

COMPOSITION AND METHOD FOR FORMATION OF SILICA THIN FILMS

ABSTRACT

The claimed invention pertains to a composition that forms silica thin films, wherein said composition performs well as a planarizing coating when applied to a substrate and is subsequently converted by exposure to high-energy radiation. The resultant silica thin films have excellent electrical insulating performance. Said composition comprises (A) a hydrogen silsesquioxane resin that contains at least 45 weight % of a hydrogen silsesquioxane resin with a molecular weight no greater than 1,500; and (B) solvent. A silica thin film is produced by evaporating the solvent (B), and then converting at least a portion of the hydrogen silsesquioxane resin (A) to silica by exposing coated substrate to high-energy radiation. The preferred substrate is a semiconductor substrate having at least one electrically conductive layer.

Figure 1

This Sheet Has Been Replaced

