No residue™ flux
IF **2005M**

INTERFLUX® ELECTRONICS N.V.

Technical data IF 2005M

Ver: 3.12 15-01-16

RoHS compliant

No clean, halide free, No residue™ soldering flux

Description:

Interflux® IF 2005M is a low solids no-clean flux, designed to evaporate during the soldering process. This means also the safest no-clean flux for high-tech circuits.

With no rosin or resin to create a sticky residue, there is nothing left after wave soldering to foul test pins or prevent electrical contact. Machine and carrier pollution is very little compared to other fluxes.

This halide free flux meets all Bellcore and IPC requirements and is QPL- listed (approved to MIL-F-14256F). It is formulated to provide the best combination of solderability, ease of processing and reliability. Great solderability on HAL, Ni Au, I-Sn, I-Ag and OSP coated PCB's.

IF2005M works great with lead-free alloys. It is resistant to elevated preheating temperatures, and to a long wave contact time with a higher working temperature.

The flux has very high compatibility with conformal coatings.

The IF 2005M is classified OR/L0 per IPC J-STD-004.

IF 2005M is also available in refillable flux pens for hand soldering.

Products pictured may differ from the product delivered

Physical properties

Appearance	Clear colourless liquid
Solid content	1,85% ± 0,15
Density at 20°C	0,807—0,809 g/ml
Water content	3-4%
Acid number	14 – 16 mg KOH/g
Flash point T.O.C	15°C (59°F)

More information:

Key advantages:

- QPL listed
- Absolutely halide free
- For lead-free and SnPb soldering
- No residue™ technology
- Very high compatibility with conformal coatings
- High stability in foam fluxing

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Application of the flux

The IF 2005M is designed to be applied by means of a variety of different systems.
1. Foam fluxing:
To ensure good foaming, the level of flux needs to be at least 2—3 cm over the porous flux stone. The use of an air knife is imperative.
2. Spray fluxing:
It is advised to use a double spray stroke during fluxing, whenever possible and to keep the flux pressure low. The nozzle traverse speed is set to a value which ensures that every point on the board is sprayed twice, (once from each side). Resulting in a 50% overlap on the spray pattern. This will give the most uniform spray pattern coverage. Spray pattern coverage can be checked by passing a piece of cardboard through the spray fluxer. Remove it before the pre heat unit. Additionally the spray fluxer settings need to be checked by passing a glass plate or empty circuit board through the fluxer. Remove it from the machine before it reaches the pre heater unit and check it on flux quantity. There may be no drops present. Drops are a sign of excessive flux and are difficult to evaporate. Reduce the flux amount until defects typical for a too low flux amount like, webbing, flagging, shorts and icicles are observed. From this point increase the flux level again until defects disappear.
3. Flux pen:
For rework and hand soldering operations

Preheating

The recommended preheat temperature measured on the topside of the boards is 80°C-130°C.

The flux can have lower preheating T° as long as the solvent is evaporated before wave contact.

Avoid hot air convection pre heater settings above 150°C

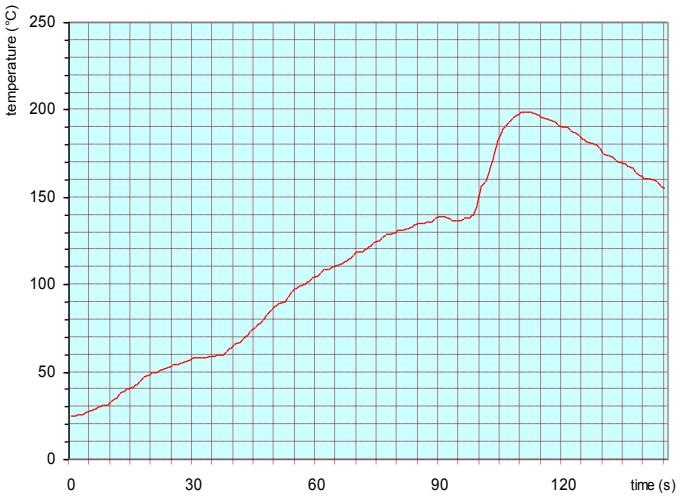
Preheat slope:
typical: 1,5°C/s
min: 1,0°C/s
max: 2,5°C/s

Wave contact

Typical wave contact or dwell time value is 3-4s when using a single solder wave. For double wave soldering systems the values will be 1-2s for the first wave and 2-4s for the second wave. Lower total dwell time limit is 2s.

Solder wetting can be optimal at lower contact times however longer contact times are recommended to provide total flux wash off from the boards. The maximum upper limit will be determined by the level of shorts and physical limitations of the board and components.

OSP finished boards can benefit with enough flux, lower preheat temperatures and high solder pressure on the (first) wave to get good through hole filling.



T° measured on the topside of the PCB on a lead-free wave soldering machine.

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Handling

Storage

Store the flux in the original packaging, tightly sealed at a preferred temperature of +5° to +25°C

Safety

Please always consult the safety datasheet of the product.

Density control

The density of the IF 2005M flux shall be checked using a suitable density meter, the value showed by the density meter should be compared, after temperature compensation, with the value in the IF 2005M density table and may only be adjusted with the T 2005M accordingly.

Titration check

The solids content value of the IF 2005M flux can be determined by titration. The liquids for titration are available at Interflux. Adjustments of the solid content may only be done by using T 2005M conditioner.

Reuse

Do not mix used and fresh flux.

Test results

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

Property	Result	Method
Chemical		
Flux designator	**OR L0**	J-STD-004B
Qualitative copper mirror	**pass**	J-STD-004B IPC-TM-650 2.3.32
Qualitative halide		
Silver chromate (Cl, Br)	**pass**	J-STD-004B IPC-TM-650 2.3.33
Quantitative halide	**0,00%**	J-STD-004B IPC-TM-650 2.3.35
Environmental		
SIR test	**pass**	J-STD-004B IPC-TM-650 2.6.3.7
Qualitative corrosion, flux	**pass**	J-STD-004B IPC-TM-650 2.6.15
Electro(chemical) migration	**pass**	Bellcore GR-78-CORE section 13.1.4
Electro(chemical) migration	**pass**	Siemens ZT

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Packaging:

IF 2005M is available in the following packages:

10 litres polyethylene drums
25 litres polyethylene drums
200 litres polyethylene drums

Trade name : IF 2005M No-Clean, Halide Free Soldering Flux

D i s c l a i m e r

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.

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