

Hot air self-adhesive

Hot air self-adhesive is by blowing hot air on the wire during the winding process. The temperature of the hot air at the windings is typically between 120 °C and 230 °C, depending on the wire diameter, winding speed, and the shape and size of the windings. This method works for most applications.

advantage	Disadvantage	risk
1、 fast 2、 Stable and easy to process 3、 Easy to automate	Not suitable for thick lines	Tool pollution

Oven self-adhesive

The self-adhesive of the oven achieves a self-adhesive effect by placing the finished coil in an oven for warming. In order to achieve uniform heating of the coil, depending on the shape and size of the coil, the temperature of the oven usually needs to be between 120 ° C and 220 ° C, and the time required is 5 to 30 minutes. Oven self-adhesive can be uneconomical for certain applications due to the long time required.

advantage	Disadvantage	risk
1、 Suitable for post-baking heat treatment 2、 Suitable for multilayer coils	1、 high cost 2、 long time	Tool pollution

Solvent self-adhesive

Solvent self-adhesion is achieved by applying a suitable solvent (such as industrial alcohol) to the wire during the winding process. The solvent can be brushed, sprayed or coated on the winding during the winding process. The typical recommended solvent is ethanol or methanol (concentration 80~ 90% is better). The solvent can be diluted with water, but the more water used, the more difficult the self-adhesive process will become.

advantage	Disadvantage	risk
Simple equipment and process	1、 Solvent emission problem 2、 Not easy to automate	1、 Solvent residue may damage the insulation 2、 The inner layer of the coil with a large number of layers is difficult to dry, and it is usually necessary to use an oven to self-adhere the residual solvent to completely evaporate.

Current Self-adhesive

Self-adhesive is self-adhesive by current (resistance heating). The required current strength depends on the shape and size of the coil. Conductive self-adhesive is recommended for products with a wire diameter of 0.120 mm or more, but special care must be taken not to overheat the center of the winding, as overheating may damage the insulation and cause a short circuit.

advantage	Disadvantage	risk
1、 Fast process and high energy efficiency 2、 Easy to automate	1、 Harder to find a suitable process 2、 Not suitable for specifications below 0.10mm	Excessive current application can cause excessive temperature