

MCap[®] Foil EVO - Data Sheet

Copper



MCap[®] Foil EVO Copper Paper Wax

The **MCap[®] Foil EVO Copper Paper Wax** is the most consistently mechanically damped version of the MCap Foil EVO family. It uses solid copper foil as the electrode and double paper insulation for maximum calmness of the winding.

Copper offers very high conductivity and, as a solid foil, brings material substance into the capacitor. This creates a stable current path with very low internal resistance, high current-carrying capability, and strong impulse reserve. At the same time, the greater mass of the copper foil gives the winding mechanical inertia and stability.

The double paper insulation further supports this calming effect. Paper does not only serve as an insulation material; it also acts as a carrier for the impregnation and as an element of internal damping. In combination with the advanced EVO impregnation, it creates a deeply calmed winding structure.

This calm is especially important where high currents can cause strong movement within the component — for example in heavily loaded loudspeaker crossovers. Macro-microphony has two sides: mechanical movements of foils, paper layers, and winding structures that feed back into the electrical signal and generate fine interference components. At the same time, macro-microphony is lossy: part of the signal energy is parasitically diverted into winding movement, material deformation, and internal damping. This energy is missing in dynamic impulses for precise control of the speaker diaphragm.

The vibration-optimized epoxy resin potting further stabilizes the construction. The patented **Angelique[®] connecting wires** complement the capacitor on the micro-microphonic and tonal level. They combine the full-bodied signature of the copper foil with the tonal color of the Angelique copper-silver-gold alloy.

Sonically, the **MCap[®] Foil EVO Copper Paper Wax** plays with a closed, tonally rich, and substantial character, with natural foundation and a calm spatial presentation. Impulses are powerful without becoming nervous; voices and instruments retain their contour and physical presence even in complex musical passages.

tonally rich

calm

grounded

calm

full-bodied

substantial



Special Features

- Solid copper foil
- High current-carrying capability and strong impulse reserves
- Double paper insulation for maximum mechanical damping
- Advanced EVO impregnation
- Suitable for high currents and high power, especially in loudspeaker crossovers
- Patented Angelique lead-out wires made from a copper-silver-gold alloy

Construction

Conductor Material	Copper Foil
Dielectric	Paper (PA)
Impregnation	Wax
Connecting Wires	Angelique [®] Copper Wires
Case	Low-Resonance Plastic
Sealing	Low-Resonance Epoxy Resin
Shrinktube Colour	Black
Marking	Copper
Operating Temperature Range	-25°C/-13°F - 85°C/185°F
Compliance	RoHS 2015/863/EU · SS-00259 REACH 1907/2006/EC · MEP No. 7

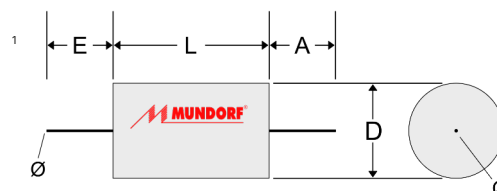
Typical Applications

- Loudspeaker crossovers
- Amplifier circuits
- Home Audio
- Home Cinema
- PA
- Studio
- Car Audio

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Electrical Data

Capacitance Range	0.1 µF - 10 µF
Tolerance	±5%
Rated Voltages	100 VDC
Insulation	
C ≤ 0.33 µF: Insulation Resistance IR	10 GΩ
C > 0.33 µF: Self-discharge constant τ	30 000 s (MΩ × µF)
Test Voltage	100 V
Dissipation Factors tan δ	
@ 1 kHz (20 °C)	0.002
@ 10 kHz (20 °C)	0.001
Specification according to	IEC 60384-1/16



¹ Wire E is connected to outer foil-winding

Standard Values

Order Code	Electrical Data			Body Dimensions		Wire Dimensions *		
	Capacitance	Tolerance	Voltage (Rated)	D Diameter (±2)	L Length (±2)	Ø Diameter (±0.05)	E Length (+10/-0)	A Length (+10/-0)
	µF	%	VDC	mm	mm	mm	mm	mm
KPE.CU-0,10T5.100	0.10	±5%	100	22	23	0.8	50	35
KPE.CU-1,0T5.100	1.0	±5%	100	45	65	1.2	105	40
KPE.CU-1,5T5.100	1.5	±5%	100	-	-	1.2	-	-
KPE.CU-2,2T5.100	2.2	±5%	100	55	65	1.2	110	45
KPE.CU-2,7T5.100	2.7	±5%	100	-	-	1.2	-	-
KPE.CU-3,3T5.100	3.3	±5%	100	60	65	1.2	110	45
KPE.CU-3,9T5.100	3.9	±5%	100	60	65	1.2	110	45
KPE.CU-4,7T5.100	4.7	±5%	100	68	65	1.2	115	50
KPE.CU-5,6T5.100	5.6	±5%	100	75	65	1.2	120	55
KPE.CU-6,8T5.100	6.8	±5%	100	75	65	1.2	120	55
KPE.CU-8,2T5.100	8.2	±5%	100	80	65	1.2	120	55
KPE.CU-10T5.100	10	±5%	100	75	95	1.2	150	55

* Early Samples may have different wire dimensions

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