



# NO CLEAN SOLDERPASTE TYPE IF 9009<sup>lt</sup>

## 1. Description

The solder paste IF 9009<sup>lt</sup> has been especially developed to replace Rosin containing solder pastes. It has good tackiness, no slump, high stencil life and tack life. The solder paste eliminates the disadvantages of Rosin: it gives no harmful fumes and less oven maintenance, the residues after reflow are minimal and clear, they do not give flying probe or ICT contact problems.

IF 9009<sup>lt</sup> solder paste keeps its rheology characteristics during screening, resulting into a stable screen process. IF 9009<sup>lt</sup> is hydrophobic and gives no solderballing after reflow. The residues can be easily cleaned with Interflux® ICM 505 and Dr Wack cleaning medium (Zestron FA).

## 2. Properties:

- Suitable for high printing speed.
- Requires only very low squeegee pressure (increases the stencil and the squeegee life !!).
- Stencil life > 24 hours.
- Tack life > 100 hours
- Stable printing between 18 and 35°C.
- No disturbing smell.
- Excellent wetting on Sn/Pb, OSP, NiAu.
- No slump.
- Low residue after reflow.
- No In-Circuit-Testing problematic.

## 3. Standards :

**Alloys :** Sn63/Pb37 (T<sub>m</sub>=183°C)  
Sn62/Pb/Ag2 (T<sub>m</sub>=179°C)

**Powder size :** 75µ-45µ (Type 2)  
45µ-25µ (Type 3)  
38µ-20µ (Type 4)(\*)  
25µ-15µ (Type 5)(\*)

(\*) On request, adapted metal content possible

**Metal content :** 90% in weight (printing)  
(Sn62, Sn63).  
86% in weight (dispensing).  
(Sn62, Sn63).

**Packaging :** 500 gram jars  
Cartridges: 0,5 and 1 Kg  
Syringes of 5, 10, 30cc.

Proflow cassette  
PuckPack™ 800g

**Shelf life :** 6 months.

## 4. Test reports

Passes IPC J-STD-004 and J-STD-005 requirements

## 5. Application

### 5.1 Storage :

Store the solder paste in tightly sealed jars, preferably in a refrigerator at about 7°C.

### 5.2 Handling :

Ensure the paste has reached room temperature in the closed jar to prevent water condensation. Stir well before use.

### 5.3 Printing:

Apply a bead of 1-2 cm to the stencil to allow smooth roll during printing. Regularly add small amounts of fresh solder to the stencil.

### 5.4 Reflow :

Reflow can be done in air or in Nitrogen. Generally a Soak Profile (with temperature plateau at 120-150°C) is recommended for IR based ovens and a Ramp Profile (continuous temperature rise) for full convection ovens. Time above melting point in the reflow zone should be between 30 and 90 seconds, with a peak of 30 to 50°C above T<sub>m</sub>



## **6. Cleaning of equipment**

Paste removal from the stencil or screen can be done by using **Interflux® stencil cleaning wipes**. For underside stencil cleaning we advise **Interflux® Stencil Cleaner SC 01**. We advise not to use alcohol based cleaners (such as isopropyl alcohol) because they or their vapours can dry out the solder paste.

## **7. Printed boards waiting for assembly**

We advise to store printed boards that are waiting for assembly underneath an airtight cover. Cover racks with printed boards for example with a plastic bag. The solder paste can then remain in good condition for > 100 hrs.



## TEST RESULTS OF INTERFLUX® IF 9009<sup>lt</sup>

### \* Copper mirror test

Applied Standards: J-STD-004, '95  
IPC-TM-650 Method 2.3.32  
Requirement: No discoloration or removal of the Cu film  
Results: Solder paste : Passed

### \* Presence of halides in the flux (Silver Chromate test paper)

Applied Standards: J-STD-004, '95  
IPC-TM-650 Method 2.3.33  
Requirement: No colour change  
Results: Raw flux: Passed

### \* Surface Insulation test

Applied Standards: J-STD-004, '95  
IPC-TM-650 Method 2.6.3.3  
Requirement: After 24 hrs, 96 hrs and 168 hrs at 85°C, 85% R.H., with applied bias 50 V DC, must be  $1 \times 10^8$  Ohm or 100 Mohm. (Measurement with 100 VDC)  
Results: Passed

	<b><u>Board 1</u></b>	<b><u>Board 2</u></b>	<b><u>Board 3</u></b>	<b><u>Board 4</u></b>
Initial value:	$3.04 \times 10^{12}$ Ohm	$1.26 \times 10^{12}$ Ohm	$4.86 \times 10^{12}$ Ohm	$4.45 \times 10^{12}$ Ohm
24 hrs:	$1.16 \times 10^9$ Ohm	$1.09 \times 10^9$ Ohm	$1.11 \times 10^9$ Ohm	$1.80 \times 10^9$ Ohm
96 hrs:	$9.51 \times 10^8$ Ohm	$7.42 \times 10^8$ Ohm	$7.38 \times 10^8$ Ohm	$1.04 \times 10^9$ Ohm
168 hrs:	$8.41 \times 10^8$ Ohm	$5.45 \times 10^8$ Ohm	$5.33 \times 10^8$ Ohm	$8.17 \times 10^8$ Ohm

