



Activated, no-clean, lead-free solder paste

Description

IF 9009It is an activated no-clean solder paste that shows good wetting on strongly oxidized surface finishes and surfaces with poor wettability.

The solder paste does not contain any rosin resulting in less harmful fumes and less oven maintenance.

The residues after reflow are minimal and clear, they are easy to be penetrated by flying probe- and ICT-test pins. Residues can be cleaned when cleaning is desired.

IF 9009It is classified as RE L1 according to IPC and EN standards.



Products pictured may differ from the product delivered



Key properties

- Excellent wetting on surfaces with poor wettability
- Excellent wetting on strongly oxidized board finishes
- Clear residues after reflow

Availability

alloy	melting point	metal content	powder size	packaging
Sn96,5Ag3Cu0,5	~217°C	printing: ~ 88%	type 3	jars: 500g
Sn95,5Ag4Cu0,5	~217°C	dispensing: ~ 84%	type 4	syringes: 10CC/30CC
other alloys upon request			type 5 conditional	other packaging upon request





Profile recommendations for IF 9009It

In general a profile with limited soak is advised. Also ramp profiles and soak profiles are possible. Soak profiles may be used when temperature differences across a board, due to a high mix of components or large board sizes, need to be levelled out or when voids, if present, need to be decreased.

When soldering an assembly in a lead-free reflow soldering process, care must be taken not to overheat components especially when using air convection or IR ovens. It is very important to know the temperature limitations of the components used on the board. To get a good thermal mapping of the board it is advised to use thermocouples and a thermal measuring tool. Measure on small outline, big outline and temperature sensitive components. Measure on the board side near the conveyor chain, in the middle of the board and close to, or on heat sinks.

Preheat

To allow absorbed moisture in the components to evaporate slowly and avoid component cracking, keep a steady heating rate between 1-3°C/s until about 200°C. For that purpose try to avoid a hot air temperature setting in the first heating zone above 150°C.

Soak

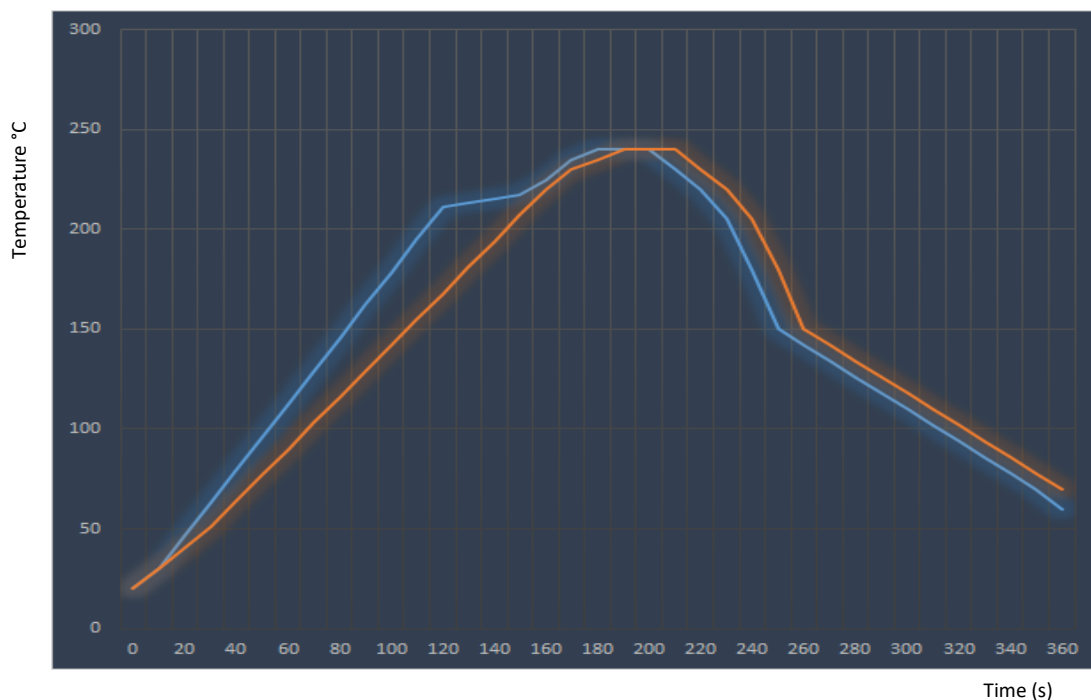
A soak zone between 200°C and 215°C for 0-90s at 0-1°C/s can be used to level out temperature differences and/or reduce voiding.

