

# Protectostan<sup>®</sup> LF

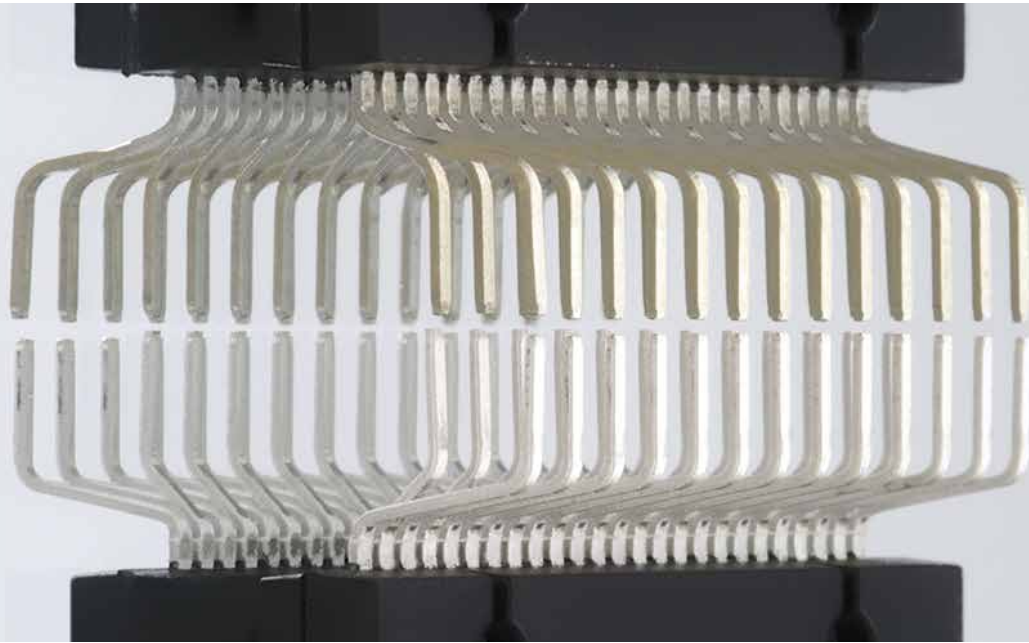
## Tin post-treatment



Electronics

Functional Electronic Coatings

atotech.com



## Unique post-treatment to mitigate corrosion whisker formation

**1h**  
at 150 °C  
Coatings not affected  
by postbaking

### Solderable and protective

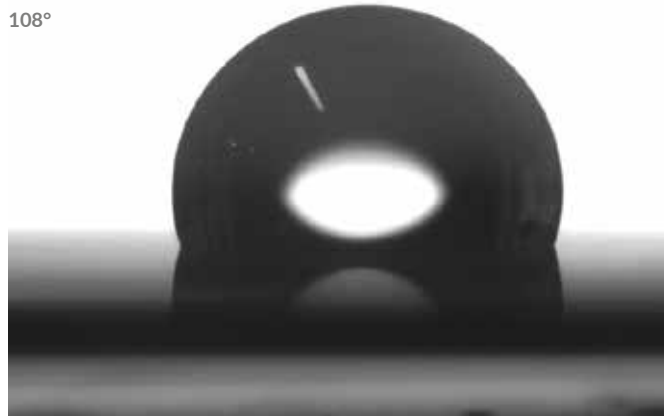
Protectostan<sup>®</sup> LF protects the plated tin and tin alloy surfaces of connectors and integrated circuits (ICs) from discoloration during heat and humidity storage conditions. Electronic components remain solderable even after long-term storage.

Protectostan<sup>®</sup> LF mitigates corrosion whisker formation. Its hydrophobic coating shields the plated tin surfaces from corrosion, thus reduces the excessive formation of corrosion whiskers after 4,000 h at 55 °C / 85% relative humidity (RH). Protectostan<sup>®</sup> LF can be easily integrated into existing plating lines. Simply use Protectostan<sup>®</sup> LF as a replacement for the commonly used alkaline tin post-treatment.

# Protectostan® LF – effective water repellent Sn post-treatment

## Protectostan® LF

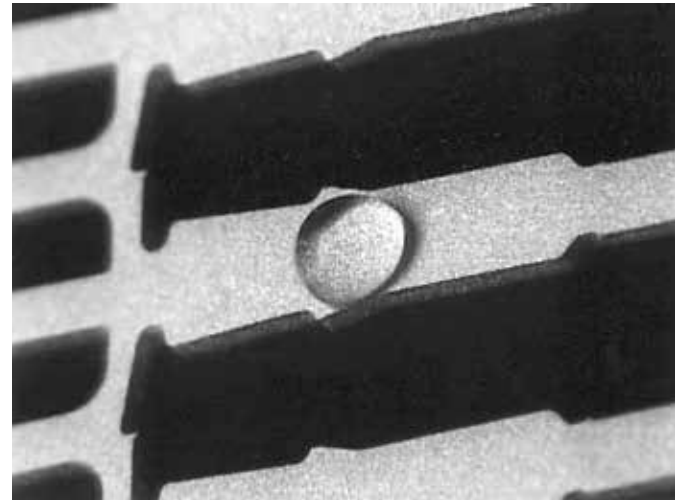
is an effective water repellent post-treatment directly applied after Tin plating. The hydrophobic nature of the surface remains intact even after storage at elevated temperatures proven by contact angle measurements.



**Figure 1:**  
Contact angle measurement on Protectostan® LF treated Sn layer after 1 h at 150 °C

## Protectostan® LF

protects the Sn layer from discoloration which often comes together with solderability issues. Electronic parts withstand elevated temperatures and storage at high humidity. It effectively reduces thereby the corrosion whisker formation and lead to longer storage times for the electronic parts.



**Figure 2:**  
Creation of a hydrophobic monolayer of Protectostan® LF on Tin

## Features and benefits

- Whisker mitigation compliant with iNEMI Jedec storage ( 4000 h at 55°C/85 % RH)
- Excellent solderability after PCT
- Withstands multiple reflow and postbaking operations
- Easy to integrate into R2R, rack and barrel
- Easy to operate at 40 °C and a pH of 2.7

