

MAKROPOL A3 MF UV FME0132 PC331 MSP**Product Description**

Low Viscosity, UV Stabilized, Transparent Color, Polycarbonate

General Considerations

Resin ID (ISO 1043)	· PC	
Additive	· UV Resistant	
Processing	· Injection Molding	· Extrusion
Color	· Black	

- The information below is for informational purposes only and should not be adopted as specification limits.

Physical	Dry	50%RH	Unit	Method
Density	1200	--	kg/m ³	ISO 1183
Mold Shrinkage				ISO 2577
Parallel	0,5	--	%	
Normal	0,7	--	%	
Water Absorption				ISO 62
Saturation (Water at 23°C)	--	0,3	%	
Equilibrium (23°C)	--	0,12	%	
Melt mass-flow rate - 300 °C; 1.2 kg	19	--	g/10min	ISO 1133

Mechanical	Dry	50%RH	Unit	Method
Tensile Modulus (1mm/min)	--	2400	MPa	ISO 527-1,-2
Yield Stress (50 mm/min)	--	66	MPa	ISO 527-1,-2
Yield Strain (50 mm/min)	--	6	%	ISO 527-1,-2
Nominal Strain at Break				ISO 527-1,-2
Stress at Break (50 mm/min)	--	60	MPa	
Strain at Break (50 mm/min)	--	120	%	
Flexural Modulus (2 mm/min)	--	2350	MPa	ISO 178
Flexural Strength (2 mm/min)	--	98	MPa	ISO 178
Flexural Strain (2 mm/min)	--	7	%	ISO 178
Charpy Impact Strength				ISO 179-1eU
-60°C	--	Non-Break	kJ/m ²	
-30°C	--	Non-Break	kJ/m ²	
23°C	--	Non-Break	kJ/m ²	
Charpy Notched Impact Strength				ISO 179-1eA
-30°C	--	14	kJ/m ²	
23°C	--	65	kJ/m ²	
Izod Notched Impact Strength				ISO 180-A
-30°C	--	12	J/m	
23°C	--	75	J/m	

Thermal	Value	Unit	Method
Heat Deflection Temperature			ISO 75-1,-2
0,45 MPa	136	°C	
1,82 MPa	124	°C	
Thermal Conductivity	0,2	W/(m·K)	ISO 8302
Vicat Softening Temperature			ISO 306
50 N ; 50°C/h	145	°C	
50 N ; 120°C/h	144	°C	
Melting Point	280	°C	ISO 294
Coefficient of Linear Thermal Expansion			ISO 11359-1,-2

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Parallel ; (23 to 55 °C)	0,65	10 -4 /K
Transverse ; (23 to 55 °C)	0,65	10 -4 /K

Thermal	Value	Unit	Method
Flammability			UL 94
0,75 mm	V-2	Class	
1,5 mm	V-2	Class	
2,6 mm	V-2	Class	
Glow Wire Test			IEC 60695-2-12
1,0 mm	850	°C	
1,5 mm	850	°C	
2,0 mm	850	°C	
3,0 mm	930	°C	
4,0 mm	960	°C	

Electrical	Dry	50%RH	Unit	Method
Relative Permittivity				IEC 60250
100 Hz	--	3,1	--	
1 MHz	--	3,0	--	
Dissipation factor				IEC 60250
100 Hz	--	5	10 ⁻⁴	
1 MHz	--	90	10 ⁻⁴	
Surface Resistivity	--	1E+16	ohm	IEC 60093
Volume Resistivity	--	1E+14	ohm.m	IEC 60093
Electric Strength (1 mm)	--	34	kV/mm	IEC 60243-1

Process		Unit	Method
Molding Process Temperature	270 to 290	°C	--
Mold Temperature	70 to 90	°C	--
Drying	120/4	°C/Hours	--

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