



## Features:

- Rosin based
- Fast soldering
- Pale residues
- Solders difficult surfaces
- Good spread on nickel, stainless steel, chromel, monel, constantin etc
- Heat stable – low fuming
- Mild odour

## Product Range

Multicore 309 cored wires are manufactured with a range of flux contents. Although users will normally be using products with nominal flux content of 3%.

Multicore 309 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. Alternative flux contents and alloys may be manufactured to special order.

## Technical Information

A full description of test methods and detailed test results are available on request.

**Alloys :** The alloys used for Multicore flux cored solder wires conform to the purity requirements of the common national and international standards. A wide range of wire diameters is available manufactured to close dimensional tolerances. For details refer to document “properties of alloys used in cored solder wires”.

**Flux :** Multicore 309 solid flux is based on blend of novel activators and resins. It has a mild characteristic odour and leaves a clear pale residue.

Typical Flux Properties	
Test	309
Acid value	200 mg KOH / g
Halide content	<1%
EN 29451-1 Classification	1.1.2
JSTD Classification	ROM1

## Special Properties

**Surface Insulation Resistance :** Multicore 309 flux passes the J-STD-004 SIR test and other elements of J-STD-004 test protocols associated with the flux classification ROM1.

**Electromigration Test :** Multicore 309 passes the Bellcore GR-78-CORE electromigration test.

## 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 :** Multicore cored wires contain a careful balance of resins and activators to provide clear residues, maximum activity and high residue, reliability, without cleaning in most situations. 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

**Cleaning :** Multicore 309 flux cored solder wires have been formulated to leave pale flux residues and to resist spilling and fuming.

Cleaning will not be required in most situations but if necessary this is best achieved using Multicore MCF800 cleaner (see separate technical data sheet). Other proprietary solvent or semi-aqueous processes may be suitable. Saponification may be viable but customers must ensure that the desired level of cleanliness can be achieved by their chosen system.

## Part Number Table

Description	Part Number
Solder Wire, 60/40, 0.5 mm, 250 G	509-0519
Solder Wire, 60/40, 0.7 mm, 250 G	509-0520
Solder Wire, 60/40, 1.2 mm, 250 G	509-0544
Solder Wire, 60/40, 0.7 mm, 500 G	509-0568

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