Technical Data Sheet

LOCTITE® TTC-LF

May 2021

PRODUCT DESCRIPTION

LOCTITE® TTC-LF provides the following product characteristics:

Technology	Lead free soldering
Application	Soldering iron tip tinner

LOCTITE® TTC-LF is a speedy and effective product for cleaning and re-tinning de-wetted soldering irons that cannot be re-tinned by sponges, pads or rosin-cored solder wire. LOCTITE® TTC-LF is a small block of electronics grade lead free solder powder and flux compacted into the shape of a thick disc, applicable for both lead and lead-free applications. It is packaged in a metal container complete with lid and self-adhesive pad on the underside so that it can be readily affixed to any convenient surface.

FEATURES AND BENEFITS

- Lead-free
- Rapidly re-tins badly oxidised soldering iron tips
- Activators thermally decompose
- Minimal residues left on tip -no transfer to assembly
- Suitable for both lead-free and Sn/Pb applications
- Alloy meets international purity standards

APPLICATIONS

LOCTITE® TTC-LF should be used when soldering iron bits become oxidised and cannot be re-tinned using cored solder wire or solder and flux employed in the normal assembly process. The soldering iron should be at normal working temperature and loose debris should be wiped from its surface. It should then be wiped gently across the surface of the LOCTITE® TTC-LF to produce local melting. There is no need to use a scrubbing action or undue pressure. If the iron is too cool (<220°C), residue de-activation cannot be assured. If it is too high (>450°C) re-tinning may be impaired. After re-tinning, the soldering iron bit should be wiped as normal on a damp sponge. It will then be ready for re-use. LOCTITE® TTC-LF should not be used as a fluxing system for the regular assembly process.

TYPICAL PROPERTIES

LOCTITE® TTC-LF is a blend of electronic grade solder powder and a unique fluxing system. The flux shows very high activity to clean heavily oxidised metal surfaces such as copper and iron plated soldering iron bits. It is formulated to decompose completely into inert components when exposed briefly to soldering temperatures. The residues left after a normal bit re-tinning cycle are compatible with modern no-clean soldering processes.

CORROSION TESTS

LOCTITE® TTC-LF passes DTD 599A and BS 5625 copper corrosion tests.
The tests were carried out in the following manner:

UK Ministry of Defence DTD 599A
Non-corrosive flux for soft soldering specification-Appendix II corrosion test

Two pieces of copper foil, one 2” x 2” the other 2” x 2½” were polished with fine abrasive carborundum paper and degreased. The 2” x 2” copper square was dished and the other given a ¼” bend each side to make a 2” square “U”-shaped coupon. A sample (0.06g) of LOCTITE® TTC-LF was placed in the dished coupon and the “U”-shaped coupon was placed over the top and clamped together. The assembly was placed in a fume cupboard and shielded from draught. A small Bunsen flame was placed beneath the assembly for the minimum time to completely melt the solder alloy in the LOCTITE® TTC-LF. Immediately the test pieces had cooled they were separated and placed in a humidity cabinet 95% RH at 22°C for 24 hours. After this time, both panels were examined by x10 microscope for signs of corrosion. There was no evidence of corrosion on the lower or upper coupons.

British Standard 5625 for soft soldering fluxes
5.2 Corrosion Test on flux residues

The corrosion test on LOCTITE® TTC-LF was carried out according to the specified method. A sample (0.08g) of LOCTITE® TTC-LF was taken for each copper test panel. The test panels were heated at 235°C for the minimum time to completely melt the solder alloy and then given a dwell time of 5 seconds. After cooling the panels were conditioned at 40°C, 95% RH for 3 days. The panels were inspected under x10 microscope for signs of corrosion. There was no evidence of corrosion.

PACKAGING

LOCTITE® TTC-LF blocks have a net weight of 15g (0.5oz) and are supplied in cartons of 10.

STORAGE AND SHELF LIFE

Storage:

It is recommended to store LOCTITE® TTC-LF in a dry environment at room temperature.

Shelf Life:

The cored solder wire is classified as a non-shelf life item. Thus, no expiry date is required to be printed on the labels. However, the quality and manufacturing records for cored solder wire is only maintained no longer than 2 years from the date of manufacture. Thus, any quality feedback after that stipulated period cannot be addressed.

DATA RANGES

The data contained herein may be reported as a typical value and/or a range. Values are based on actual test data and are verified on a periodic basis.

GENERAL INFORMATION

For safe handling information on this product, consult the Material Safety Data Sheet (MSDS).

Not for Product Specifications

The technical information contained herein is intended for reference only. Please contact Henkel Technologies Technical Service for assistance and recommendations on specifications for this product.

Conversions

(°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
mm / 25.4 = inches
µm / 25.4 = mil
N x 0.225 = lb
N/mm x 5.71 = lb/in
N/mm² x 145 = psi
MPa x 145 = psi
N·m x 8.851 = lb·in
N·m x 0.738 = lb·ft
N·mm x 0.142 = oz·in
mPa·s = cP

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