Stannolume® WP

Sulfuric acid based bright tin

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Sustainable bright tin

Stannolume® WP

Stannolume® WP is a sustainable NPE-free sulfate-based bright tin process suitable for connectors, bus bars, and more. It can be directly plated on top of steel without the use of a nickel adhesion-promoting layer. The process is suitable for both Rack and Barrel applications. Due to the sulfuric acid-base, Stannolume® WP has a tremendous cost advantage compared to MSA-based electrolytes.

Characteristics and process features

- Bright and pure tin deposit
- Based on sulfuric acid
- Sustainable, NPE-free
- No nickel layer needed
- Cost-efficient
- Applicable in connectors

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Figure 1:
Hull Cell test process sequence

Technology in detail

Stannolume® WP consists of Make-Up, Starter, and Brightner. The process is designed for rack and barrel tools with a current density of about 1 ASD.

Stannolume® WP has a large operational window that has been extensively tested. Even larger variations of organic additives, temperatures, and applicable current densities still result in even deposits. To preserve the bright appearance it can be ideally combined with PostDip® SN.

Process sequence

The Stannolume® WP plating process starts with cleaning the sample surface using Puronon® RTR. Afterwards, the surface is activated in acid following the tin plating process. Stannolume® WP is then plated in rack or barrel applications at 16 °C (room temperature) with no agitation. The sample follows rinsing steps before being treated with a post-treatment using PostDip® SN and Protectostan® LF. These two steps clean up the tin-plated surface and protect them from discoloration. This ensures solderability even after high temperature or humidity storage.

Figure 2: Sample test with LCD and low temp.: 1 ASD, 16 °C

Figure 3: Sample test with HCD and high temp.: 3 ASD, 20 °C

Figure 4: Sample test in barrel, 0.4 ASD, 16 °C

Figure 5: Sample test in barrel, 0.6 ASD, 16 °C