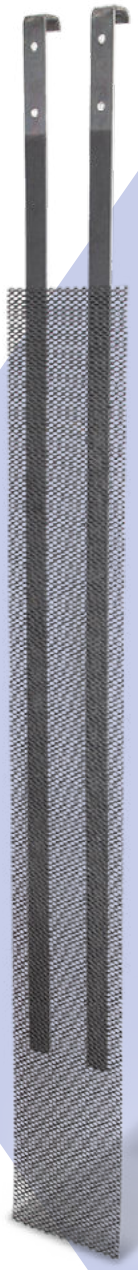
METAKEM
Precious metals & anodes

METAKEM MOX Cr(III)-Anode

For stable performance in Cr(III)-electroplating processes

MADE IN GERMANY



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Anodes

METAKEM MOX Cr(III)-Anode

Specifications

Carrier metals:	Titanium, Ti
Material:	Grade 1 (DIN 3.7025) Grade 2 (DIN 3.7035)
Anode body made of:	Expanded metal, sheet metal, tubing, rod, wire, 3D materials (e.g. Ti felt etc.)
Size and construction:	According to customer requirements
Precious metal load:	6 – 40 g Ir / m²
Layer types:	Ir-mixed oxide (MMO)
Coating by means of:	Thermal conversion of precious metal and valve metal compounds to oxides
Anodic current density:	≤ 100 A / dm²
Application as:	Anode and bipolar electrode, also in pulsed mode
pH value:	0 – 11 recommended
Bath temperature:	≤ 60 °C recommended

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Expanded metal types:

METAKEM offers various mesh sizes available for Ti expanded metals, see our Overview of expanded metal types.

The METAKEM MOX Cr(III)-Anodes are made of a titanium carrier and are activated with an Ir-MMO coating.

This specially tailored MMO coating for galvanic Cr(III)-plating electrolytes ensures a stable process with low Cr(VI) formation rates. Additionally, this coating has been optimized for longer service life with comparable iridium loadings.

Key Features of the METAKEM MOX Cr(III)-Anode:

- Low Cr(VI) formation rates
- Extended service life with the same iridium content
- Reactivation capability
- Production of application-specific anode shapes
- Lightweight and stable anode structure
- Excellent current density distribution through expanded metals
- No anode residues in the electrolyte

For optimal current distribution on the cathode, the METAKEM MOX Cr(III)-Anode made from expanded metal is preferred. Our standard expanded metal types include D2 (OF 1.6) or D3 (OF 1.8). Expanded metal ensures high scattering power, efficient electrolyte exchange, and compact designs with low weight.

Our precious metal loading refers to pure iridium as metal in g Ir / m². As standard, we offer a loading of 6 g Ir / m² for low to medium anode loads and 12 g Ir / m² for higher demands.
For particularly high anode stress, such as in hard chrome applications, we also offer higher iridium loadings of up to 40 g / m².

Example Calculation of Total Iridium content / Anode:
Anode area (m²) × Expanded metal type (OF) × Precious metal loading (g Ir / m²)

Example: 0.25 m × 1 m × OF 1.8 × 12 g Ir / m² = 5.4 g Ir / anode

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