

CAMPUS® Datasheet

Makrolon® 2808 - PC
Covestro Deutschland AG

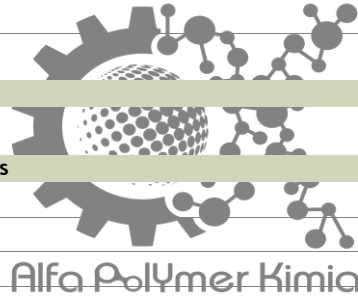


Product Texts

- MVR (200 °C/1,2 kg) 9,0 cm³/10 min
- medical devices
- suitable for ETO and steam sterilization at 121 °C
- biocompatible according to many ISO 10993-1 test requirements
- medium viscosity
- easy release
- available in transparent and opaque colors

Rheological properties	Value	Unit	Test Standard
Melt volume-flow rate, MVR	9	cm ³ /10 min	ISO 1133
Temperature	200	°C	ISO 1133
Load	1,2	kg	ISO 1133
Molding shrinkage, parallel	0,7	%	ISO 294-4, 2077
Molding shrinkage, normal	0,8	%	ISO 294-4, 2077
Mechanical properties	Value	Unit	Test Standard
Tensile Modulus	2400	MPa	ISO 527-1/-2
Yield stress	76	MPa	ISO 527-1/-2
Yield strain	7,1	%	ISO 527-1/-2
Nominal strain at break	>50	%	ISO 527-1/-2
Tensile creep modulus, 1 h	2200	MPa	ISO 899-1
Tensile creep modulus, 1000 h	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 763-2
Puncture - maximum force, -30 °C	6300	N	ISO 763-2
Puncture energy, +23 °C	70	J	ISO 763-2
Puncture energy, -30 °C	70	J	ISO 763-2
Thermal properties	Value	Unit	Test Standard
Glass transition temperature, 10 °C/min	140	°C	ISO 11307-1/-2
Temp. of deflection under load, 1,8 MPa	120	°C	ISO 70-1/-2
Temp. of deflection under load, 0,45 MPa	137	°C	ISO 70-1/-2
Vicat softening temperature, 50 °C/h 50N	140	°C	ISO 306
Coeff. of linear therm. expansion, parallel	70	E-6/K	ISO 11309-1/-2
Coeff. of linear therm. expansion, normal	70	E-6/K	ISO 11309-1/-2
Yellow Card available	Yes	-	-
Burning Behav. 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, 100 Hz	3,1	-	IEC 60200
Relative permittivity, 1 MHz	3	-	IEC 60200
Dissipation factor, 100 Hz	0	E-4	IEC 60200
Dissipation factor, 1 MHz	90	E-4	IEC 60200
Volume resistivity	>1E13	Ohm*m	IEC 60093
Surface resistivity	>1E10	Ohm	IEC 60093

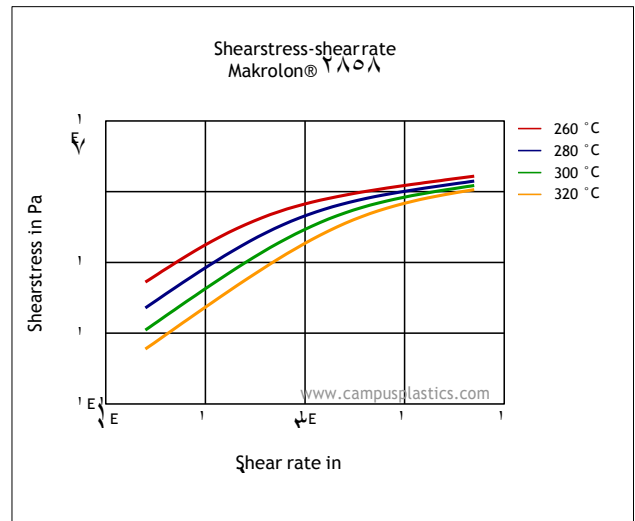
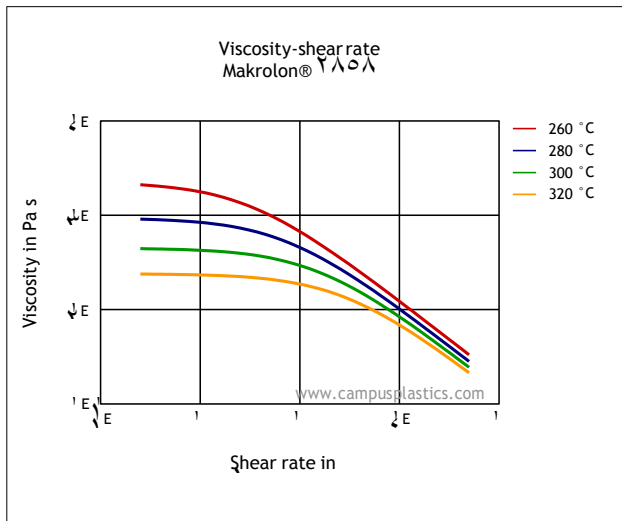
Electric strength	34	kV/mm	IEC 60243-1
Comparative tracking index	200	-	IEC 60112
Other properties	Value	Unit	Test Standard
Water absorption	0,3	%	Sim. to ISO 62
Humidity absorption	0,12	%	Sim. to ISO 62
Density	1200	kg/m ³	ISO 1183
Material specific properties	Value	Unit	Test Standard
Luminous transmittance	89	%	ISO 13468-1, -2
Rheological calculation properties	Value	Unit	Test Standard
Density of melt	1020	kg/m ³	-
Thermal conductivity of melt	0,214	W/(m K)	-
Spec. heat capacity melt	2100	J/(kg K)	-
Eff. thermal diffusivity	1E-7	m ² /s	-
Ejection temperature	130	°C	-
Test specimen production	Value	Unit	Test Standard
Injection Molding, melt temperature	300	°C	ISO 294
Injection Molding, mold temperature	80	°C	ISO 10724
Injection Molding, injection velocity	200	mm/s	ISO 294



