



Version: 29 January 2024



DIALLOY[®] 822

TIN-ZINC-ELECTROLYTE



Coatings with low porosity for technical applications

DIALLOY[®] 822 is an alkaline cyanide electrolyte for the deposition of a tin-zinc alloy in barrel or rack operation.

The alloy composition is on average 80 % Sn and 20 % Zn, whereby other Sn/Zn alloy ratios can also be deposited by varying the working parameters.

The electrolyte is suitable for the deposition of silk-matt alloy layers.

Alloy layers deposited of DIALLOY[®] 822 are mainly used in technical applications. They are suitable as an anti-corrosion coating for iron and iron alloys, but also as corrosion protection in combination with light metals such as aluminum. Corrosion resistance can be further increased by suitable post-treatment (passivation, sealing).

Moreover, the layers have a good solderability and weldability.



Advantages

- Very good metal distribution
- Excellent corrosion protection of light metals, iron and iron alloys
- Very good soldering and welding properties
- Low porosity
- Suitable for rack and barrel operation

Applications

- Fastening elements such as clamps, screws and washers
- Hydraulic components and connecting elements
- Fuel and brake oil lines
- Aircraft and automobile construction
- Housing parts
- Solder alloys
- Electrotechnical components
- Cadmium substitute

DIALLOY® 822

TIN-ZINC-ELECTROLYTE

TECHNICAL SPECIFICATIONS

Electrolyte characteristics		Coating characteristics	
Electrolyte type	Alkaline-cyanide	Coating	Tin-zinc
Metal content	22 g/l Sn 2.4 g/l Zn	Alloy composition	70 - 80 % Sn 30 - 20 % Zn
KCN content	30 g/l	Colour of deposit	White
KOH content	8 g/l or 15 g/l	Hardness of deposit	approx. 50 HV
pH value	> 13	Density of the coating	7.25 g/cm ³
Operating temperature	60 °C		
Current density range			
Rack	1.5 A/dm ²		
Barrel	1.0 A/dm ²		
Plating speed	0.25 µm/min at 1.5 A/dm ² 0.17 µm/min at 1.0 A/dm ²		

YOUR CONTACT

Do you have a specific question or would you like a no-obligation quote calculation?
Our specialist will be happy to help you with any technical questions you might have.



Markus Legeler
Manager Sales International

Mail: markus.legeler@eu.umicore.com
Phone: +49 (0) 7171 607 - 204

