



VOC free soldering flux PacIFic 2009MLF-E

INTERFLUX®
ELECTRONICS N.V.



Technical data 2009MLF-E

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VOC free, No-clean and halide free soldering flux for spray applications

Description:

PacIFic 2009MLF-E is developed to combine low residue levels with minimal micro solder ball formation. It is an optimized version of the PacIFic 2009MLF.

Conventional VOC-free fluxes may give more solder balling than alcohol based fluxes on micro ball sensitive solder masks. PacIFic 2009MLF-E **minimises micro solder balling** on these solder masks. The flux will leave less residue after soldering, while maintaining its micro solder ball reducing properties.

PacIFic 2009MLF-E is absolutely halogen free. The flux allows a change over from alcohol based fluxes to water based fluxes with absolutely no disadvantages.

PacIFic 2009MLF-E is perfectly suitable for lead-free soldering and is typically applied by spray-fluxing.



Physical and chemical properties:

Density at 20°C	: 1.00 g/ml ± 0.01
Colour	: clear
Odour	: sweet
Solid content	: 3.6% ± 0.2
Halide content	: none
Flash point (T.O.C)	: n.a.
Total Acid Number	: 25 mg KOH/g ± 2
IPC/ EN	: OR/ L0

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Why VOC-free?

- ▶ No more risk of fire caused by flux inflammation
- ▶ No more Volatile Organic Compounds emission caused by flux evaporation
- ▶ No more irritating alcohol smell in your production caused by flux evaporation
- ▶ No more use of flux thinner
- ▶ No checking of flux quality needed
- ▶ Improvement in solder ability and cleanliness
- ▶ Lower flux transport, storage and insurance costs

Key advantages:

- Absolute halide free
- 100% water based
- Resists high temperatures
- Practically odourless
- Improved through hole filling

Avoiding micro solder balls

More flux will give less solder balls.

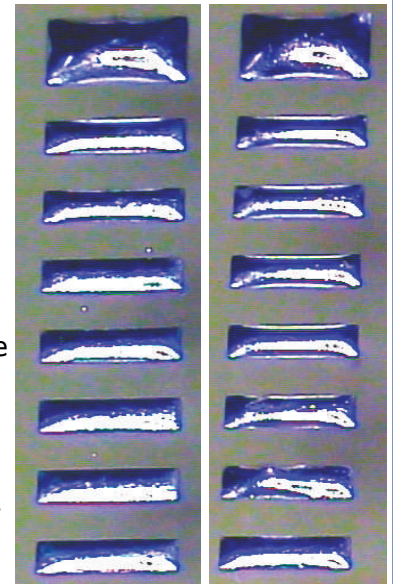
More flux gives also more residues, so an optimal spray volume has to be determined. Because the main cause of solder balling is the solder mask, this optimal spray volume can vary a bit from solder mask to solder mask.

Check the spray pattern by passing a card

board through the machine. The card board must equally be wetted by the flux. If not, adapt your lateral spray speed, spray pitch or spray volume until you get an even wetting of the flux.

To check good top side wetting of the flux, apply some flux to the through hole components on top of the board with a spray bottle or brush and

compare the through hole wetting results with your original results. If there is a difference, your spray fluxer settings will have to be adapted. You can either bring the fluxer closer to the board, give more flux, spray slower or give more air pressure. If none of the above works, contact INTERFLUX® Electronics.



Left: micro solder balls on conventional VOC-free flux
Right: 2009MLF-E

Preheating

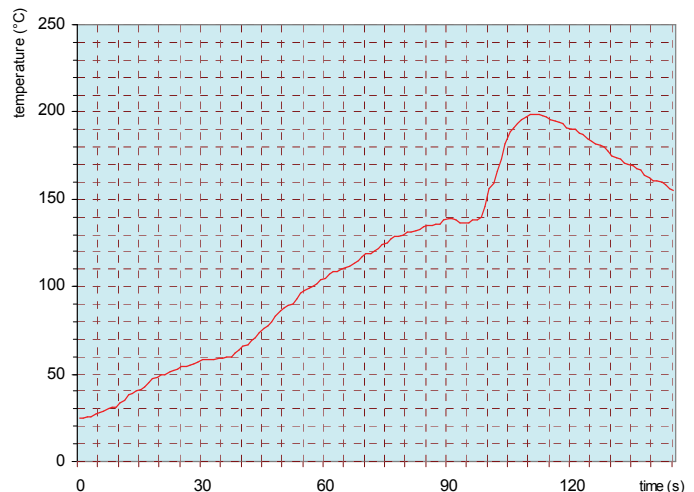
All water should be evaporated from the boards before hitting the wave.

The recommended preheat temperature measured on the top-side of the boards is 85°C-160°C.

Avoid hot air preheating settings above 150°C

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

“All water should be evaporated before hitting the wave”



Wave contact

Typical wave contact or dwell time value is 4,5s when using a single solder wave. For double wave soldering systems the values will be, 2s for the first wave and 3,5s for the second wave. Lower total dwell time limit is 2s. Solder wetting can

be optimal at this value 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.



Packaging:

PacIFic 2009MLF-E is available in the following packages:

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

D i s c l a i m e r

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