



STANNOL®

Wenn's ums Löten geht  
When it's about soldering  
Quand il s'agit du soudage

## Technical Data Sheet

# STANNOL® Solder FLOWTIN® TC300

## New Lead-Free Solder Alloy for Electronic Application

- Tin-copper alloy Sn97Cu3 with micro additives
- Melting range 227-310°C
- Good wetting properties
- Fine grain and smooth surface better than **ECOLOY® TC300** (S-Sn97Cu3)
- Reduced dissolution of substrate metal compared to **ECOLOY® TC300**
- Easy disposal – no lead containing waste

### Description

**STANNOL® FLOWTIN® TC300** has been developed to reduce the dissolution rate of copper especially for pre-tinning thin copper wires at higher temperatures of >350°C. These high temperatures have to be used to burn off the isolating copper enamel. At these high temperatures the dissolution rate of copper increases dramatically, if compared to the former used high-lead containing alloys.

### Application

When changing over to lead-free alloys, the use of high copper containing alloy **ECOLOY® TC300** (Sn97Cu3) is already an advantage, as due to the high copper contents of the alloy itself, the dissolution rate of additional copper is already reduced, compared to the standard lead-free alloys TC and TSC. Using this Sn97Cu3 with additional micro additives will again reduce the dissolution rate drastically! When changing from **ECOLOY® TC300** to **FLOWTIN® TC300** all the parameters may not be subject for changes.

The physical properties of **FLOWTIN® TC300** do not change compared to common Sn97Cu3 solder. But there are differences between **ECOLOY® TC300** and **FLOWTIN® TC300** with micro additives:

- The solder joint solidifies as fine grain metal; therefore the surface is shinier
- The dissolution of substrate metal is reduced
- The extended service life of solder baths due to smaller copper enrichment

### Cu-Wire Dissolution

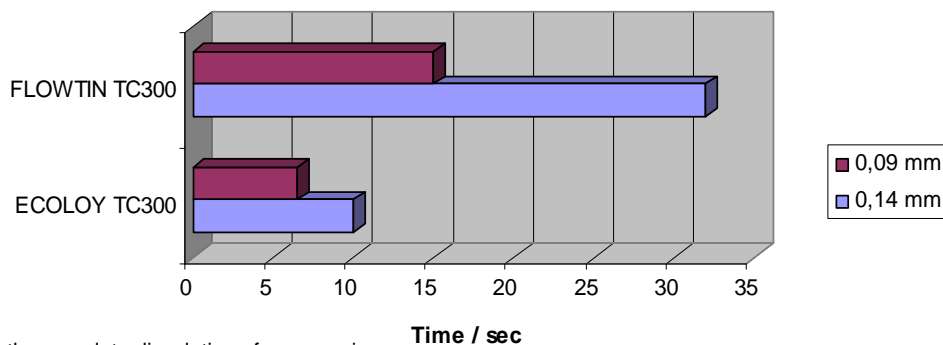


Chart 1: Time for the complete dissolution of copper wire

The above values are typical and represent no form of specification. The Data Sheet serves for information purposes. Any verbal or written advise is not binding for the company, whether such information originates from the company offices or from a sales representative. This is also in respect of any protection rights of third parties, and does not release the customer from the responsibility of verifying the products of the company for suitability of use for the intended process or purpose. Should any liability on the part of the company arise, the company will only indemnify for loss or damage to the same extent as for defects in quality.



**STANNOL**®

Wenn's ums Löten geht  
When it's about soldering  
Quand il s'agit du soudage

**FLOWTIN® TC300** with micro additives reduces the dissolution rate of copper wires und therefore decreases the reduction of the diameter of the copper wire. If dross may be an issue on static solder bath, it may be advantageous to add on a regular base lead-free Anti-Oxidation-Pellets. This keeps the surface of the solder bath clean and free of dross.

### Purity

Like S-Sn97Cu3 according to ISO 9453:2006, but with micro-additive <0.1%.

### Supply forms

Solder Wire (solid)  
Triangular bars

### Health and Safety

Before using please read the material safety data sheet carefully and observe the safety precautions described.

The above values are typical and represent no form of specification. The Data Sheet serves for information purposes. Any verbal or written advise is not binding for the company, whether such information originates from the company offices or from a sales representative. This is also in respect of any protection rights of third parties, and does not release the customer from the responsibility of verifying the products of the company for suitability of use for the intended process or purpose. Should any liability on the part of the company arise, the company will only indemnify for loss or damage to the same extent as for defects in quality.