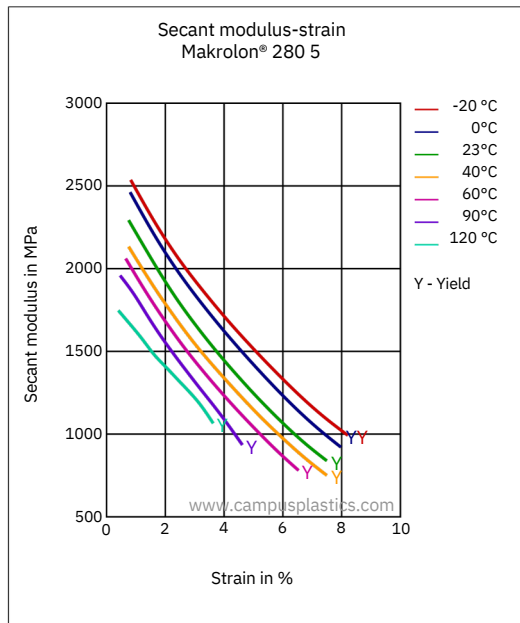
Dynamic shear modulus-temperature



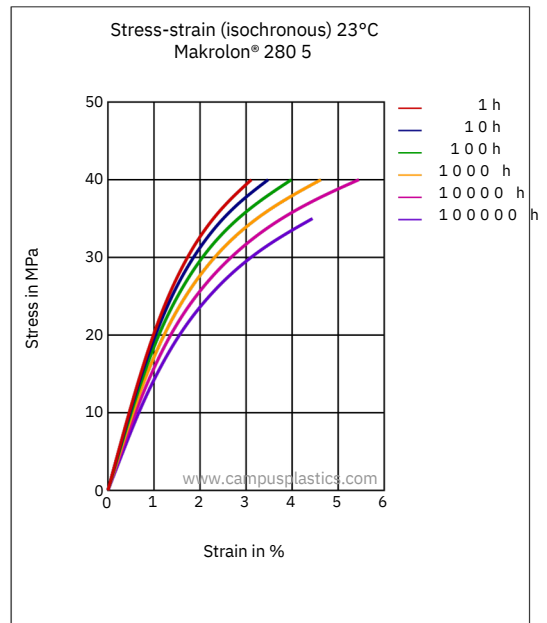
Stress-strain



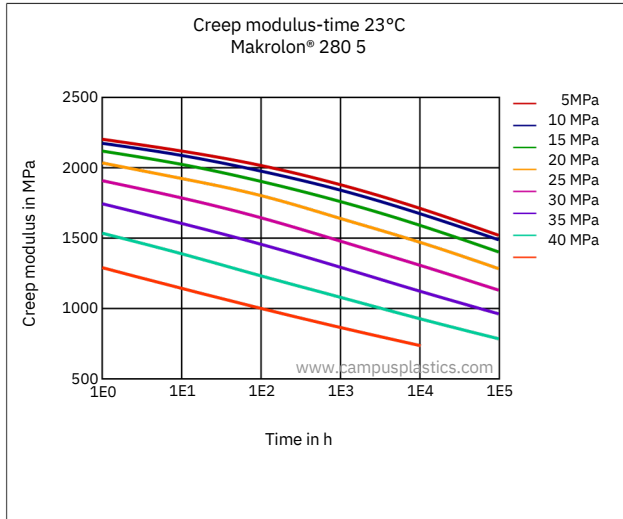
Secant modulus-strain



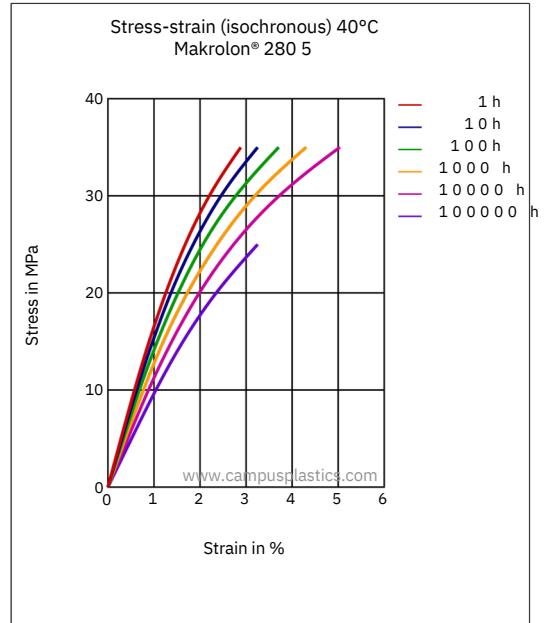
Stress-strain (isochronous) 23°C



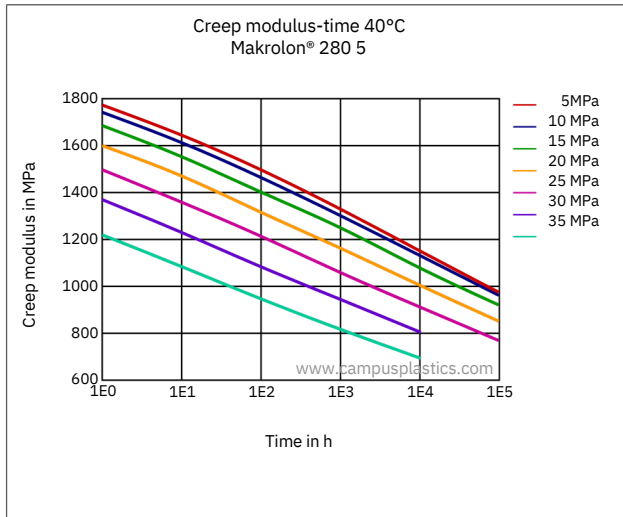
Creep modulus-time 23°C



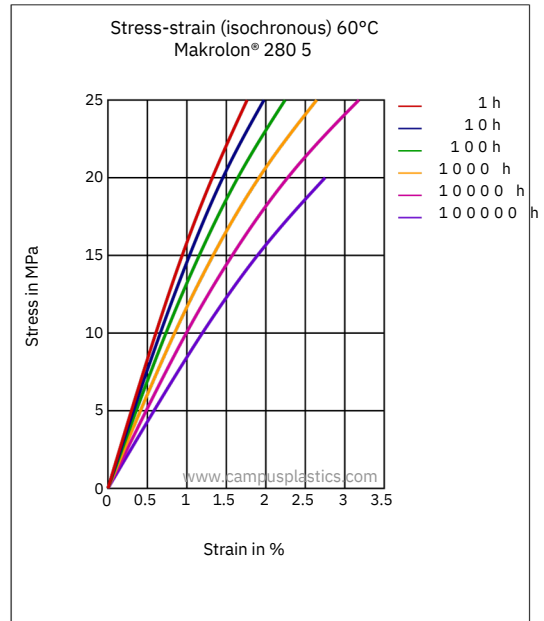
