

Niveostan[®] SL-N

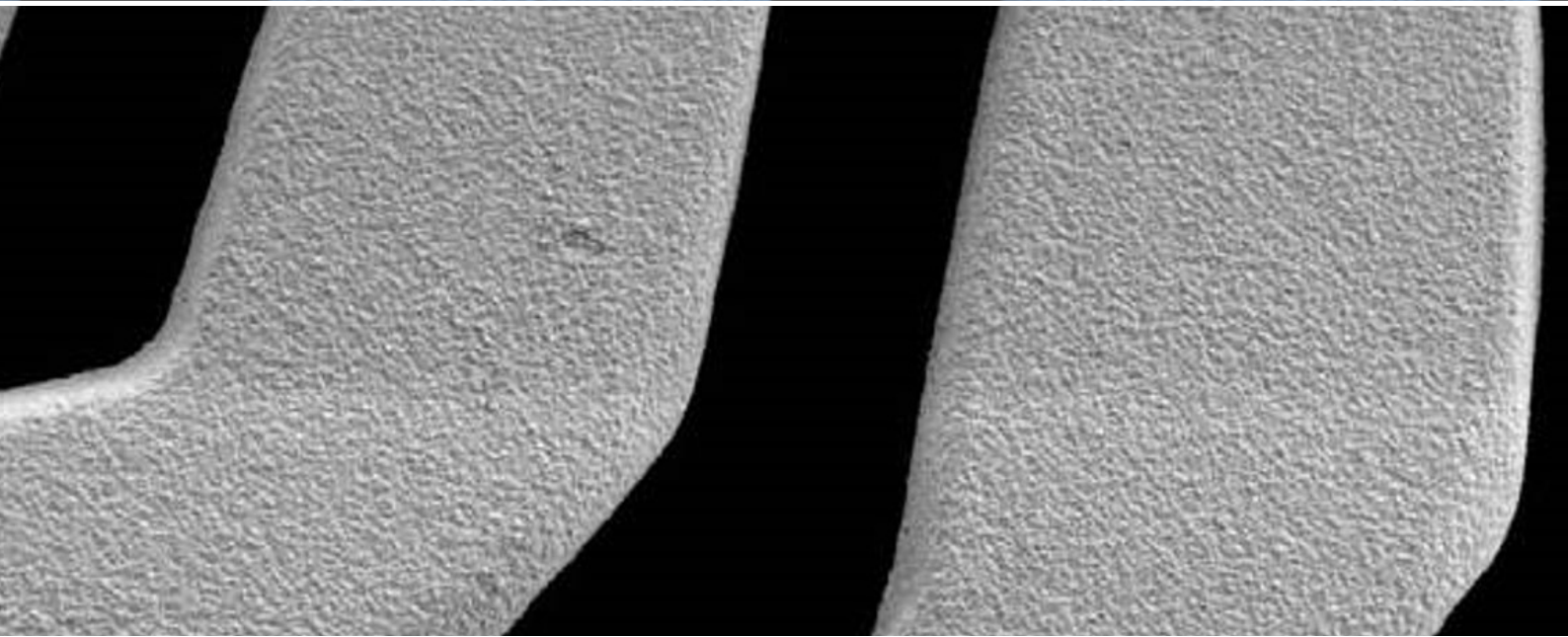
Sustainable semi-bright tin



Electronics

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Universal solution for high- and low-speed tin plating

Performance, simplicity, sustainability

Niveostan[®] SL-N is a universal tin process for the deposition of large, semi-bright tin crystals on strips, wires, connectors, and lead frames. The process is designed for broad applicability, where deposition rates from 5 – 60 ASD can be achieved. The one-additive electrolyte ensures a simple, yet powerful process. It has a strong cost advantage compared to similar competitor processes.

Niveostan[®] SL-N is the sustainable alternative to our Niveostan[®] SL series and contains no BPA, NPE, PFAS and other critical substances.

Features and benefits

- Exhibits a 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
- Simplicity: 1 additive system

Niveostan® SL-N – Sustainable, large grain, semi-bright tin

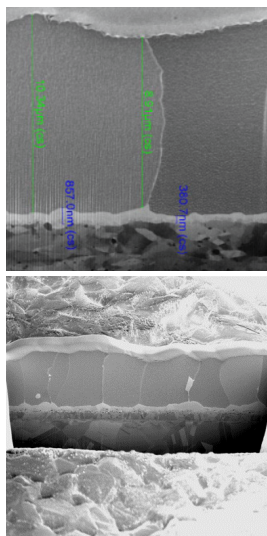


Figure 1+2:
1) Surface structure
2) Grain structure

Deposit characteristics

Niveostan® SL-N deposits show a white, silk-like, semi-bright appearance. In a microscopic view, smooth, large-grained structures with a low RSAI (Relative Surface Area Increase) are seen over the entire surface. Additionally, Niveostan® SL-N deposits show excellent solderability and are less likely to grow whiskers. These deposits maintain exceptional surface characteristics even in different plating temperatures. Ultimately, no discoloration and no change in roughness even after one year of storage are detected.

Additive stability and potential cost savings

Niveostan® SL-N 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 longer bath lifetimes 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 dm²/month for 20 h/d; 25 d/month; 1038 strips QFN per h with 2.55 dm²/ strip (26 x 7 cm)

Drag out: 2645 l/month or 2 ml/ dm²

Tin MSA: 300 g/l Tin , d = 1.54 kg/l

MSA: 945 g/l , d = 1.35 kg/l