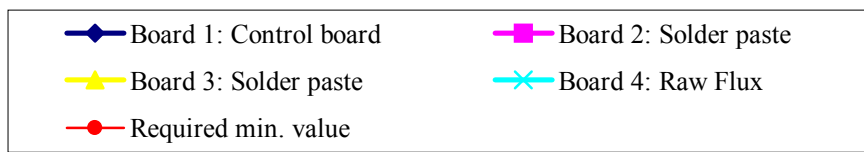
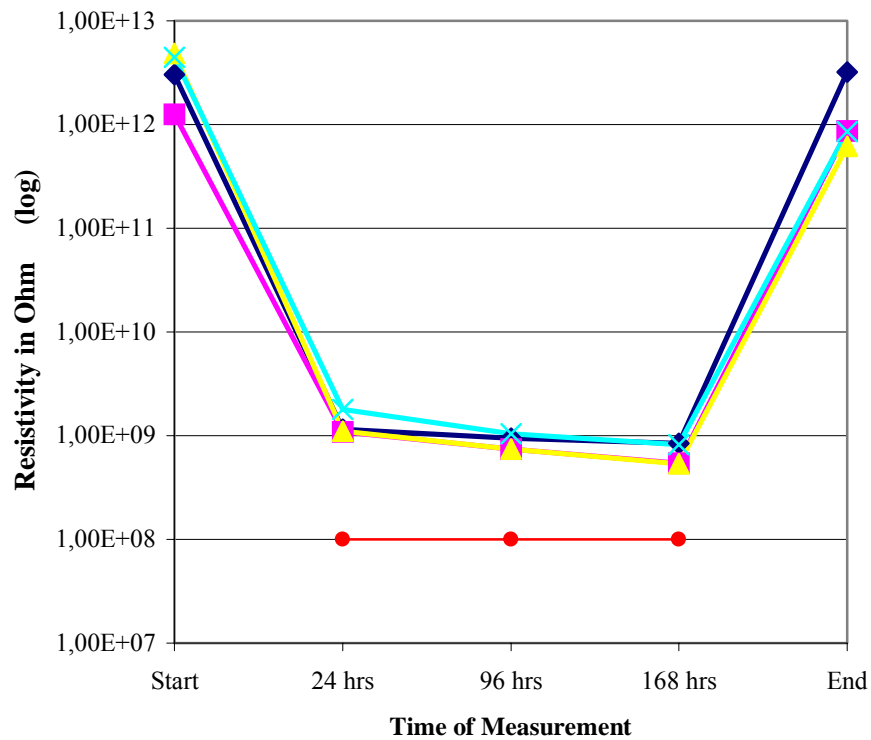
Climatic chamber cooled down, measurement after 24 hour at ambient T°.

	$3.22 \times 10^{12}$ Ohm	$8.63 \times 10^{11}$ Ohm	$6.15 \times 10^{11}$ Ohm	$8.61 \times 10^{11}$ Ohm
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Board 1 Control Board  
Board 2 Solder paste Rampprofile : 165°C - 190°C - 200°C - 415°C - 400°C 0.4 m/min  
Board 3 Solder paste Rampprofile : 165°C - 190°C - 200°C - 415°C - 400°C 0.4m/min  
Board 4 Pure Flux



**INTERFLUX® SOLDER PASTE  
IF 9009It**





**\* Solder ball test**

Applied Standards: J-STD-005, '95  
IPC-TM-650 Method 2.4.43  
Requirement: Reflow within 15 minutes  
Reflow after 4 hours  
Results: Reflow within 15 min.: Preferred  
Reflow after 4 hrs: Acceptable

**\* Wetting test**

Applied Standards: J-STD-005, '95  
IPC-TM-650, Method 2.4.45  
Requirement: Shall uniformly wet the Cu coupon without evidence of dewetting or non wetting  
Results: Passed

**\* Spread test**

Applied Standards: J-STD-004, '95  
IPC-TM-650, Method 2.4.46  
Requirement: Solder spread is expressed in mm<sup>2</sup>  
Results: 137.89 mm<sup>2</sup>

**\* Slump test**

Applied Standards: J-STD-005, '95  
IPC-TM-650, Method 2.4.35  
Requirement: 15 min. at 25°C, 50% R.H. and 10 min. at 150°C, no slump effect or bridging may occur.  
Results: After 15 min. at 25°C, 50% R.H.: Passed  
After 10 min at 150°C: Passed

**\* Metal content**

Applied Standards : J-STD-005, >95  
IPC-TM-650, Method 2.2.20  
Requirement : Expressed in %  
Results : 90% (Printing)  
86% (Dispensing)

**\* The solder powder**

Only high quality solder powders are used.  
A certificate of analysis is available on request, including the particle size distribution.

For more information about health and safety we refer to our MSDS.

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