Stress-strain (isochronous) 40°C



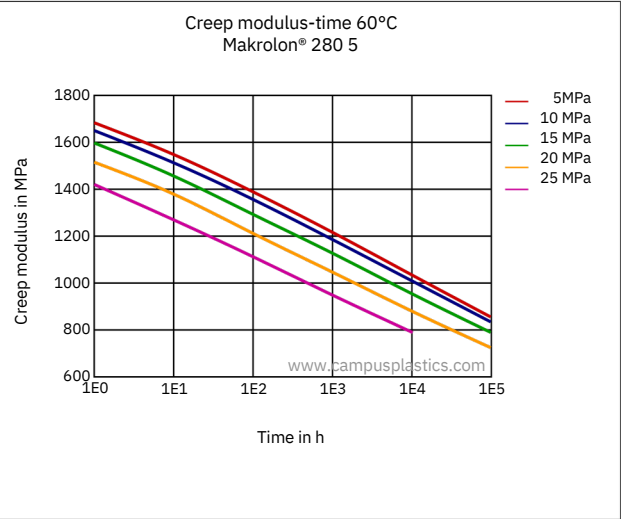
Creep modulus-time 40°C



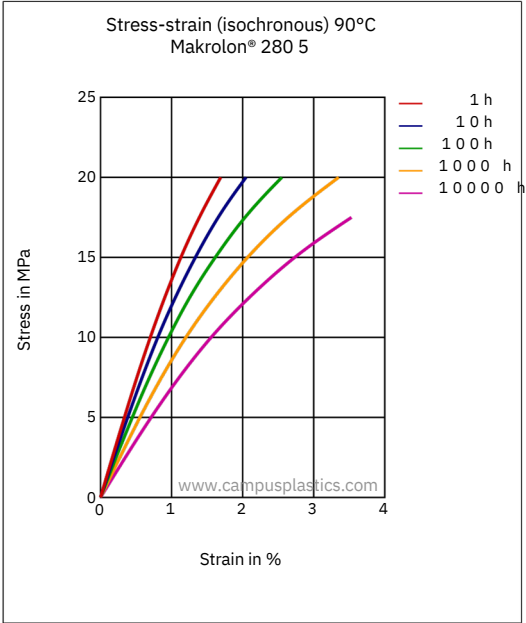
Stress-strain (isochronous) 60°C



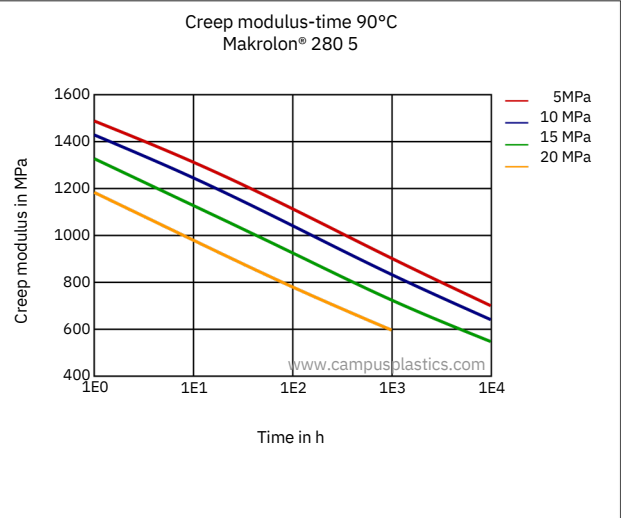
Creep modulus-time 60°C



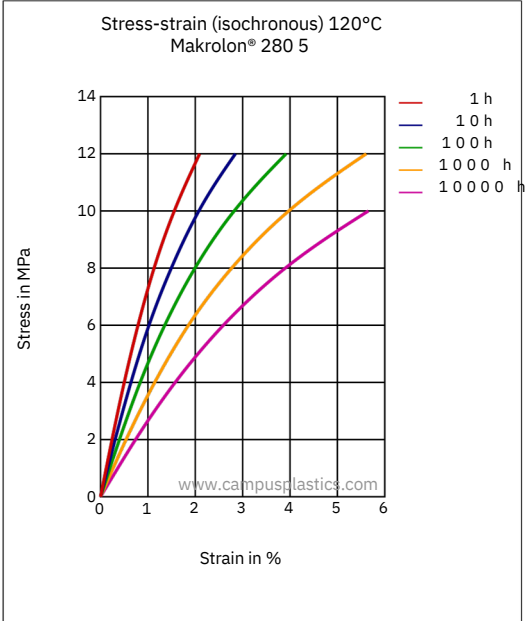
Stress-strain (isochronous) 90°C



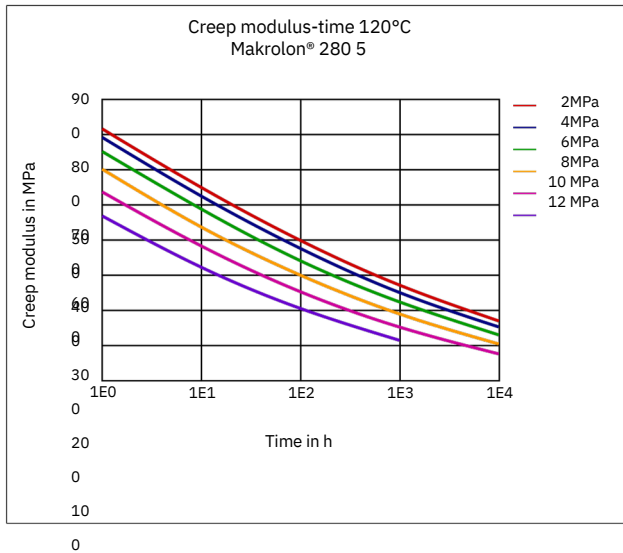
Creep modulus-time 90°C



