



Solder paste

DP 5505 SnPb(Ag)

INTERFLUX®
ELECTRONICS N.V.



Technical data DP 5505 SnPb(Ag)

Ver: 3.11 30-09-15

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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 LO** according IPC and EN standards.



Products pictured may differ from the product delivered

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Key advantages:

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

Availability

alloy	metal content	powder size	packaging
Sn63Pb37	printing: 89% - 90%	standard type 3 (25— 45µ)	500g jar
Sn62Pb36Ag2			1kg—1,2kg—1,3kg in 12 Oz. cartridge
ATK anti tombstone	dispensing: 85%	type 4 and type 5 available for certain alloys	5cc— 10cc— 30cc syringe
			Other packaging upon request



Reflow profile for SnPb(Ag) alloys

General description

In general a soak profile is advised and 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 the number of voids, if present be-

cause of material combination, need to be decreased.

When soldering an assembly in a reflow 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 conveyer chain, in the middle of the board and close to, or on heat sinks.

Profile recommendations (for SnPb(Ag) alloys)

Preheat

From room temperature until about 120°C at a rate of 1-3°C/seconds.

Higher heating rates could result in component cracking due to absorbed moisture.

Soak

Between about 120°C and 170°C, a temperature holding soak zone is often used at a rate of 0°C/s - 1°C/s to level out differences on a board. It is often used on high mix boards or to reduce voids.

Ramp up to reflow

Maximum 4°C/s because of differences in thermal expansion of different materials on the PCB

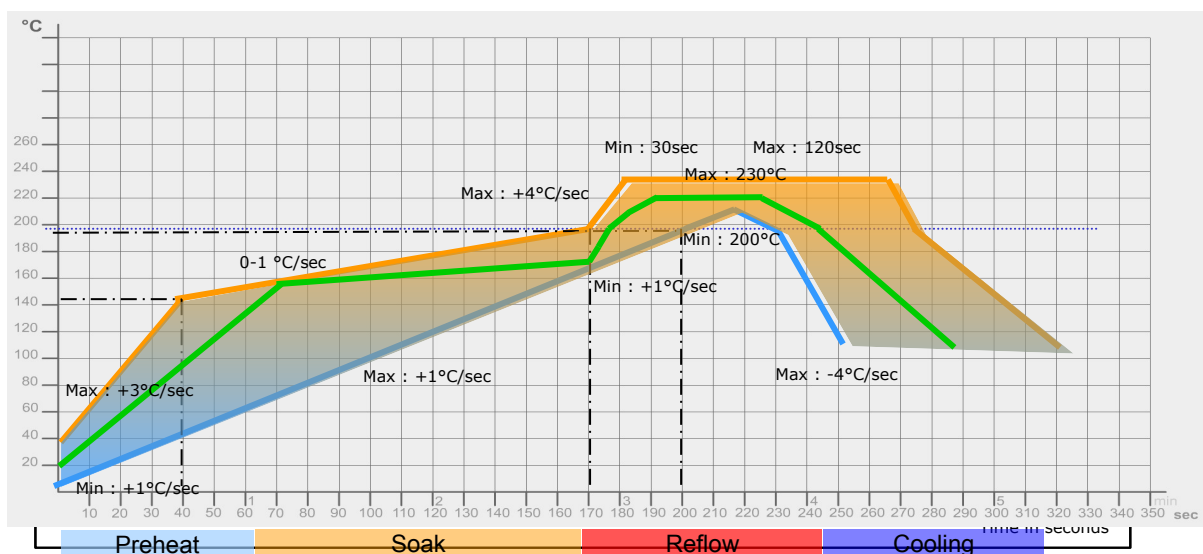
Reflow

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 45 seconds and 90 seconds.

Cooling

Cooling rate around -4°C/s because of differences in thermal expansion of different materials





Handling

Storage

Store the solder paste in the original packaging, tightly sealed at a preferred temperature of 3° to 7°C

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. 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. **IS-C8020** is recommended as cleaning agent in pre saturated wipes and USC liquid.

Reuse

Do not mix used and fresh paste. 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.

Safety

Please always consult the safety datasheet of the product.

Test results

conform IPC J-STD-004A/J-STD-005

Property	Result	Method
Chemical		
qualitative copper mirror	pass	J-STD-004A IPC-TM-650 2.3.32
halide content	0,0%	J-STD-004A IPC-TM-650 2.3.28.1
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

Property	Result	Method
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



Operating parameter recommendations

Printing
speed: 20—150 mm/sec
squeegee pressure: 250g—350g/cm
length
U.S.C. interval: every 10 boards
temperature range: 15°C to 25°C

Mounting
tack time: > 8 hours

Reflow
reflow profile: linear and soak
heating type: convection, ...

I.C.T
flying probe testable
pin-bed testable

Trade name : Interflux® DP 5505 No-Clean, Halide Free Solder Paste

D i s c l a i m e r

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