Reflow

Peak temperature used is related to component specifications. In general between 235°C and 250°C. The time in liquidus (over melting point of the alloy used) could be between 30s and 90s.

Cooling

It is advisable to cool not faster than -4°C/s because of differences in thermal expansion of different materials (component and boards). Faster cooling in general gives stronger solder joints.





Handling

Storage

Store the solder paste in the original packaging, tightly sealed at a preferred temperature of 3° to 7°C. Shelf life is 6 months.

Handling

Let the solder paste reach room temperature prior to opening the packaging. Stir well before use.

Printing

Assure good sealing between PCB and stencil. A negative print gap of 0,2 to 0,4mm is advisable. Apply no more than enough squeegee pressure to get a clean stencil. Apply enough solder paste to the stencil to allow smooth rolling during printing. Regular replenish fresh solder paste.

Maintenance

Set an under stencil clean interval which provides continuous printing quality. **ISC8020** is recommended as cleaning agent in pre saturated wipes and USC liquid.

Reuse

Avoid mixing used and fresh paste in a jar. Do not put packages back into refrigeration when already opened. Store used paste in a separate jar at room temperature. A test board before reusing in production is advisable.

Test results

Property	Result	Method
Chemical		
qualitative copper mirror	pass	J-STD-004A IPC-TM-650 2.3.32
silver chromate (Cl, Br)	pass	J-STD-004A IPC-TM-650 2.3.33
flux classification	RE L1	J-STD-004A
spread test	137,89 mm²	J-STD-004 IPC-TM-650, 2.4.46
Environmental		
SIR test	pass	J-STD-004A IPC-TM-650 2.6.3.3
Mechanical		
solder ball test after 15min	pass	J-STD-005 IPC-TM-650 2.4.43
after 4h	acceptable	J-STD-005 IPC-TM-650 2.4.43
wetting test	pass	J-STD-005 IPC-TM-650 2.4.45
slump test after 15min at 25°C	pass	J-STD-005 IPC-TM-650 2.4.35
after 10min at 150°C	pass	J-STD-005 IPC-TM-650 2.4.35



Health and safety

Please always consult the safety datasheet of the product.

Operating parameter recommendations

Printing

speed:	20—70 mm/sec
squeegee pressure:	250g—350g/cm length
U.S.C. interval:	every 10 boards
Preferred temperature range:	15 to 25°C
Preferred humidity range:	40% to 75% r.H.
Stencil life:	>8hrs

Mounting

tack time:	>4 hrs
------------	--------

Reflow

reflow profile:	linear and soak
heating type:	convection, vapour phase,...

I.C.T

flying probe testable
pin-bed testable

Cleaning

Cleaning of the paste from stencils and tools is recommended with Interflux[®] **ISC 8020**.

The post reflow residues of IF 9009It are reliable and do not need to be cleaned, however they can be cleaned if desired.

A compatibility list between Interflux[®] products and some Zestron[®], Kolb and Kyzen cleaning products is available at Interflux.

Trade name : IF 9009It No-Clean, Lead Free Solder Paste

Disclaimer

Because Interflux[®] Electronics N.V. cannot anticipate or control the many different conditions under which this information and our products may be used, we do not guarantee the applicability or the accuracy of this information or the suitability of our products in any given situation. Users of our products should make their own test to determine the suitability of each such product for their particular purposes. The product discussed is sold without such warranty, either express or implied.

Copyright:

INTERFLUX[®] ELECTRONICS N.V.

Latest version of this
document on:

www.interflux.com

