



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. Thickn.	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	-

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Characteristics

Processing

Injection Molding

Special Characteristics

Flame retardant, Impact modified, UV stabilized

Additives

Release agent

Applications

Electrical and Electronical