OSPI 3311M

No-clean, halide free soldering flux for OSP

Description:

Interflux® OSPI 3311M is a no-clean flux that especially has been developed for high volume soldering of OSP-boards that have passed one or more reflow processes.

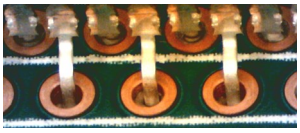
OSPI 3311M is an optimised version of OSPI 3311 for residue formation and odour.

Most OSP-finishings will degrade quickly after reflow, making (through hole) wetting in wave or selective soldering a challenge, especially with lead-free alloys.

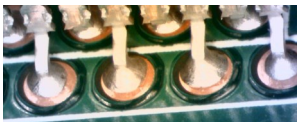
The elements of OSPI 3311M have been carefully chosen to promote (through hole) wetting on these degraded OSPs, especially with high conveyor speeds and low preheat temperatures.

Moreover, the flux is absolutely halogen free and has been designed to be safe and reliable.

OSPI 3311M meets IPC requirements.



Conventional flux on degraded OSP



OSPI 3311M on degraded OSP

Products pictured may differ from the product delivered

RoHS compliant

Click for Interflux' ecological profile

Key properties

- Very good wetting on degraded OSP
- For high volume productions
- High conveyor speeds possible
- Absolutely halogen free
- For SnPb and lead-free alloys
- Reduced residue formation
- Reduced odour

Physical and chemical properties

Appearance	Clear colourless liquid
Solid content	5.3% +/- 0.5%
Halide content	0.00%
Density at 20°C	0.825 g/ml ±0.01
Acid number	42 mg KOH/g ±5
Odour	Alcohol
IPC/EN	OR/L0

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Through hole filling

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.

Applying the flux

Spray fluxing: It is advised to use a double spray stroke during fluxing, whenever possible and to keep the flux air 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 preheat 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.

Preheating

The flux has been designed to perform well on low preheating settings. The recommended preheat temperature measured on the topside of the boards is 80°C-100°C (176°-212°F) . Higher preheating is possible for electronic units with high thermal mass. More preheating can promote through hole wetting on these units but beware not to exhaust the flux. The flux itself has no lower limit for the preheating but the solvent should be evaporated before wave contact.

Preheat slope: 1-3°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 typical values are 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 facilitate total flux wash off from the boards. The maximum upper limit will be determined by flux exhaustion and physical limitations of the board and components. Indications for flux exhaustion are bridging, icicling, webbing,…

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Test results

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

Property	Result	Method
Chemical		
Flux designator	**OR L0**	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 2.3.33D
Spot test (F)	**pass**	J-STD-004A IPC-TM-650 2.3.35.1A
Quantitative halide	**0,00%**	J-STD-004A IPC-TM-650 2.3.35C
Environmental		
SIR test	**pass**	J-STD-004A IPC-TM-650 2.6.3.3B

Handling

Storage

Store the flux in the original packaging, tightly sealed at a preferred temperature of +5° to +35°C

Safety

OSPI 3311M is flammable. Please always consult the safety datasheet of the product.

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Packaging

OSPI 3311M is available in the following packages:

1L HDPE bottle

10L and 25L HDPE drums
200L HDPE barrel

Other packaging available upon request.

Trade name : OSPI 3311M No-Clean Soldering Flux

Disclaimer

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