

Makrolon® FR6005 HF

PC

Covestro Deutschland AG

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	16	cm³/10min	ISO 1133
Temperature	300	°C	-
Load	1.2	kg	-
Molding shrinkage, parallel	0.7	%	ISO 294-4, 2577
Molding shrinkage, normal	0.7	%	ISO 294-4, 2577

Mechanical Properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	2310	MPa	ISO 527
Yield stress	60	MPa	ISO 527
Yield strain	5.7	%	ISO 527
Nominal strain at break	>50	%	ISO 527
Stress at Break	55	MPa	ISO 527
Strain at Break	100	%	ISO 527
Notched Impact Strength (Charpy), +23°C	56	kJ/m²	ISO 179/1eA
Type of failure	P	-	-
Notched Impact Strength (Charpy), -30°C	18	kJ/m²	ISO 179/1eA
Type of failure	C	-	-
Puncture - maximum force, +23°C	5000	N	ISO 6603-2
Puncture energy, +23°C	51	J	ISO 6603-2
Flexural Modulus (23°C)	2320	MPa	ISO 178
Flexural strength	92	MPa	ISO 178
Notched Impact Strength (Izod), 23°C	56	kJ/m²	ISO 180/1A
Notched Impact Strength (Izod)	16	kJ/m²	ISO 180/1A
Temperature	-30	°C	-

Thermal Properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load (1.80 MPa)	118	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	133	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	138	°C	ISO 306
Coeff. of Linear Therm. Expansion, parallel	61	E-6/K	ISO 11359-1/-2
Coeff. of Linear Therm. Expansion, normal	66	E-6/K	ISO 11359-1/-2
Burning Behav. at 1.5 mm Nom. Thickn.	V-0	class	UL 94
Thickness tested	1.5	mm	-
Burning Behav. at thickness h	V-0	class	UL 94
Thickness tested	3.0	mm	-
Glow Wire (GWFI, Flammability Index)	960	°C	IEC 60695-2-12
GWFI - thickness tested (1)	1.5	mm	-
Glow Wire (GWFI, Flammability Index)	960	°C	IEC 60695-2-12
GWFI - thickness tested (2)	3	mm	-
Glow Wire Ignition Temperature	850	°C	IEC 60695-2-13
GWIT - thickness tested (1)	1.5	mm	-
Glow Wire Ignition Temperature	900	°C	IEC 60695-2-13
GWIT - thickness tested (2)	3	mm	-

Other Properties	Value	Unit	Test Standard
ISO Data			
Density	1200	kg/m³	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
Injection Molding, injection velocity	200	mm/s	ISO 294

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

Pre-drying - Time	2 - 3	h	-
Processing humidity	≤0.02	%	-
Melt temperature	280 - 320	°C	-
Mold temperature	80 - 120	°C	-
Zone 1	250 - 260	°C	-
Zone 2	270 - 280	°C	-
Zone 3	280 - 290	°C	-
Nozzle temperature	290 - 300	°C	-
Back pressure	5 - 15	MPa	-

Characteristics

Processing

Injection Molding

Special Characteristics

Flame retardant, Impact modified

Additives

Release agent

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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