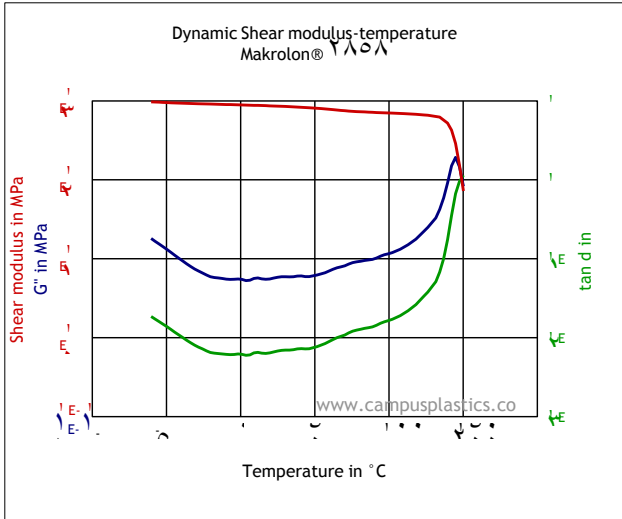
Diagrams

Viscosity-shear rate

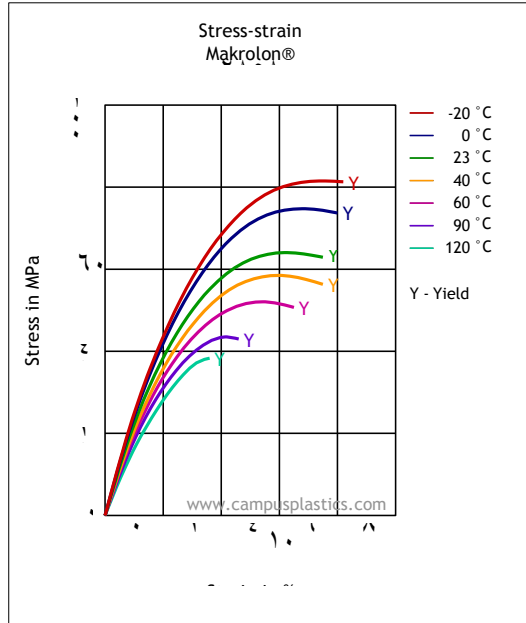
Shearstress-shear rate



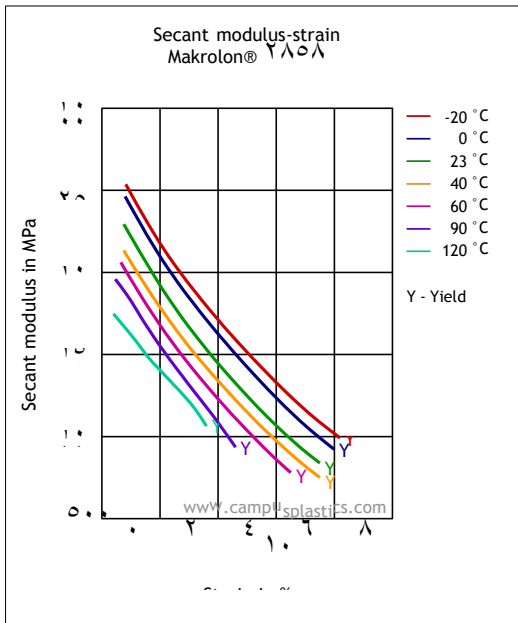
Dynamic Shear modulus-temperature



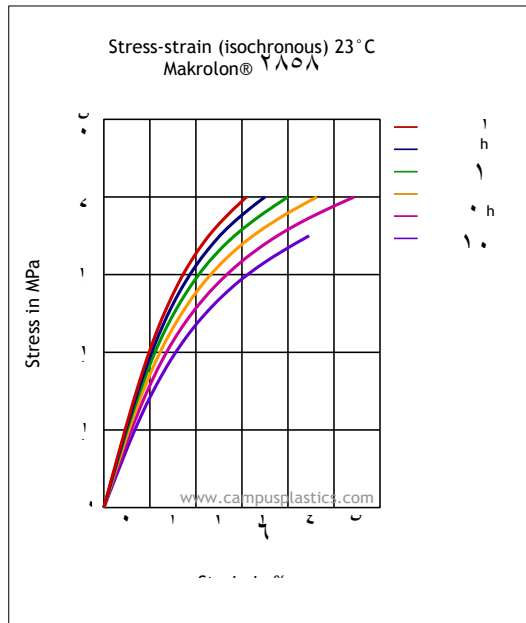
Stress-strain



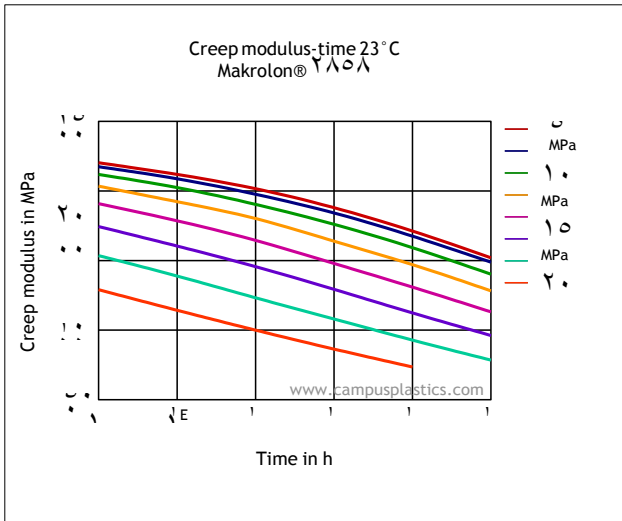
Secant modulus-strain



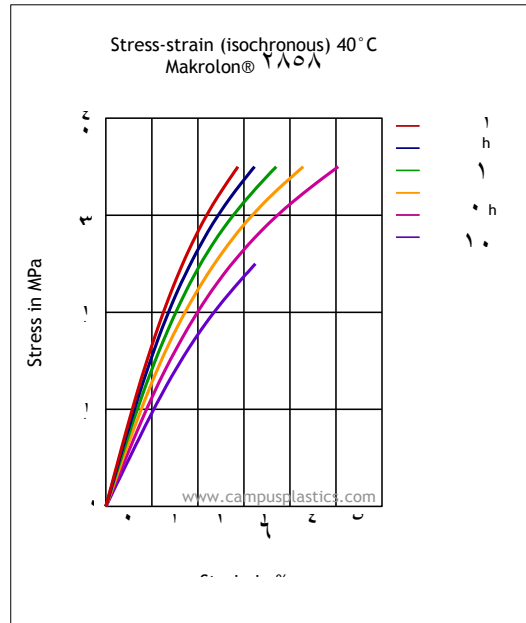
