

Makrolon® FR6040

PC-I FR(40)

Covestro Deutschland AG

- easy release
- UV stabilized
- flame retardant
- improved chemical resistance compared to standard Makrolon grades
- Information technology
- electrical/electronic

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	10	cm ³ /10min	ISO 1133
Temperature	300	°C	-
Load	1.2	kg	-
Molding shrinkage, parallel	0.8	%	ISO 294-4, 2577
Molding shrinkage, normal	0.7	%	ISO 294-4, 2577

Mechanical Properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	2200	MPa	ISO 527
Yield stress	55	MPa	ISO 527
Yield strain	5.6	%	ISO 527
Impact Strength (Charpy), +23°C	no break	kJ/m ²	ISO 179/1eU
Puncture - maximum force, +23°C	4780	N	ISO 6603-2
Puncture energy, +23°C	45	J	ISO 6603-2
Flexural Modulus (23°C)	2300	MPa	ISO 178
Flexural strength	90	MPa	ISO 178
Notched Impact Strength (Izod), 23°C	60	kJ/m ²	ISO 180/1A
Notched Impact Strength (Izod)	45	kJ/m ²	ISO 180/1A
Temperature	-30	°C	-
Ball Indentation Hardness	107	MPa	ISO 2039-1

Thermal Properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load (1.80 MPa)	114	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	129	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	135	°C	ISO 306
Coeff. of Linear Therm. Expansion, parallel	63	E-6/K	ISO 11359-1/-2
Coeff. of Linear Therm. Expansion, normal	68	E-6/K	ISO 11359-1/-2
Burning Behav. at 1.5 mm Nom. Thicken.	V-0	class	UL 94
Thickness tested	2.0	mm	-

Electrical Properties	Value	Unit	Test Standard
ISO Data			
Volume Resistivity	>1E13	Ohm*m	IEC 62631-3-1
Surface Resistivity	>1E15	Ohm	IEC 62631-3-2

Other Properties	Value	Unit	Test Standard
ISO Data			
Water Absorption	0.18	%	Sim. to ISO 62
Density	1200	kg/m ³	ISO 1183

Test specimen production	Value	Unit	Test Standard
ISO Data			
Injection Molding, melt temperature	300	°C	ISO 294
Injection Molding, mold temperature	80	°C	ISO 294

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	120	°C	-
Pre-drying - Time	4	h	-
Melt temperature	280 - 300	°C	-
Mold temperature	80	°C	-

Characteristics

Processing

Injection Molding

Additives

Release agent

Special Characteristics

Flame retardant, Impact modified, UV stabilized

Applications

Electrical and Electronical

Disclaimer

Liability Exclusion

These guide values are measured and provided by the product manufacturer and have been determined on standardised test specimens and can be affected by pigmentation, mould design and processing conditions. M-Base has taken the guide values from the producer's original Technical Data Sheet. **ALBIS AND M-BASE ARE THEREFORE NOT RESPONSIBLE FOR THE ACCURACY OF THE GUIDE VALUES AND CANNOT GIVE ANY WARRANTY WITH REGARD TO THEIR CORRECTNESS.**

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