



TECHNICALLY SPEAKING

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Using Chemask[®] Solder Masking Agent when Conformal Coating

Each month, we have many questions dealing with our Konform[®] SR and Konform[®] AR Conformal Coatings and I want to talk briefly about one particular issue.

When coating their PCBs with Konform AR or SR, many customers use Chemask Peelable Spot Mask, to mask gold finger connectors and any other surfaces they don't want the conformal coating to cover. However, they encounter problems when removing the peelable mask after the conformal coating has completely cured. In dipping or spraying the boards with conformal coating, they over-spray the coating onto the mask. When they peel off the mask, they lift the edge of the conformal coating layer or peel the coating layer completely off the board! They see this as a failure of the conformal coating to adhere to the PCB, but this is not the case!

First apply the Chemask masking agent and allow it to cure completely, usually 30 minutes at room temperature, before applying the conformal coating to the masked board. If they coat uncured Chemask with conformal coating, the mask will not cure all the way through. When the mask is peeled away, only the top, cured layer will come off, leaving behind a partially cured, sticky residue that is hard to remove. Check that the applied Chemask layer is completely cured by sticking it with a pin and noting if any liquid mask sticks to the pin or oozes out of the pinhole.

Once the Chemask has dried completely, dip or spray the board with Konform. Allow the conformal coating to dry for about ten to fifteen minutes. Then, just before the coating starts to become tack-free, remove the Chemask. The edge of the conformal coating layer should still be liquid enough to separate from the mask without lifting from the board, but firm enough to maintain a sharp edge, without flowing. The Chemask will then peel off without lifting the edge of the coating layer or peeling the coating layer from the board.

Konform Conformal Coating products are used in many different locations, each with its own conditions of humidity and temperature. Each user will have to determine the best length of time to allow the Konform to dry, before Chemask can be removed without removing any of the coating. Taking time to develop this technique will eliminate any problems with the conformal coat lifting, when using Chemask as a masking agent.