Stress-strain (isochronous) 23°C



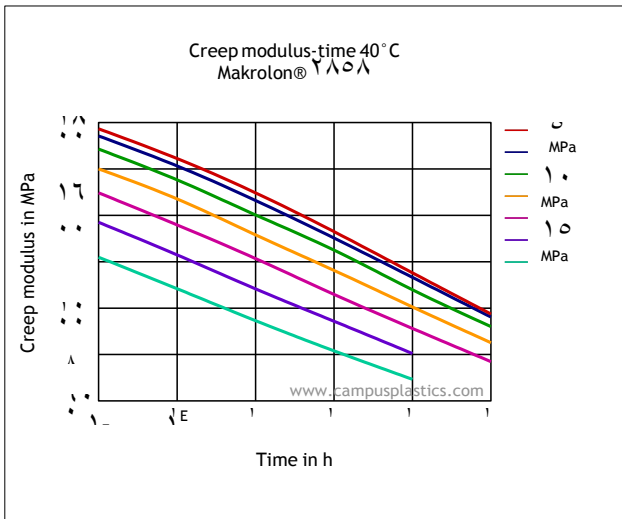
Creep modulus-time 23°C



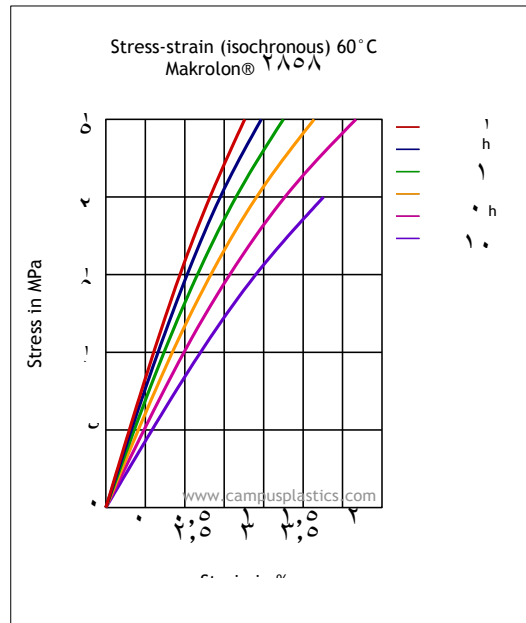
Stress-strain (isochronous) 40°C



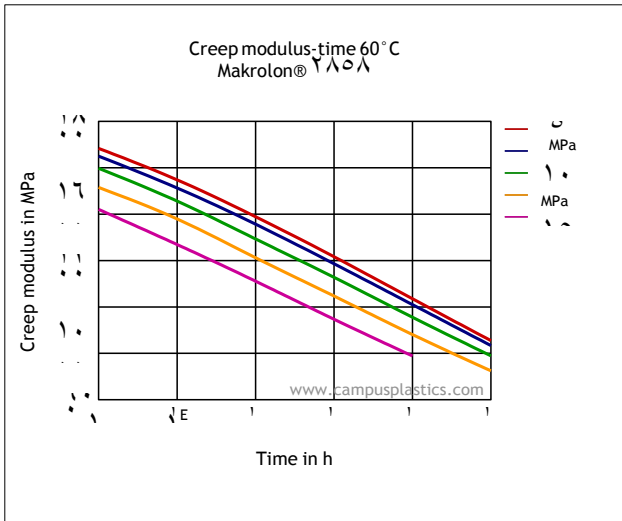
Creep modulus-time 40°C



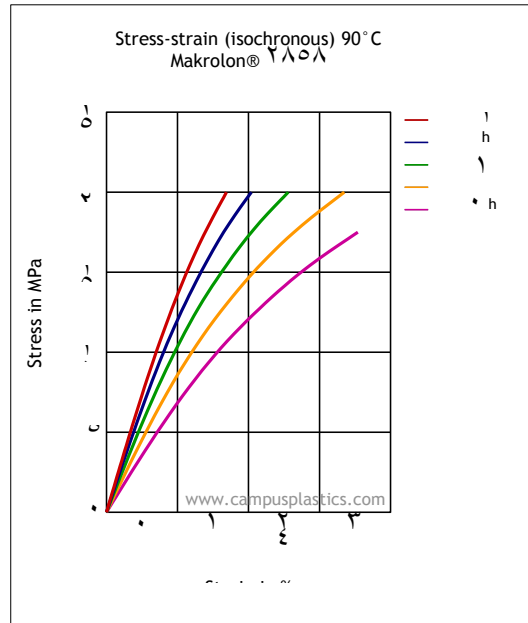
Stress-strain (isochronous) 60°C



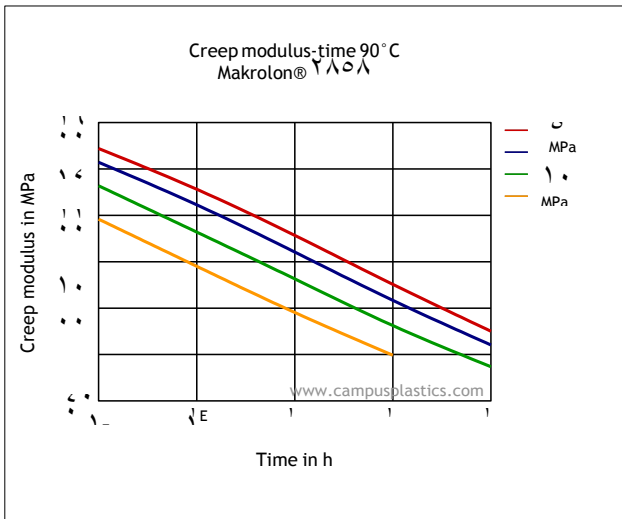
Creep modulus-time 60°C



