



FLOWTIN TC300

New Lead-Free Solder Alloy for Electronic Application

DESCRIPTION

Stannol Flowtin TC300 has been developed to reduce the dissolution rate of copper especially for pre-tinning thin copper wires at higher soldering 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 with standard alloys without microalloying additions as well as with high lead containing alloys.

CHARACTERISTICS

This product offers the following advantages:

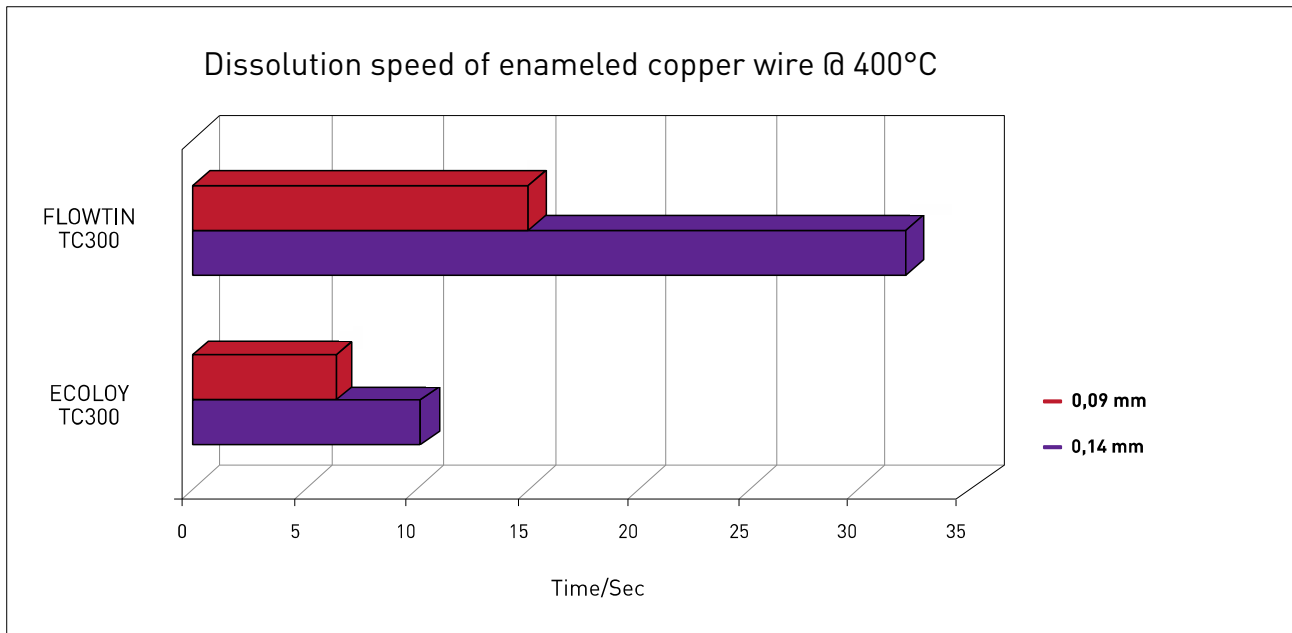
- **Tin-copper alloy Sn97Cu3 with micro additives**
- **Melting range 227-310°C**
- **Good wetting properties**
- **Fine grain and smooth surface better than Ecoloy TC300 (S-Sn97Cu3)**
- **Reduced dissolution of substrate metal compared to Ecoloy TC300**

APPLICATION

When changing over to lead-free alloys, the use of high copper containing alloy Ecoloy TC300 (S-Sn97Cu3) is already an advantage, as due to the high copper contents of the alloy itself, the dissolution rate of copper is 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 like copper wires is reduced**
- **The extended service life of solder baths due to smaller copper enrichment**
- **Longer operating time of tools at elevated solder bath temperatures**



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

Similar to S-Sn97Cu3 according to DIN EN ISO 9453, 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.

NOTICE

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.