



Multicore[®] Hydro-X

September 2007

HIGH ACTIVITY WATER SOLUBLE CORED SOLDER WIRE

Properties of Multicore Hydro-X solid flux cored solder wires:

- **Rapid soldering of most difficult to solder parts**
- **Fast wetting**
- **Water washable, no need for added neutralisers**
- **No insoluble residues**
- **No spitting**
- **Residues must be removed**

PRODUCT RANGE

Multicore Hydro-X cored wires are manufactured with a flux content of 2%.

Multicore Hydro-X cored wires are available in a variety of alloys conforming to J-STD-006 and EN 29453 or alloys conforming to similar national or international standards. For details refer to document "Properties of Alloys used in Cored Solder Wires". A wide range of wire diameters is available.

APPLICATION

Multicore Hydro-X water soluble flux cored solder wires are suitable for use in normal hand soldering operations where the components have been assessed as being able to withstand the necessary washing procedures.

Stranded wire should not be used. Strip any insulation back so that flux residues are not trapped during the washing process.

CLEANING

It is essential that the residues from soldering with Multicore Hydro-X cored solder wires be removed as soon as possible after soldering. The residues from Multicore Hydro-X cored solder wires may be readily cleaned in conventional equipment using water. It is important that the cleanliness of boards and components is thoroughly checked after soldering and cleaning. The usual procedure is to continuously check the conductivity of the final rinse water as a measure of ionic contamination. Samples of cleaned boards should be subjected to a laboratory corrosion test, insulation resistance test, or ionic contamination assessment.

RECOMMENDED OPERATING CONDITIONS

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

Soldering process: To achieve the best results from Multicore solder wires, recommended working practices for hand soldering 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 Multicore flux 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.

Multicore flux cored solder wires provide fast soldering on copper and brass surfaces as well as solder coated materials. Activity of the halide activated versions on nickel is also good depending on the state of oxidation of the nickel finish. The good thermal stability of Multicore fluxes means they are also well suited to soldering applications requiring high melting temperature alloys

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GENERAL INFORMATION

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

Note

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