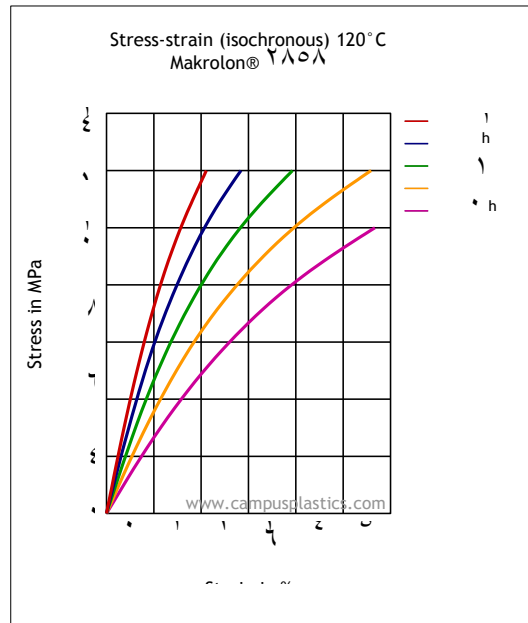
Stress-strain (isochronous) 60°C



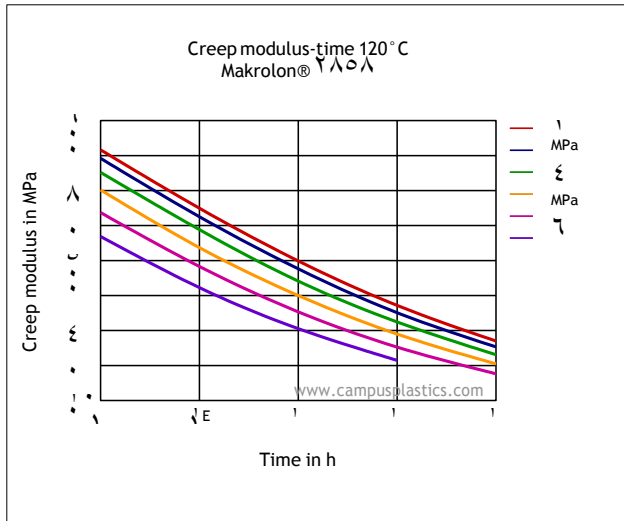
Creep modulus-time 90°C



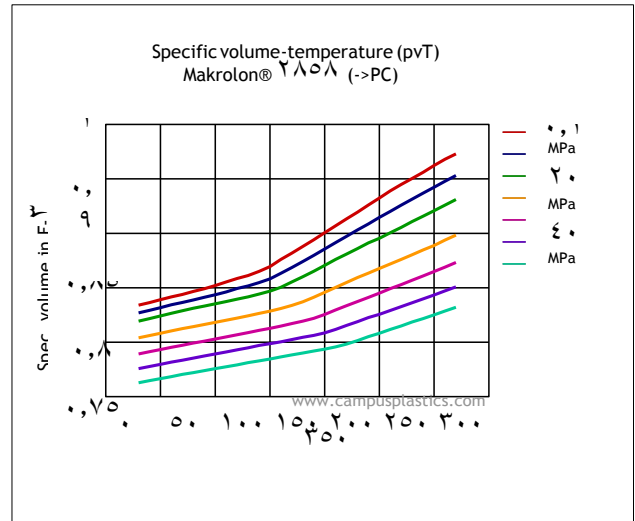
Stress-strain (isochronous) 90°C



Creep modulus-time 120 °C



Specific volume-temperature (pvT)



Characteristics

Processing

Injection Molding, Blow Molding

Delivery form

Pellets

Additives

Release agent

Special Characteristics

Transparent

Regional Availability

North America, Europe, Asia Pacific, South and Central America, Near East/Africa

Other text information

Injection molding

PREPROCESSING

Max. Water content: 0.1 - 0.2 %

Drying temperature: 120 °C

Drying time:

Circulating air drying oven (20 % 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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