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