

EPOXY RESIN COMPOSITION FOR ENCAPSULATING
SEMICONDUCTOR CHIP AND SEMICONDUCTOR DEVICE

ABSTRACT

The present invention provides an epoxy resin composition for encapsulating a semiconductor chip having an improved flowability, an improved sequential moldability and the like, and additionally having improved characteristics of a cured product thereof, such as an improved mold-releaseability, an improved resistance to reflow soldering heat and the like, and a semiconductor device that is formed by encapsulating a semiconductor chip with the epoxy resin composition.

10 An epoxy resin composition for encapsulating a semiconductor chip according to the present invention contains essential components of:

(A) an epoxy resin, (B) a phenolic resin, (C) a cure accelerator, (D) an inorganic filler, (E) a mold releasing agent, (F) a silane coupling agent and (G) a chemical compound having aromatic ring that has

15 hydroxyl groups, each of which is bound to respective two or more adjacent carbon atoms that composes the aromatic ring. At least one of said (A) epoxy resin and said (B) phenolic resin contains resin of novolac structure, in which biphenylene skeleton is included in its main chain, and said (E) mold releasing agent includes one or more

20 chemical compound(s) selected from a group consisting of (E1) oxidized polyethylene wax, (E2) glycerin tri-fatty acid ester and (E3) oxidized paraffin wax, and further, said (E) mold releasing agent is contained in the amount of 0.01 wt% to 1 wt% both inclusive, and said (G) chemical compound is contained in the amount of 0.01 wt% to 1 wt% both

25 inclusive, in the total epoxy resin composition.