



Interflux® Electronics N.V. has developed a new cost saving high speed low melting point soldering alloy for wave and selective soldering. The new LMPA™-Q alloy is also available as a solder paste for reflow soldering. The alloy can be used with existing older equipment as well as with latest state of the art high end soldering machines. As soldering temperatures for this alloy are much lower than for traditional lead-free alloys, the soldering machines experience less stress which increases life time and reduces machine maintenance. The lower soldering temperatures also has a cost saving in electricity consumption of about 25%. The largest cost saving however could be in reducing/ switching off the nitrogen where the alloy has no need for. Soldering results are as good without as with nitrogen.

Another benefit of the reduced soldering temperatures would be in indulging the use of temperature sensitive components and PCB materials that can be damaged with current lead-free soldering temperatures. BGAs, elcoes, plastic connectors, displays, LEDs, relays, crystal oscillators, etc...all experience much less stress with the LMPA™-Q alloy.

Especially within wave and selective soldering, the soldering speed can be increased substantially in combination with perfect through hole wetting, even on thermally demanding boards and components that are known to limit throughput of the current soldering lines. The use of the LMPA™-Q alloy will in any case increase the capacity of the soldering machines and improve through hole soldering yields.

From a mechanical reliability point of view, the LMPA™-Q alloy has a shock and vibration resistance comparable to SAC and it even outperforms SAC in thermal cycling and tensile strength tests. In reflow the LMPA™-Q alloy test show soldering voiding rates are typically below 10%.

