

Makrolon® M6011 FR

PC-I FR(40)

Covestro Deutschland AG

- medium viscosity
- impact modified
- UV stabilized
- flame retardant
- improved chemical resistance compared to standard Makrolon grades
- tested only according to ISO 10993-5 and ISO 10993-10 for contact with uncompromised skin only
- electrical/electronic
- housing parts

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	25	cm ³ /10min	ISO 1133
Temperature	300	°C	-
Load	5	kg	-

Mechanical Properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	2250	MPa	ISO 527
Yield stress	60	MPa	ISO 527
Yield strain	5.9	%	ISO 527
Nominal strain at break	>50	%	ISO 527
Impact Strength (Charpy), +23°C	no break	kJ/m ²	ISO 179/1eU
Puncture - maximum force, +23°C	5000	N	ISO 6603-2
Puncture - maximum force, -30°C	6200	N	ISO 6603-2
Puncture energy, +23°C	51	J	ISO 6603-2
Puncture energy, -30°C	57	J	ISO 6603-2
Flexural Modulus (23°C)	2250	MPa	ISO 178
Flexural strength	89	MPa	ISO 178
Notched Impact Strength (Izod), 23°C	70	kJ/m ²	ISO 180/1A
Notched Impact Strength (Izod)	20	kJ/m ²	ISO 180/1A
Temperature	-30	°C	-

Thermal Properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load (1.80 MPa)	115	°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	136	°C	ISO 306
Burning Behav. at thickness h	V-1	class	UL 94
Thickness tested	1.0	mm	-
Glow Wire (GWFI, Flammability Index)	960	°C	IEC 60695-2-12
GWFI - thickness tested (1)	1	mm	-
Glow Wire (GWFI, Flammability Index)	960	°C	IEC 60695-2-12
GWFI - thickness tested (2)	1.5	mm	-
Glow Wire Ignition Temperature	875	°C	IEC 60695-2-13
GWIT - thickness tested (1)	1	mm	-
Glow Wire Ignition Temperature	850	°C	IEC 60695-2-13
GWIT - thickness tested (2)	1.5	mm	-

Other Properties	Value	Unit	Test Standard
ISO Data			
Water Absorption	0.36	%	Sim. to ISO 62
Humidity absorption	0.12	%	Sim. to ISO 62
Density	1190	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	90	°C	ISO 294

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	120	°C	-

Pre-drying - Time 4 h -

Characteristics

Processing

Injection Molding

Chemical Resistance

General Chemical Resistance

Special Characteristics

Flame retardant, Impact modified, UV stablized, Opaque

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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