

ABSTRACT

The present invention relates to a self-bonding magnet wire that exhibits improved chemical stability with no decrease in heat resistance or flexibility, as well as a self-bonding insulating material for use with such wire. In conventional self-bonding magnet wire, because the quantity of active groups contained in the thermoplastic resin is small, excess cross-linking agent must be added, and as a result, the production conditions during enameling must be controlled within narrow ranges. In addition, in the case of applications under special conditions, such as within an insulating oil the like, a further problem arises in that the excess cross-linking agent can react with any of the variety of different chemical substances contained within the insulating oil. The self-bonding magnet wire of the present invention resolves these problems by including: a conductor; and a thermosetting self-bonding insulating material coated and baked onto the conductor either directly or via an insulating layer, wherein the thermosetting self-bonding insulating material includes, as an effective component, a resin varnish consisting of: a base resin consisting of a polyhydroxyether resin with a molecular weight of at least 20,000 and a polysulfone based resin; and a cross-linking agent containing two functional groups within each molecule. Furthermore, a self-bonding insulating material of the present invention is used in forming such a self-bonding magnet wire.