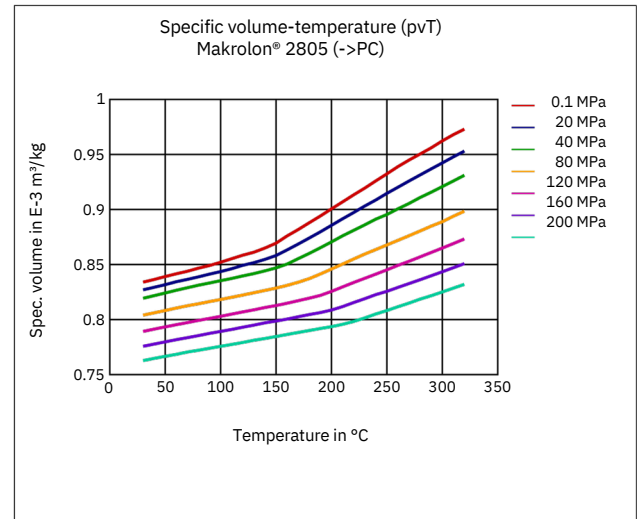
Stress-strain (isochronous) 120°C



Creep modulus-time 120°C



Specific volume-temperature (pvT)



Characteristics

Special Characteristics

Transparent

Other text information

Regional Availability

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

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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