AUDIO CAPACITOR

MCap® Foil – Data Sheet

Aluminum

MCap® Foil Alu PP Oil

The **MCap® Foil Alu PP Oil** is a Mundorf film-foil capacitor with solid aluminum foil as the electrode. It combines the electrical advantages of a stable metal-foil current path with the mechanical calm of an elaborately impregnated and potted capacitor structure.

The solid foil made from high-purity aluminum provides significantly conductive substance. This lowers internal resistance, increases current-carrying capability, and allows impulses to be handled with authority. At the same time, aluminum as a solid foil adds mechanical stability to the winding while preserving a fast, light, and open sound character.

Mundorf uses this material basis not only electrically, but also acoustically. The impregnation calms the winding deep into its structure and reduces fine relative movements within the winding package. The potting in the enclosure, using vibration-optimized epoxy resin, additionally stabilizes the entire construction and reduces enclosure-borne and structure-borne vibration.

This calming effect is essential because macro-microphony has two sides: mechanical movements of the foil, winding, and enclosure 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 patented **Angelique®- connection wires** complement the capacitor in terms of micro-microphonic response and tonal quality. They combine the clear, structured signature of the aluminum foil with the tonal color of the **Angelique®** copper-silver-gold alloy.

Sonically, the **MCap® Foil Alu PP Oil** stands for clarity, power and vibrant order. The solid aluminum foil combines high impulse fidelity with an open, fast, and structured presentation. Through impregnation, potting, and Angelique lead-out wires, this clarity does not become sober or hard, but gains calm, spatial stability, and natural definition. Especially in high-quality crossovers, the **MCap® Foil Alu PP Oil** supports a precise, controlled presentation with clear contours and a stable soundstage.

clear · powerful · open · spatially stable · controlled · structured

Special Features

- Solid aluminum foil
- Very low internal resistance and high current capability
- Fast, light, and open sound character
- Elaborate impregnation and vibration-optimized potting
- Reduced macro-microphony and less parasitic winding movement
- Patented Angelique lead-out wires made from a copper-silver-gold alloy

Construction

Conductor Material	Aluminum Foil
Dielectric	Polypropylene (PP) Film
Impregnation	Oil
Connecting Wires	Angelique®Copper Wires
Case	Low-Resonance Plastic
Sealing	Low-Resonance Epoxy Resin
Shrinktube Colour	Black
Marking	Red
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

AUDIO CAPACITOR

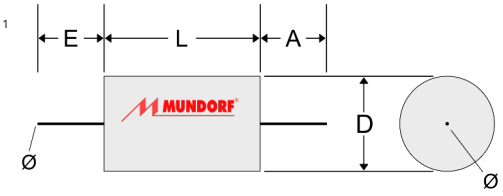
MCap® Foil

Aluminum

MCap® Foil Alu PP Oil

Electrical Data

Capacitance Range	0.022 µF – 6.8 µF
Tolerance	±5%
Rated Voltages	100 · 250 · 630 VDC
Insulation	
C ≤ 0.33 µF: Insulation Resistance IR	*10 GΩ*
C > 0.33 µF: Self-discharge constant τ	*30 000 s (MΩ × µF)*
IR Test Voltage	100 · 100 · 500 VDC
Dissipation Factors	
@ 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	Toleranz	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
KP.AL-0,10T5.630	0.10	±5%	630	12	23	0.8	45	35
KP.AL-0,22T5.630	0.22	±5%	630	17	32	0.8	60	35
KP.AL-0,33T5.630	0.33	±5%	630	17	30	0.8	55	35
KP.AL-0,47T5.630	0.47	±5%	630	19	41	0.8	70	35
KP.AL-0,68T5.630	0.68	±5%	630	22	42	0.8	70	35
KP.AL-1,0T5.630	1.0	±5%	630	25	42	0.8	70	35
KP.AL-1,5T5.250	1.5	±5%	250	31	40	0.8	75	35
KP.AL-2,2T5.250	2.2	±5%	250	31	42	0.8	75	35
KP.AL-2,7T5.100	2.7	±5%	100	42	42	1.2	80	40
KP.AL-3,3T5.100	3.3	±5%	100	42	42	1.2	80	40
KP.AL-3,9T5.100	3.9	±5%	100	42	42	1.2	80	40
KP.AL-4,7T5.100	4.7	±5%	100	42	42	1.2	80	40
KP.AL-6,8T5.100	6.8	±5%	100	48	42	1.2	85	40

* Early Samples may have different wire dimensions

Mundorf EB GmbH

Liebigstraße 110
50823 Cologne
Germany

Website: www.mundorf.com
Phone: +49 221 977705-0
E-Mail: info@mundorf.com