



BGA gel flux IF 7500HAB

INTERFLUX®
ELECTRONICS N.V.



Technical data IF 7500HAB

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No-clean, halide free tacky gel flux

Description:

Interflux® IF 7500HAB is a no-clean, halide free tacky gel flux with increased activity.

The flux provides resin-like rheological properties.

The **IF 7500HAB** can be applied by printing, dispensing, dipping or by brush.

The **IF 7500HAB** gel flux is compatible with both lead-free and lead containing alloys.

The flux exhibits excellent wetting on virtually all surface finishes including OSP, NiAu, I-Sn...etc.

The residues are minimal and transparent and do not require any cleaning.



Products pictured may differ from the product delivered

Physical and chemical properties:

| | |
|----------------|-----------|
| State | : viscous |
| Colour | : yellow |
| Odour | : mild |
| Halide content | : none |
| pH (5% aq.sol) | : 3 |
| IPC/ EN | : RO M0 |

Physical and chemical properties

IF 7500HAB

| | |
|---------------------|---------------|
| Flash point | 160 °C |
| Solubility in water | insoluble |
| Auto-ignition point | > 204 °C |
| Specific gravity | 1,014 g/ml |
| Viscosity at 20 °C | ± 200.000 cPs |



More information:

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Key advantages:

- Increased activity
- True halogen free
- Classification to IPC and EN: **RO M0**
- Excellent wetting on I-Sn, Ni/Au, OSP, Ag/Pd



Reflow profile

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 because of material combination, need to be decreased.

When soldering in air the profile's peak temperature should occur within a frame time of maximum 300sec or 5 minutes from the profile's starting point.

The correct conveyor speed (m/min) can be calculated by dividing the total chamber length (m) of the heating zones by the desired process time (min). Soldering under nitrogen has fewer

limitations.

When soldering an assembly in a lead free solder 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.

Profile recommendations SnPb and SnPbAg alloys

Preheat

From room temperature until about 170°C at a rate of 1-3°C/s. Higher heating rates could result in component cracking due to absorbed moisture.

Soak

Between about 120°C and 170°C, a soak

zone is often used at a rate of 0°C/s - 1°C/s for 20-90s to level out temperature differences on a board 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

Profile recommendations SAC and SnCu alloys

Preheat

From room temperature until about 200°C at a rate of 1-3°C/s. Higher heating rates could result in component cracking due to absorbed moisture that evaporates too fast.

Soak

From 180°C to about 215°C at a rate of 0-1°C/s.

In some cases a soak zone is used to level out temperature differences on a board or to reduce voids. A 20-90s soak between 200°C and 215°C is

often being used for this purpose.

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

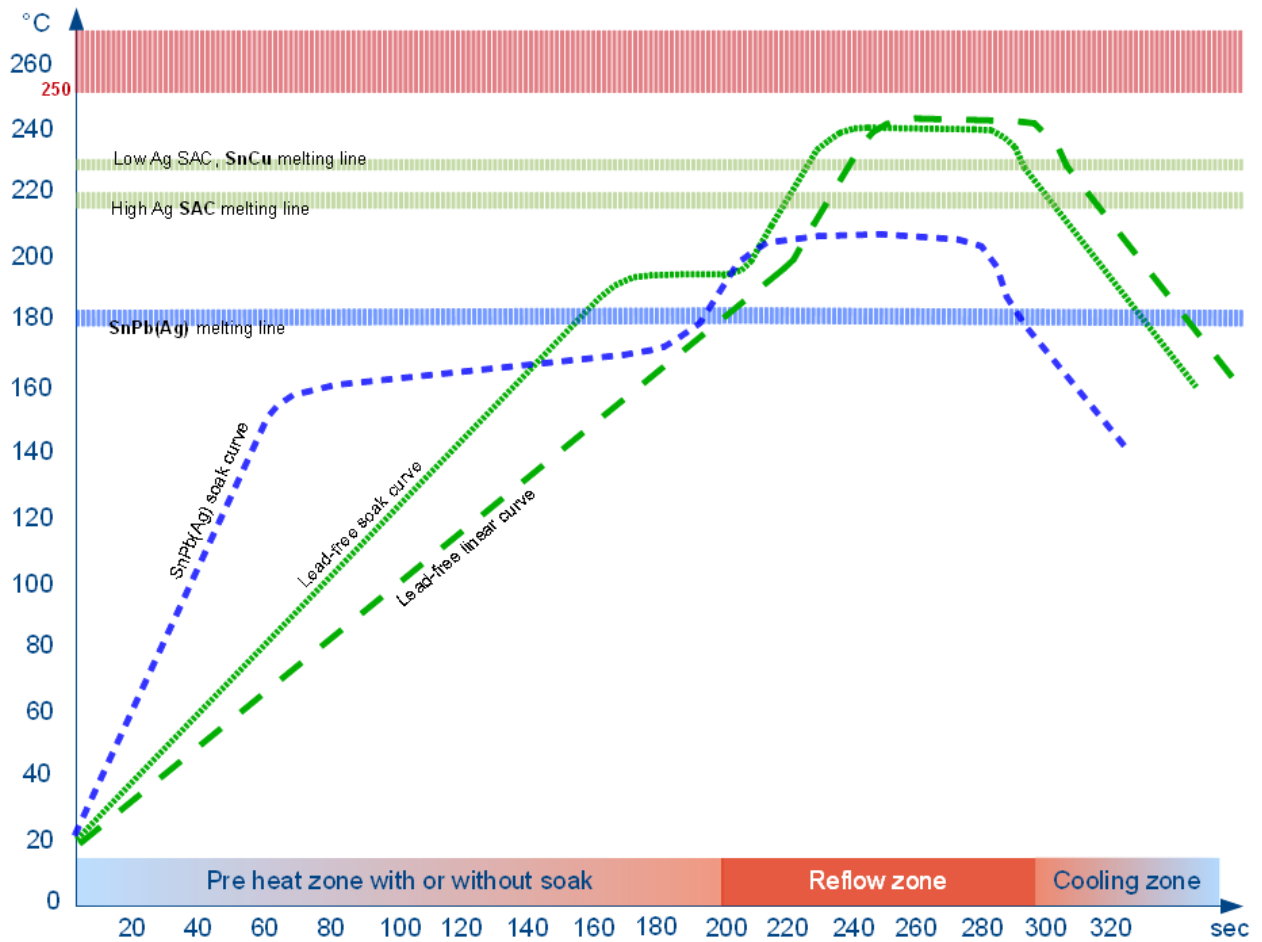
used) could be between 45s and 90s.

Cooling

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



Recommended profile examples





Test results

conform EN 61190-1-2(2002) and IPC J-STD-004A

| Property | Result | Method |
|--------------------------|-------------|-------------------------------|
| Chemical | | |
| copper mirror | pass | J-STD-004A IPC-TM-650 2.3.32 |
| qualitative halide | | |
| silver chromate (Cl, Br) | pass | J-STD-004A IPC-TM-650 2.3.33 |
| acid value by titration | 45,5 | mg KOH/g |
| Environmental | | |
| SIR test | pass | J-STD-004A IPC-TM-650 2.6.3.3 |

Packaging:

The **IF7500HAB** is available in the following packaging:

- 5cc syringe with and without plunger
- 10 cc syringe with and without plunger
- 30 cc syringe with and without plunger
- 30 cc jar with brush

Trade name: **Interflux® IF 7500 High Activated BGA Gel Flux**

D i s c l i m e r

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