No-clean, halide free solder paste

Description

DP 5505 SnPb(Ag) is a no-clean, halide free solder paste for SnPb(Ag) alloys.

It has high resistance against moisture and elevated temperatures.

The rheology of DP 5505 SnPb(Ag) allows for very fast printing speeds, even on small apertures and is excellent for Pin in Paste applications.

The paste shows good wetting and spreading on many board finishes including OSP.

DP 5505 SnPb(Ag) is halide free providing optimal reliability after soldering.

The residues after reflow are minimal and clear, they are easy to be penetrated by flying probe- and ICT-test pins.

DP 5505 SnPb(Ag) is classified as RO L0 according IPC and EN standards.

Products pictured may differ from the product delivered

Key properties

- High stability / High abandon time
- Wide process window
- Good wetting on HASL, NiAu, OSP Cu, I-Sn, I-Ag
- Low voiding
- Low residue after reflow
- Absolutely halogen free

Availability

alloy	melting point	metal content	powder size	packaging
Sn63Pb37	~183°C	printing: ~ 88,5-90%	type 3	jars :500g
Sn62Pb36Ag2	~179°C	dispensing: ~83-85%	type 4	syringes : 10CC/30CC
ATK anti tombstone	~179°C-183°C		type 5	
other alloys upon request				other packaging upon request

Note : Not all combinations are available

S.A. INTERFLUX® ELECTRONICS N.V - Eddastraat 51 - BE-9042 Gent - Belgium
tel.: +32 9251 49 59 - fax.: +32 9251.4970
www.interflux.com - Info@interflux.com

Profile recommendations for DP 5505 SnPb(Ag)

In general a profile with limited soak is advised. Also linear 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.

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 170°C. For that purpose try to avoid a hot air temperature setting in the first heating zone above 150°C.

Soak

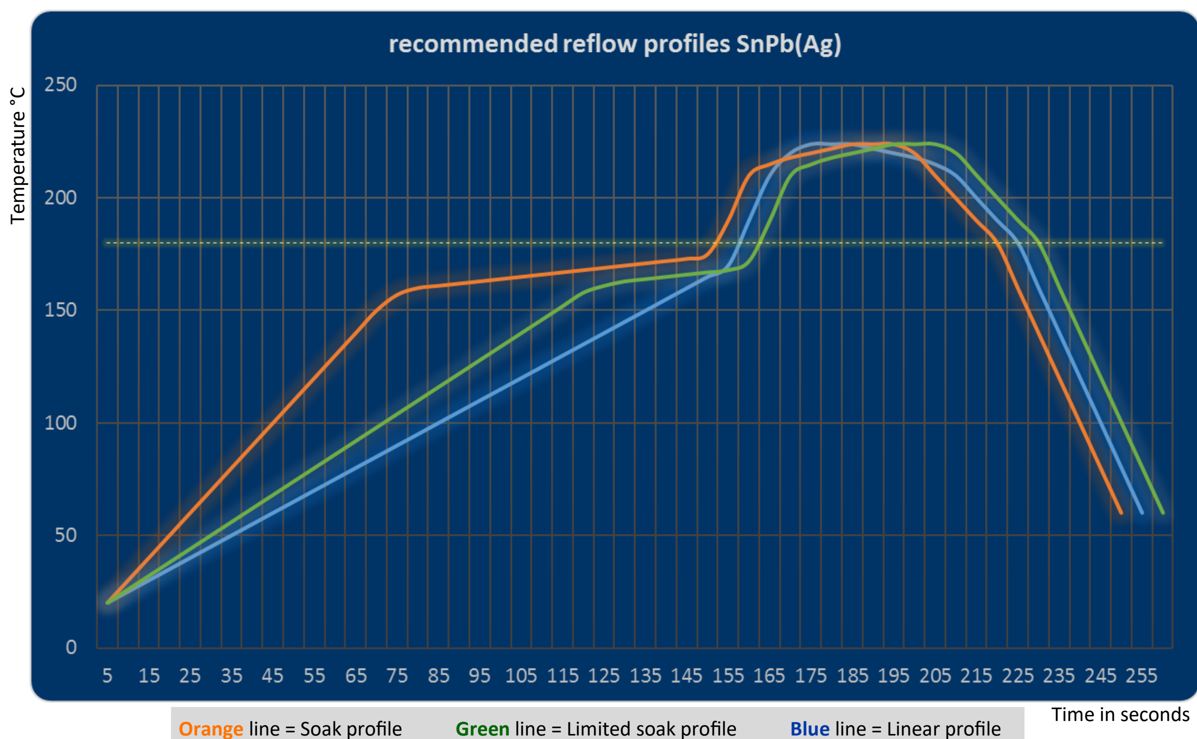
A soak zone between 150°C and 170°C for 0-90s at 0-1°C/s can be used to level out temperature differences and/or reduce voiding.

Reflow

Peak temperature used is related to component specifications. In general between 200°C and 230°C. The time in liquidus (over melting point of the alloy used) could be between 30s and 90s.

Cooling

It is advised 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.



S.A. INTERFLUX® ELECTRONICS N.V - Eddastraat 51 - BE-9042 Gent - Belgium
tel.: +32 9251 49 59 - fax.: +32 9251.4970
www.interflux.com - Info@interflux.com

ISO 9001

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
quantitative halide	**N.D.***	J-STD-004A IPC-TM-650 2.3.35
silver chromate (Cl, Br)	**pass**	J-STD-004A IPC-TM-650 2.3.33
flux classification	**RO L0**	J-STD-004A
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	**pass**	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

* N.D. = None detected, the detection limit for this test is 100ppm

S.A. INTERFLUX® ELECTRONICS N.V - Eddastraat 51 - BE-9042 Gent - Belgium
tel.: +32 9251 49 59 - fax.: +32 9251.4970
www.interflux.com - Info@interflux.com

ISO 9001

Health and safety

Please always consult the safety datasheet of the product.

Operating parameter recommendations

Printing

speed:	20—120 mm/s
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:	>18hrs

Mounting

tack time:	>8hrs

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 DP 5505 SnPb(Ag) are highly reliable and do not need to be cleaned, however they can be cleaned if desired.

Trade name : Interflux® DP 5505 SnPb(Ag) No-Clean, Halide 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

S.A. INTERFLUX® ELECTRONICS N.V - Eddastraat 51 - BE-9042 Gent - Belgium
tel.: +32 9251 49 59 - fax.: +32 9251.4970
www.interflux.com - Info@interflux.com