

科思创 PC Makrolon® FR6005 RE物性表

Thermal properties				
属性名称	测试标准	测试标准	单位	数值
Burning behavior UL 94	UL 94	1.2 mm (BK)	Class	V-0
Burning behavior UL 94 [UL recognition]	UL 94	1.5 mm	Class	V-0
Burning behavior UL 94 [UL recognition]	UL 94	1.0 mm (BK)	Class	V-0
Burning behavior UL 94 [UL recognition]	UL 94	3.0 mm	Class	V-0
Burning behavior UL 94 [UL recognition]	UL 94	1.2 mm	Class	V-1
Coefficient of linear thermal expansion, normal	ISO 11359-1,-2	23 to 55 °C	10 ⁻⁴ /K	0.7
Coefficient of linear thermal expansion, parallel	ISO 11359-1,-2	23 to 55 °C	10 ⁻⁴ /K	0.7
Glow wire test (GWFI)	IEC 60695-2-12	1.0 mm	°C	850
Glow wire test (GWFI)	IEC 60695-2-12	1.5 mm	°C	960
Glow wire test (GWFI)	IEC 60695-2-12	3.0 mm	°C	960
Glow wire test (GWIT)	IEC 60695-2-13	1.0 mm	°C	875
Glow wire test (GWIT)	IEC 60695-2-13	1.5 mm	°C	850
Glow wire test (GWIT)	IEC 60695-2-13	3.0 mm	°C	900
Relative temperature index (Electric strength)	UL 746B	0.75 mm	°C	115
Relative temperature index (Tensile impact strength)	UL 746B	0.75 mm	°C	105
Relative temperature index (Tensile strength)	UL 746B	0.75 mm	°C	115
Resistance to heat (ball pressure test)	IEC 60695-10-2		°C	134
Temperature of deflection under load	ISO 75-1,-2	0.45 MPa	°C	136
Temperature of deflection under load	ISO 75-1,-2	1.80 MPa	°C	121
Vicat softening temperature	ISO 306	50 N; 120 °C/h	°C	144
Vicat softening temperature	ISO 306	50 N; 50 °C/h	°C	142
Mechanical properties (23 °C/50 % r. h.)				
属性名称	测试标准	测试标准	单位	数值

Charpy notched impact strength	ISO 21305/based on ISO 179/1eA	23 °C	kJ/m ²	68P
Charpy notched impact strength	ISO 21305/based on ISO 179/1eA	-10 °C	kJ/m ²	50C
Charpy notched impact strength	ISO 21305/based on ISO 179/1eA	-30 °C	kJ/m ²	20C
Flexural modulus	ISO 178	2 mm/min	MPa	2400
Flexural strength	ISO 178	2 mm/min	MPa	90
Izod notched impact strength	ISO 21305/based on ISO 180/A	23 °C/ 3 mm	kJ/m ²	60P
Izod notched impact strength	ISO 21305/based on ISO 180/A	-30 °C/ 3 mm	kJ/m ²	15C
Nominal strain at break	ISO 527-1,-2	50 mm/min	%	> 50
Puncture energy	ISO 6603-2	-30 °C	J	55
Puncture energy	ISO 6603-2	23 °C	J	54
Puncture impact properties - maximum force	ISO 6603-2	-30 °C	N	6100
Puncture impact properties - maximum force	ISO 6603-2	23 °C	N	5100
Strain at break	b.o. ISO 527-1,-2	50 mm/min	%	135
Stress at break	ISO 527-1,-2	50 mm/min	MPa	66
Tensile modulus	ISO 527-1,-2	1 mm/min	MPa	2300
Yield strain	ISO 527-1,-2	50 mm/min	%	6
Yield stress	ISO 527-1,-2	50 mm/min	MPa	62

Rheological properties

属性名称	测试标准	测试标准	单位	数值
Melt volume-flow rate	ISO 1133	300 °C/ 1.2 kg	cm ³ /10 min	9
Molding shrinkage, parallel/normal	b.o. ISO 2577	Value range based on general practical experience	%	0.6 - 0.8

Electrical properties (23 °C/50 % r. h.)

属性名称	测试标准	测试标准	单位	数值
Comparative tracking index CTI	IEC 60112	Solution A	Rating	200
Surface resistivity	IEC 60093		Ohm	4E17
Volume resistivity	IEC 60093		Ohm*m	9E16

Processing conditions for test specimens

属性名称	测试标准	测试标准	单位	数值
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Injection molding - Injection velocity	ISO 294	mm/s	200
Injection molding - Melt temperature	ISO 294	°C	300
Injection molding - Mold temperature	ISO 294	°C	80

Other properties (23 °C)

属性名称	测试标准	测试标准	单位	数值
Density	ISO 1183-1		kg/m ³	1200

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