

ABSTRACT

METHOD FOR LAMINATION OF FLUOROPOLYMER TO METAL AND PRINTED CIRCUIT BOARD (PCB) SUBSTRATE

The present invention is directed to a method for the lamination of fluoropolymers to the
5 surfaces of metals, and especially to copper, gold, and platinum, and to printed circuit board
(PCB) substrate at temperatures substantially below the sintering temperatures or melting
temperatures of the fluoropolymers. More specifically, the invention is directed to a method
for surface modification of fluoropolymers by thermal graft copolymerization with concurrent
lamination of metals in the presence of a functional monomer and an adhesive such as an
10 epoxy resin. The process can be carried out under atmospheric conditions and in the complete
absence of an added polymerization initiator. The laminated fluoropolymer-metal or
fluoropolymer-PCB substrate interfaces exhibit T-peel strengths of no less than 8 N/cm. This
invention can also be applied to substantially improve the adhesion between PCB substrates
and metals.

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