



**SOLVENT-FREE EPOXY BASED ADHESIVES FOR SEMICONDUCTOR CHIP
ATTACHMENT AND PROCESS**

ABSTRACT

The present invention discloses chip (die) bond adhesive formulations preferably comprising a siloxane containing epoxide preferably a diglycidyl ether derivative, an anhydride curing additive which is soluble in the epoxide without the use of a solvent, and, optionally comprising, an oligomeric/polymeric co-additive of the type poly(alkylacrylate or -methacrylate), in conjunction with thermal and electrically conductive fillers and conventional co-catalysts used for curing epoxy systems to provide reworkable epoxy adhesives. Also disclosed are adhesive formulations comprising a siloxane containing epoxide and a hydroxybenzophenone curing additive which is soluble in the epoxide without the use of a solvent. The chips can be bonded to the substrate by conventional heating and curing techniques.

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