Niveostan® 200-E

Sustainable semi-bright tin

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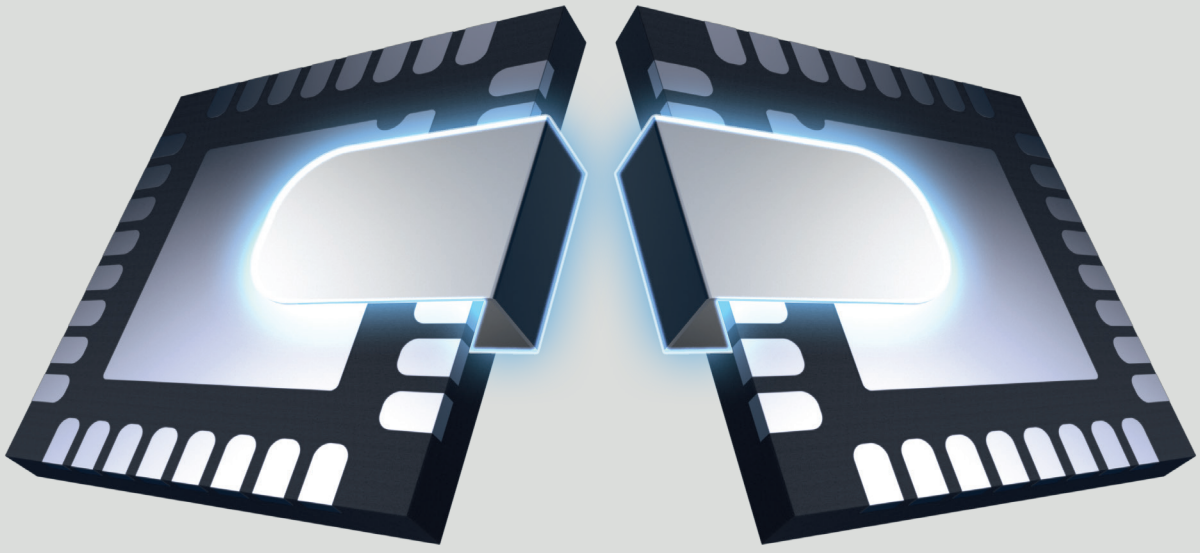

Semi-bright tin – Highest speed deposition

Performance, sustainability, simplicity

Niveostan® 200-E is a high-speed semi-bright process for tin deposition with large grains. It is developed for continuous plating of strips, wires, connectors and lead frames. The process qualifies for fastest deposition technology, reaching a deposition speed of up to 30 µm/min. Niveostan® 200-E is the sustainable alternative to our Niveostan® 200 process and contains no BPA, NPE, PFAS and other critical substances.

Features and benefits

- Exhibits low tendency towards whisker formation
- Fully sustainable solution, complies with EU 2003/53/CE
- Big grain and flat morphology
- Cost effective through lower MSA and tin concentration
- Can operate at room temperature
- Simplicity: 1 additive system

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Niveostan® 200-E – Sustainable, highest speed, semi-bright tin

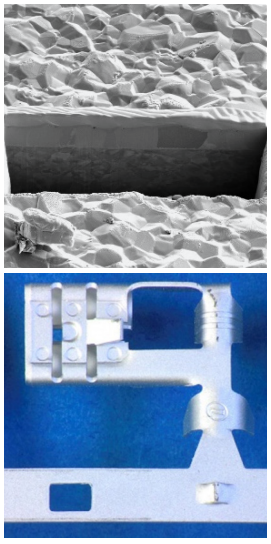

Figure 1+2:
1) FIB-Investigation
2) Plating example on connectors

Deposit characteristics

Niveostan® 200-E deposits develop a white, semi-bright appearance. In a microscopic view, a unique smooth, large-grained structure with low RSAI (Relative Surface Area Increase) is seen over the entire surface. The unique structure guarantees an exceptionally low tendency to grow whiskers and shows excellent solderability. Niveostan® 200-E also shows less discoloration than fully matte tin processes.

Additive stability and potential cost savings

Niveostan® 200-E contains just one additive. This enables an easy and simple process control using UV analysis methods. In general, Niveostan® processes run with reduced tin and MSA concentrations. Hence, the whole electrolyte exhibits a longer bath lifetime than traditional processes leading to potential savings of around 9 %.

Items	Standard Make-up	Niveostan® Make-up	Material savings per year	Cost savings per year
Tin MSA	60 g/l	50 g/l	1632 kg Tin MSA	29 K$ (18 $/kg)
MSA	190 g/l	120 g/l g/l Tin MSA	3175 kg MSA	22 K$ (7 $/kg)
Σ				**51 K$**

Parameters for the calculation:
Throughput: 132 k dm^2/month for 20 h/d; 25 d/month; 1038 strips QFN per h with 2.55 dm^2/ strip (26 x 7 cm)
Drag out: 2645 l/month or 2 ml/ dm^2
Tin MSA: 300 g/l Tin , d = 1.54 kg/l
MSA: 945 g/l , d = 1.35 kg/l