



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

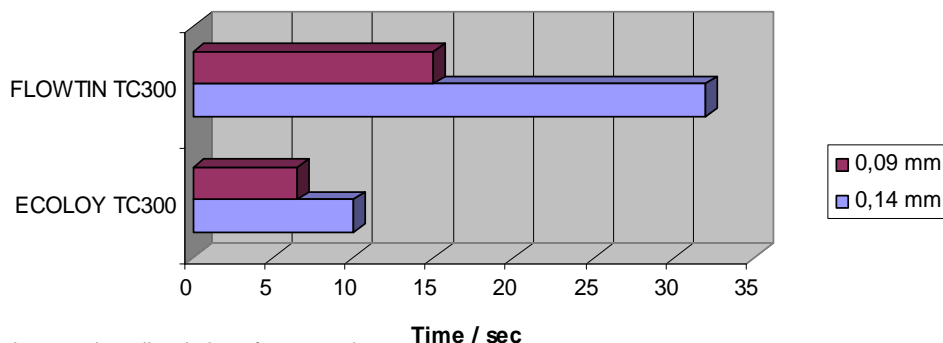


Chart 1: Time for the complete dissolution of copper wire

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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.

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