

welcome to the world of printed circuit boards



Dear Ladies and Gentlemen

The ongoing trend toward miniaturisation in the electronics industry is leading to ever more demanding requirements for PCB construction and design. This, in turn, increases the demands placed on production processes and materials. For base materials in particular, there is an increased need for higher Tg values and improved dimensional stability.

To accommodate this trend, we have performed an intensive evaluation of various FR4 base materials and solder mask systems. To ensure that we continue to provide you with the best possible product quality in the future, our process engineers imposed stringent requirements on the relevant manufacturers.

We are now pleased to present further details of the successfully qualified new FR4 base material and the new solder mask system. Over the upcoming weeks, we will replace the materials currently available with the new base material and solder mask. Please feel free to contact us if you require further information.



Change within standard FR4 material

For a number of years, we have used the Panasonic material R-1755C in our standard FR4 build-up. However, this material type is now being discontinued at Panasonic and the successor product is the material R-1755M.

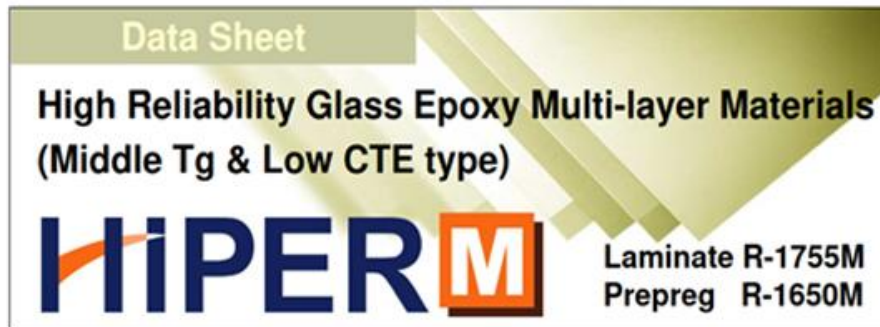
Below, we set out the properties of the material R-1755M and explain the benefits to you of this significantly improved material type:

- The glass transition temperature (Tg) is 150 °C, instead of the previous 135 °C.
- The new product has a significantly improved CTE value, which defines thermal expansion along the X, Y and Z axes. The values along the Z axis in particular have been clearly improved, with a value of 40 ppm/°C.
- Excellent CAF performance of 1.E+12 ohm improves the insulation properties and reduces the risk of short circuit.

Following extensive testing and a comprehensive qualification procedure, we have also now obtained UL approval for the successor product. As a result, we will be implementing a gradual changeover to the new standard FR4 material variant over the coming weeks.

Our specialists will be happy to provide further information. If required, you can find the material data sheet under the following [link](#).

We look forward to hearing from you.



Successful qualification of a new solder mask

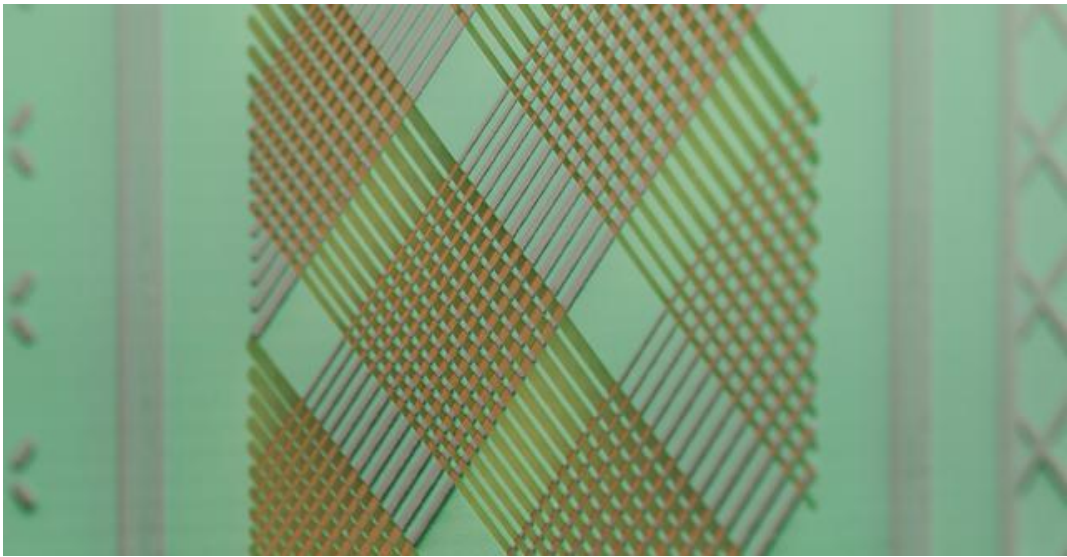
In collaboration with Lackwerke Peters, we have successfully completed the qualification process for the current version of the ELPEPCB ELPEMER® AS 2467 solder mask system already used in the electronics industry.

All reliability testing was conducted in accordance with the internationally recognised specification IPC SM-840 E "Qualification and Performance Specification of Permanent Solder Mask", and the new product passed without issues.

We plan for the new solder mask to replace the previously used product ImageCure XV501 from Sunchemical for the majority of PCB types as soon as possible.

Alongside better environmental compatibility, the new solder mask from Peters also provides finer grain resolution of the colour pigments and improved imaging performance. As a customer, you benefit from improved solder mask structuring, especially in fine-line conductor applications, as well as a homogeneous surface structure. Together with our modern, future-oriented production process ([link to https://www.varioprint.ch/en/processes/solder-masks-and-prints.html](https://www.varioprint.ch/en/processes/solder-masks-and-prints.html)), this enables us to provide you with the highest level of product quality for PCBs for generations to come.


Our specialists will be happy to provide further information, or you can visit us at www.varioprint.com




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