

StannoPure[®] 3000 E

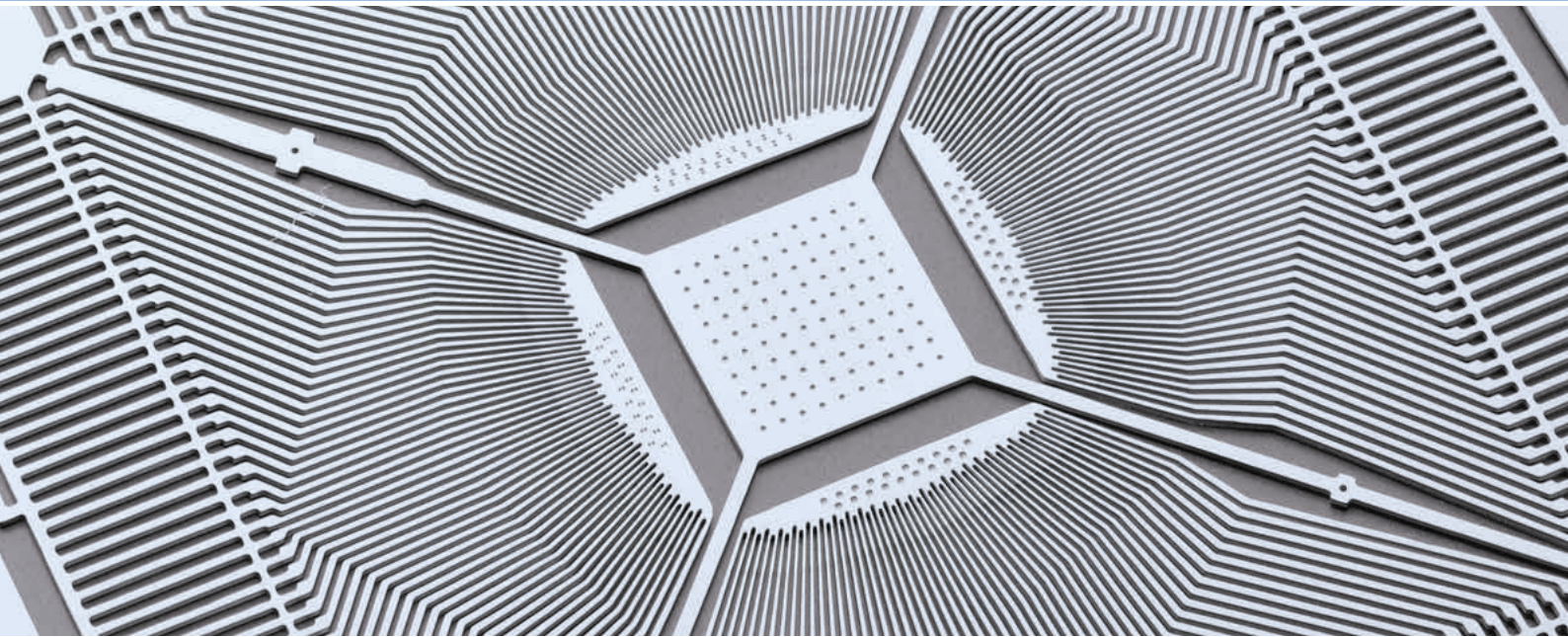
Sustainable matte tin



Electronics

Functional electronic coatings

atotech.com



High-speed matte tin process

Performance, simplicity, sustainability

StannoPure 3000 E operates with only one additive and provides an easily controlled and extremely stable process. The deposits have a lower tendency to grow whiskers compared to other electrolytes due to a unique grain structure. They also provide excellent solderability and are compatible with all lead and lead-free alloys.

StannoPure 3000 E is the sustainable alternative to our established StannoPure 3000 process and is specifically designed for continuous plating of strips, wires, connectors, and lead frames.

Features and benefits

- Simple sustainable electrolyte
- Good solderability
- No step-plating
- Even, big grains resulting in matte appearance
- No foaming and no oiling out
- For R2R and spot installations

StannoPure[®] 3000 E – Sustainable, high-speed, matte tin

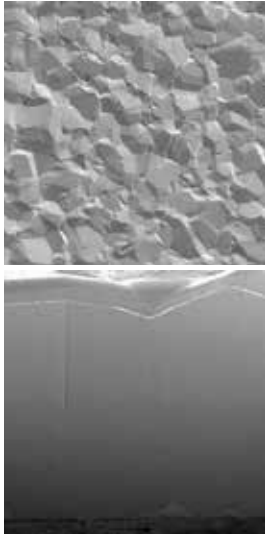


Figure 1+2:
Surface structure
Grain structure

Deposit characteristics

StannoPure 3000 E deposits exhibit a smooth surface and matte appearance. With the highest purity tin and a unique grain structure, our deposits deliver excellent solderability and tend less likely to grow whisker. During testing, these deposits exhibit exceptional characteristics, with surface roughness rated at 20 % RSAI and no step plating detected.

Additive stability and potential cost savings

StannoPure 3000 E contains only one additive. This allows for easy and simple process control. In general, StannoPure 3000 E operates at lower MSA concentrations. As a result, the total electrolyte bath life is longer than traditional processes. MKS' Atotech performs extensive tests to evaluate the bath characteristics. The results show that StannoPure 3000 E achieves high bath stability with no oil out and excellent foaming behavior.

Sustainability

StannoPure 3000 E is free of any hazardous CMR (Cancer, Mutagen, Reprotoxic) components and complies with EU Directive 2003/53/CE on NP, NPE, and Cr⁶⁺ usage restrictions. In detail, our products do not contain any BPA, PFAS, D-siloxanes, NPEs, or other critical substances. With the focus on our health, we enable a major competitive advantage to commonly used tin electrolytes that utilize CMRs.

Summary

Feature	Remark
Enabling high speed / limiting CD	Room temperature plating possible
Morphology	Smooth deposits with 20 % RSAI surface roughness
Whisker propensity	Less likely to grow whisker than competitor processes
Solderability	Exceptional through low organic inclusion
Throwing power / thickness distribution	Suited for all common lead & lead-free lead frames
Robustness / bath stability	No oil out
Easy maintenance / foam issue	No foaming issues
Running costs	Low MSA usage -> lower costs
Sustainability	Fully green product, free of CMR, complies with EU Directive 2003/53/CE on NP, NPE and Cr ⁶⁺ usage restrictions

