Makrolon® M6011 FR

PC-I FR(40) Covestro Deutschland AG

Product Texts

- 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

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
[C] Melt volume-flow rate, MVR	**25**	cm³/10min	ISO 1133
Temperature	**300**	°C	-
Load	**5**	kg	-
Molding shrinkage, parallel	**0.7**	%	ISO 294-4, 2577
Molding shrinkage, normal	**0.7**	%	ISO 294-4, 2577

[C]: CAMPUS

Mechanical properties	Value	Unit	Test Standard
ISO Data			
[C] Tensile Modulus	**2250**	MPa	ISO 527
[C] Yield stress	**60**	MPa	ISO 527
[C] Yield strain	**5.9**	%	ISO 527
[C] Nominal strain at break	**>50**	%	ISO 527
Flexural modulus, 23°C	**2250**	MPa	ISO 178
Flexural strength	**89**	MPa	ISO 178
[C] Charpy impact strength, +23°C	**N**	kJ/m²	ISO 179/1eU
Izod notched impact strength, +23°C	**70**	kJ/m²	ISO 180/1A
Izod notched impact strength	**20**	kJ/m²	ISO 180/1A
Temperature	**-30**	°C	-
[C] Puncture - maximum force, +23°C	**5000**	N	ISO 6603-2
[C] Puncture - maximum force, -30°C	**6200**	N	ISO 6603-2
[C] Puncture energy, +23°C	**51**	J	ISO 6603-2
[C] Puncture energy, -30°C	**57**	J	ISO 6603-2

[C]: CAMPUS

Thermal properties	Value	Unit	Test Standard
ISO Data			
[C] Temp. of deflection under load, 1.80 MPa	**115**	°C	ISO 75-1/-2
[C] Temp. of deflection under load, 0.45 MPa	**129**	°C	ISO 75-1/-2
[C] Vicat softening temperature, B	**136**	°C	ISO 306
Burning behav. at 1.5 mm nom. thickn.	**V-0**	class	IEC 60695-11-10
Thickness tested	**1.5**	mm	-
[C] Burning Behav. at thickness h	**V-1**	class	IEC 60695-11-10
Thickness tested	**1.0**	mm	-
Glow Wire Flammability Index (GWFI)	**960**	°C	IEC 60695-2-12
GWFI - thickness tested (1)	**1**	mm	-
Glow Wire Flammability Index (GWFI)	**960**	°C	IEC 60695-2-12
GWFI - thickness tested (2)	**1.5**	mm	-
Glow Wire Ignition Temperature (GWIT)	**875**	°C	IEC 60695-2-13
GWIT - thickness tested (1)	**1**	mm	-
Glow Wire Ignition Temperature (GWIT)	**850**	°C	IEC 60695-2-13
GWIT - thickness tested (2)	**1.5**	mm	-

[C]: CAMPUS

Other properties	Value	Unit	Test Standard
[C] Water absorption	**0.36**	%	Sim. to ISO 62
[C] Humidity absorption	**0.12**	%	Sim. to ISO 62

[C] Density	**1190**	kg/m³	ISO 1183

[C]: CAMPUS

Test specimen production	Value	Unit	Test Standard
ISO Data			
[C] Injection Molding, melt temperature	**300**	°C	ISO 294
Injection Molding, mold temperature	**90**	°C	ISO 294

[C]: CAMPUS

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	**120**	°C	-
Pre-drying - Time	**4**	h	-

Characteristics

Processing
Injection Molding

Applications
Electrical and Electronical

Special Characteristics
Flame retardant, High impact or impact modified, U.V. stabilized or stable to weather, Opaque

Regional Availability
North America, Europe, Asia Pacific, Near East/Africa

Chemical Resistance
General Chemical Resistance