

# Makrolon® SF810

## Grades / Structural foam

MVR (300 °C/1.2 kg) 6.0 cm<sup>3</sup>/10 min; structural foam; glass fiber reinforced; flame retardant; easy release; injection molding; in combination with an appropriate blowing agent for the production of structural foam moldings

## ISO Shortname

Property	Test Condition	Unit	Standard	typical Value
<b>Rheological properties</b>				
Melt volume-flow rate	300 °C; 1.2 kg	cm <sup>3</sup> /10 min	ISO 1133	6
C Molding shrinkage, parallel	60x60x2 mm	%	ISO 294-4	0.60
C Molding shrinkage, normal	60x60x2 mm	%	ISO 294-4	0.45
<b>Mechanical properties (23 °C/50 % r. h.)</b>				
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	3800
C Yield stress	50 mm/min	MPa	ISO 527-1,-2	64
C Yield strain	50 mm/min	%	ISO 527-1,-2	4
C Stress at break	5 mm/min	MPa	ISO 527-1,-2	45
C Strain at break	5 mm/min	%	ISO 527-1,-2	15
Flexural modulus	2 mm/min	MPa	ISO 178	3600
Flexural strength	2 mm/min	MPa	ISO 178	105
Flexural strain at flexural strength	2 mm/min	%	ISO 178	5.8
<b>Thermal properties</b>				
C Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	135
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	140
C Vicat softening temperature	50 N; 50 °C/h	°C	ISO 306	145
C Coefficient of linear thermal expansion, parallel	23 to 55 °C	10 <sup>-4</sup> /K	ISO 11359-1,-2	0.4
C Coefficient of linear thermal expansion, transverse	23 to 55 °C	10 <sup>-4</sup> /K	ISO 11359-1,-2	0.65
C Oxygen index	Method A	%	ISO 4589-2	35
<b>Electrical properties (23 °C/50 % r. h.)</b>				
C Relative permittivity	100 Hz	-	IEC 60250	3.2
C Relative permittivity	1 MHz	-	IEC 60250	3.2
C Electrical strength	1 mm	kV/mm	IEC 60243-1	36
C Comparative tracking index CTI	Solution A	Rating	IEC 60112	175
Volume resistivity		Ohm·m	b.o. IEC 60093	1.0E+14
Surface resistivity		Ohm	b.o. IEC 60093	1.0E+16
<b>Other properties (23 °C)</b>				
C Water absorption (saturation value)	Water at 23 °C	%	ISO 62	0.26
C Water absorption (equilibrium value)	23 °C; 50 % r. h.	%	ISO 62	0.10
C Density		kg/m <sup>3</sup>	ISO 1183-1	1270
Glass fiber content	Method A	%	b.o. ISO 3451-1	10
<b>Processing conditions for test specimens</b>				
C Injection molding-Melt temperature		°C	ISO 294	300
C Injection molding-Mold temperature		°C	ISO 294	110
C Injection molding-Injection velocity		mm/s	ISO 294	200

C These property characteristics are taken from the CAMPUS plastics data bank and are based on the international catalogue of basic data for plastics according to ISO 10350.

Impact properties: N = non-break, P = partial break, C = complete break



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## Disclaimer

### 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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### Disclaimer Non Medical Grade

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