



No residue™ flux IF 2005M

INTERFLUX®
ELECTRONICS N.V.



Technical data IF 2005M

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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.

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.

Interflux® IF 2005M is made to work well in foam fluxers, while

also being compatible with spray and wave fluxing equipment. It has a longer pot life in the foam fluxer than synthetic fluxes, making it the most cost-effective choice for no-clean soldering.

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

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



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Key advantages:

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

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)



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, when-

ever 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 top-side 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

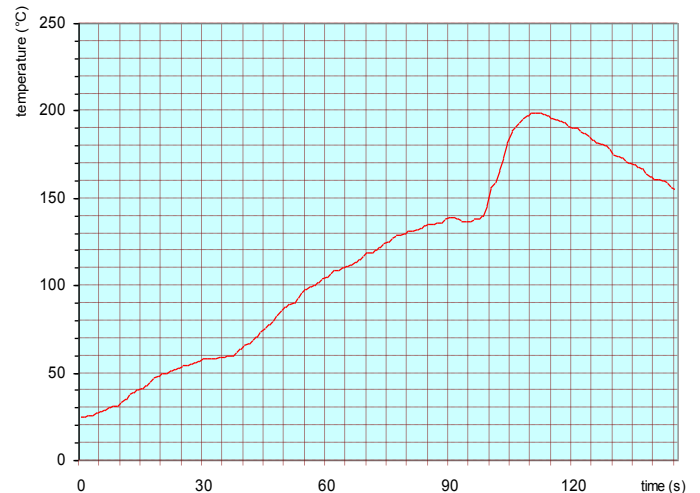
OSP finished boards can benefit with enough flux, lower preheat temperatures and high solder

pressure on the (first) wave to get good through hole filling.

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



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

limitations of the board and components.



Handling

Storage

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

temperature compensation, with the value in the IF 2005M density table and may only be adjusted with the T 2005M accordingly.

may only be done by using T 2005M conditioner.

Reuse

Do not mix used and fresh flux.

Density control

The density of the IF 2005M flux shall be checked using the IF density meter, the value showed by the density meter should be compared, after

Titration check

The solids content value of the IF 2005M flux shall be determined by using the Titration Kit for IF 2005M. Adjustments of the solid content

Test results

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

Property	Result	Method
Chemical		
Flux designator	OR LO	J-STD-004A
Qualitative 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
Quantitative halide	0,00%	J-STD-004A IPC-TM-650 2.3.35
Environmental		
SIR test	pass	J-STD-004A IPC-TM-650 2.6.3.3
Qualitative corrosion, flux	pass	J-STD-004A IPC-TM-650 2.6.15



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 i m e r

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