

# MCap<sup>®</sup> Foil EVO - Data Sheet

## Copper



### MCap<sup>®</sup> Foil EVO Copper Paper PP Oil

The **MCap<sup>®</sup> Foil EVO Copper Paper PP Oil** is a high-grade Mundorf film-foil capacitor with solid copper foil, combined paper/polypropylene insulation, and advanced EVO impregnation. It combines high voltage capability with pronounced mechanical damping.

The solid copper foil forms a highly stable and conductive current path. It provides high conductive substance, very low internal resistance, and high current-carrying capability. This allows the capacitor to handle dynamic music signals and impulses with authority.

The combination of paper and polypropylene brings together two different strengths. Paper supports mechanical damping and allows deep, effective impregnation of the winding. Polypropylene complements this structure with high voltage capability and low electrical losses. This makes the design especially suitable for applications where higher voltages and acoustic control are required together — for example in demanding amplifier circuits.

The advanced EVO impregnation calms the winding deeply. It reduces fine relative movements, improves mechanical stability, and makes the capacitor less sensitive to macro-microphonic excitation. This calming effect not only reduces fine electrical interference caused by mechanical feedback into the signal. It also lowers the loss-related part of macro-microphony: A quieter winding consumes less signal energy for its own movement, deformation, and internal damping. This energy is missing in dynamic impulses for precise control of the speaker diaphragm.

The vibration-optimized epoxy resin potting additionally stabilizes the winding and reduces enclosure-borne and structure-borne vibration. The patented **Angelique<sup>®</sup> 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<sup>®</sup>** copper-silver-gold alloy and contribute significantly to the coherent overall result.

The **MCap<sup>®</sup> Foil EVO Copper Paper PP Oil** combines the mechanical damping of paper with the higher voltage resistance of polypropylene. It is also suitable for high-quality electronic and amplifier circuits where higher voltages are present.

This makes the **MCap<sup>®</sup> Foil EVO Copper Paper PP Oil** the ideal solution when high voltage resistance, low electrical losses, mechanical quietness and natural timbres are all required. It is suitable for both demanding signal and coupling applications as well as for crossovers. Its strengths lie in its liveliness with substance, precision, and spatial stability.



### Special Features

- Solid copper foil
- Paper/polypropylene insulation for damping and higher voltage capability
- Advanced EVO impregnation
- Suitable for higher voltages at lower currents, especially in amplifier and electronics circuits
- Reduced macro-microphony and less parasitic winding movement
- Patented Angelique lead-out wires made from a copper-silver-gold alloy

substantial

tonally faithful

precise

natural

calm

spatially stable

### Construction

<b>Conductor Material</b>	Copper Foil
<b>Dielectric</b>	Paper-Polypropylene (PAPP) Film
<b>Impregnation</b>	Oil
<b>Connecting Wires</b>	Angelique®Copper Wires
<b>Case</b>	Low-Resonance Plastic
<b>Sealing</b>	Low-Resonance Epoxy Resin
<b>Shrinktube Colour</b>	Black
<b>Marking</b>	Copper
<b>Operating Temperature Range</b>	-25°C/-13°F - 85°C/185°F
<b>Compliance</b>	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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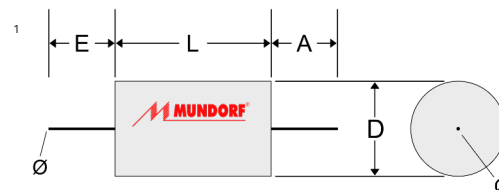
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### Electrical Data

<b>Capacitance Range</b>	0.01 µF - 10 µF
<b>Tolerance</b>	±5%
<b>Rated Voltages</b>	630 VDC
<b>Insulation</b>	
C ≤ 0.33 µF: Insulation Resistance IR	10 GΩ
C > 0.33 µF: Self-discharge constant τ	30 000 s (MΩ × µF)
<b>Test Voltage</b>	500 V
<b>Dissipation Factors tan δ</b>	
@ 1 kHz (20 °C)	0.002
@ 10 kHz (20 °C)	0.001
<b>Specification according to</b>	IEC 60384-1/16



<sup>1</sup> Wire E is connected to outer foil-winding

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-0,10T5.630	0.10	±5%	630	22	23	0,8	50	35
KPE.CU-0,15T5.630	0.15	±5%	630	-	-	0,8	-	-
KPE.CU-0,22T5.630	0.22	±5%	630	22	41	0,8	70	35
KPE.CU-0,33T5.630	0.33	±5%	630	25	56	0,8	85	35
KPE.CU-0,47T5.630	0.47	±5%	630	25	56	0,8	85	35
KPE.CU-0,68T5.630	0.68	±5%	630	31	56	0,8	90	35
KPE.CU-1,0T5.630	1.0	±5%	630	45	65	1,2	105	40
KPE.CU-1,5T5.630	1.5	±5%	630	-	-	1,2	-	-
KPE.CU-2,2T5.630	2.2	±5%	630	60	65	1,2	110	45
KPE.CU-2,7T5.630	2.7	±5%	630	-	-	1,2	-	-
KPE.CU-3,3T5.630	3.3	±5%	630	73	65	1,2	120	55
KPE.CU-3,9T5.630	3.9	±5%	630	73	65	1,2	120	55
KPE.CU-4,7T5.630	4.7	±5%	630	73	65	1,2	120	55
KPE.CU-5,6T5.630	5.6	±5%	630	90	65	1,2	125	60
KPE.CU-6,8T5.630	6.8	±5%	630	90	95	1,2	125	60
KPE.CU-8,2T5.630	8.2	±5%	630	90	95	1,2	155	60
KPE.CU-10T5.630	10	±5%	630	90	95	1,2	155	60

\* Early Samples may have different wire dimensions

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