Makrolon 6265

Flame retardant grades / Low viscosity	Global grade; MVR 19 cm³/10 min; Flame retardant; UL 94 V-0/1.5 mm; Low viscosity; Easy release; Injection molding; Available in opaque colors only
ISO Shortname	ISO 7391-PC,MFR,(,,)-18-9

	Property	Test Condition	Unit	Standard	Value
Rheological properties					
C	Melt volume-flow rate	300 °C; 1.2 kg	cm³/(10 min)	ISO 1133	19
	Molding shrinkage, parallel/normal	Value range based on general practical experience	%	acc. ISO 2577	0.5 - 0.7
	Melt mass-flow rate	300 °C; 1.2 kg	g/(10 min)	ISO 1133	20
Mechanical properties (23 °C/50 % r. h.)					
C	Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	2400
C	Yield stress	50 mm/min	MPa	ISO 527-1,-2	65
C	Yield strain	50 mm/min	%	ISO 527-1,-2	6.0
C	Nominal strain at break	50 mm/min	%	ISO 527-1,-2	> 50
	Stress at break	50 mm/min	MPa	ISO 527-1,-2	65
	Strain at break	50 mm/min	%	acc. ISO 527-1,-2	110
C	Tensile creep modulus	1 h	MPa	ISO 899-1	2200
C	Tensile creep modulus	1000 h	MPa	ISO 899-1	1900
	Flexural modulus	2 mm/min	MPa	ISO 178	2350
	Flexural strength	2 mm/min	MPa	ISO 178	98
	Flexural strain at flexural strength	2 mm/min	%	ISO 178	7.0
	Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178	73
C	Charpy impact strength	23 °C	kJ/m²	ISO 179-1eU	N
C	Charpy impact strength	-30 °C	kJ/m²	ISO 179-1eU	N
	Charpy notched impact strength	23 °C; 3 mm	kJ/m²	acc. ISO 179-1eA	12C(P)
	Charpy notched impact strength	-30 °C; 3 mm	kJ/m²	acc. ISO 179-1eA	12C
	Izod notched impact strength	23 °C; 3.2 mm	kJ/m²	acc. ISO 180-A	12C(P)
	Izod notched impact strength	-30 °C; 3.2 mm	kJ/m²	acc. ISO 180-A	12C
C	Puncture maximum force	23 °C	N	ISO 6603-2	5000
C	Puncture maximum force	-30 °C	N	ISO 6603-2	5900
C	Puncture energy	23 °C	J	ISO 6603-2	50
C	Puncture energy	-30 °C	J	ISO 6603-2	55
	Ball indentation hardness		N/mm²	ISO 2039-1	115
Thermal properties					
C	Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	124
C	Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	137
C	Vicat softening temperature	50 N; 50 °C/h	°C	ISO 306	145
	Vicat softening temperature	50 N; 120 °C/h	°C	ISO 306	146
C	Coefficient of linear thermal expansion, parallel	23 to 55 °C	10^{-4}/K	ISO 11359-1,-2	0.65
C	Coefficient of linear thermal expansion, transverse	23 to 55 °C	10^{-4}/K	ISO 11359-1,-2	0.65
C	Burning behavior UL 94 (1.6 mm) [UL recognition]	1.5 mm	Class	UL 94	V-0
C	Burning behavior UL 94 [UL recognition]	3.0 mm	Class	UL 94	V-0
C	Oxygen index	Method A	%	ISO 4589-2	36
	Thermal conductivity	23 °C	W/(m·K)	ISO 8302	0.20
	Resistance to heat (ball pressure test)		°C	IEC 60695-10-2	134
	Temperature index (Tensile strength)	20000 h; 1.5 mm	°C	IEC 60216-1	130
	Halving interval (Tensile strength)	1.5 mm	°C	IEC 60216-1	7.3
	Temperature index (Tensile impact strength)	20000 h; 1.5 mm	°C	IEC 60216-1	125
	Halving interval (Tensile impact strength)	1.5 mm	°C	IEC 60216-1	7.0
	Temperature index (Electric strength)	20000 h; 1.5 mm	°C	IEC 60216-1	135
	Halving interval (Electric strength)	1.5 mm	°C	IEC 60216-1	9.7
	Relative temperature index (Tensile strength) [UL recognition]	1.5 mm	°C	UL 746B	125
	Relative temperature index (Tensile impact strength) [UL recognition]	1.5 mm	°C	UL 746B	115
	Relative temperature index (Electric strength) [UL recognition]	1.5 mm	°C	UL 746B	125
	Glow wire test (GWFI)	1.0 mm	°C	IEC 60695-2-12	960
	Glow wire test (GWFI)	1.5 mm	°C	IEC 60695-2-12	960
	Glow wire test (GWFI)	2.0 mm	°C	IEC 60695-2-12	960
	Glow wire test (GWFI)	3.0 mm	°C	IEC 60695-2-12	960

Makrolon 6265

	Property	Test Condition	Unit	Standard	Value
	Application of flame from small burner	Method K and F; 2.0 mm	Class	DIN 53438-1,-3	K1, F1
	Needle flame test	Method K; 1.5 mm	s	IEC 60695-2-2	60
	Needle flame test	Method K; 2.0 mm	s	IEC 60695-2-2	120
	Needle flame test	Method K; 3.0 mm	s	IEC 60695-2-2	120
	Needle flame test	Method F; 1.5 mm	s	IEC 60695-2-2	120
	Needle flame test	Method F; 2.0 mm	s	IEC 60695-2-2	120
	Needle flame test	Method F; 3.0 mm	s	IEC 60695-2-2	120
	Incandescent bar test		Rating	IEC 60707-BH	BH2/<30 mm
	Burning rate (US-FMVSS)	>=1.0 mm	mm/min	ISO 3795	passed
	Flash ignition temperature	Procedure B	°C	ASTM D1929	450
	Self ignition temperature	Procedure B	°C	ASTM D1929	520
Electrical properties (23 °C/50 % r. h.)					
C	Relative permittivity	100 Hz	-	IEC 60250	3.1
C	Relative permittivity	1 MHz	-	IEC 60250	3.0
C	Dissipation factor	100 Hz	10^{-4}	IEC 60250	10
C	Dissipation factor	1 MHz	10^{-4}	IEC 60250	90
C	Volume resistivity		Ohm·m	IEC 60093	1E14
C	Surface resistivity		Ohm	IEC 60093	1E16
C	Electric strength	1 mm	kV/mm	IEC 60243-1	33
C	Comparative tracking index CTI	Solution A	Rating	IEC 60112	200
	Comparative tracking index CTI M	Solution B	Rating	IEC 60112	125
	Electrolytic corrosion		Rating	IEC 60426	A1
Other properties (23 °C)					
C	Water absorption (Saturation value)	Water at 23 °C	%	ISO 62	0.30
C	Water absorption (Equilibrium value)	23 °C; 50 % RH	%	ISO 62	0.12
C	Density		kg/m³	ISO 1183	1200
	Bulk density	Pellets	kg/m³	ISO 60	640
Processing conditions for test specimens					
C	Injection molding-Melt temperature		°C	ISO 294	280
C	Injection molding-Mold temperature		°C	ISO 294	80
C	Injection molding-Injection velocity		mm/s	ISO 294	200

C These property characteristics are taken from the CAMPUS plastics data bank and are based on the international catalogue of basic data for plastics according to ISO 10350.