



Product 370(WRAP)

March 2003

Cored Solder Wire RA Type

PRODUCT DESCRIPTION

Multicore™ 370 (formerly WRAP) solid flux for cored solder wire has been specially formulated to conform to the QQ-S-571E Type RA specification. Multicore™ 370 solid flux is our most popular flux for TV and electronics soldering in the U.S. market. It is a non-corrosive activated flux that has good activity on most surfaces.

TYPICAL PROPERTIES

Alloys:

The alloys used for 370 cored solder wires conform to the purity requirements of the common national and international standards (QQ-S-571, J-STD-006A, JIS Z 3282). A range of wire diameters is available manufactured to close dimensional tolerances.

Flux:

370 solid flux is based on modified rosin and carefully selected activators. In practice they exhibit a mild rosin odor and leave a small quantity of amber residue. Multicore 370 is available as 3 core (2% flux), and 5 core (3% flux) solder wire.

370 Flux Properties	
Acid Value, mg KOH/g	164-176
Halide Content, %	0.4
QQ-S-571E	
- Solder Spread	>90%
- Solder Pool	Pass
- Water Extract Resistivity	87000
DIN 8516	
- Area of Spread	Pass
- Corrosion F-SW31 & F-SW32	Pass
DTD599A	
- Corrosion	Pass
- Insulation Resistance	Pass

GENERAL INFORMATION

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

Directions for Use

Soldering Iron:

Good results should be obtained using a range of tip temperatures. However, the optimum tip temperature and heat capacity required for a hand soldering process is a function of both soldering iron design and the nature of the task and care should be exercised to avoid unnecessarily high tip temperatures for excessive times. A high tip temperature will increase any tendency to flux spitting and it may produce some residue darkening.

The soldering iron should be properly tinned and this may be achieved using 370 cored wire. Severely contaminated soldering iron tips should first be cleaned and pre-tinned using Multicore Tip Tinner/Cleaner TTC1, then wiped on a clean, damp sponge before re-tinning with Crystal cored wire.

Soldering Process

Multicore 370 flux cored wires contain a careful balance of resins and activators to provide amber residues, maximum activity and high residue reliability, without cleaning in most situations. To achieve the best results from Multicore 370 solder wire, recommended working practices should be observed as follows:

- Apply the soldering iron tip to the work surface, ensuring that it simultaneously contacts the base material and the component termination to heat both surfaces adequately. This process should only take a fraction of a second.
- Apply 370 cored solder wire to a part of the joint surface away from the soldering iron and allow to flow sufficiently to form a sound joint fillet – this should be virtually instantaneous. Do not apply excessive solder or heat to the joint as this may result in dull, gritty fillets and excessive or darkened flux residues.
- Remove solder wire from the work piece and then remove the iron tip.

The total process will be very rapid, depending upon thermal mass, tip temperature and configuration and the solderability of the surfaces to be joined.

The resin and flux systems are designed to leave relatively low residues and to minimize residual activity. This is achieved by ensuring some decomposition and volatilization takes place during the soldering process. In some situations, this may generate visible fuming but in all cases, rosin fumes must be removed from the breathing zone of operators.

Cleaning:

Multicore 370 flux cored solder wire has been formulated to leave amber flux residues and to resist spitting and fuming. In most industrial and consumer electronics applications cleaning will not be required and the product may therefore be used to complement a No Clean wave soldering or reflow process or to allow repairs to cleaned boards without the need for a second cleaning process. In high reliability applications the residues should be removed.

Should cleaning be required, this is best achieved using Multicore MCF800 Solvent Cleaner (separate datasheet available). There are also other commercially available saponifiers and flux residues that also work well.

Packaging:

370 solid flux for cored solder wire is available in various diameter and flux percentages, and reel sizes.

Data Ranges

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

Note

The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, **Loctite Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Loctite Corporation's products. Loctite Corporation specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.** The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Loctite Corporation patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.

**Loctite Electronics**

Henkel Loctite Corporation, 15051 E Don Julian Road, Industry, CA 91746, U.S.A.
U.S.A.: 626.968.6511 Canada: 905.814.6511 Brazil: 011.55.11.4143.7000
Loctite is a Trademark of Henkel Loctite Corp. U.S.A www.loctite.com