

# Types of hot melt adhesive films, classified by product form and main components

## Detail Introduction :

Hot melt adhesive film is a kind of hot melt adhesive product in the form of a film, which belongs to a category of hot melt adhesives in terms of classification. The classification is similar to that of hot melt adhesives, but due to the product's appearance, it can be classified in various ways. The following is an introduction to the classification of hot melt films from two perspectives: the product form and the main components.

## Classification by Product Form

Hot melt films can be classified into hot melt films with substrates and hot melt films without substrates according to the different production processes.

Hot melt film with substrate means that the hot melt film needs to be attached to a substrate, such as release paper, PE film, etc. Hot melt films with substrates are also called hot melt films with paper or film and can be used for processes that require adhesive backing. Hot melt films with substrates are generally produced using the coating method but can also be produced using the casting method.

Substrate-free hot melt films, as the name implies, are hot melt films that do not require a substrate. They look very much like plastic films, but unlike plastic films, they are sticky when heated, which they are. Hot melt films without substrates are usually produced using the cast and blow molding methods or can also be obtained by stripping the substrate using hot melt films with substrates. Still, the cost is higher and is usually done by factories without cast and blow molding processes.



## Classification according to the main components of the product

The main components of hot melt adhesive films are basic resin, tackifier, plasticizer, and some other additives. The largest proportion is the basic resin, which is also the basis for naming hot melt adhesives. There are various hot melt adhesive film components, which will be adjusted according to the specific materials to be bonded. Still, according to the type of basic resin, it can be roughly divided into EVA hot melt adhesive film, TPU hot melt adhesive film, PES hot melt adhesive film, PA hot melt adhesive film, and PU hot melt adhesive film.

EVA hot melt film is the main component of EVA, which is ethylene-vinyl acetate copolymer. EVA hot melt film is one of the most widely used hot melt film products because EVA itself has strong material adaptability and can be bonded to a wide variety of materials. EVA hot melt film has many applications in shoes, the automotive industry, decorative building materials, packaging, and other fields.

TPU hot melt adhesive film is mainly composed of TPU, also known as thermoplastic polyurethane, which is very soft and has strong water resistance due to its material properties. That's why TPU hot melt film is used most in the apparel industry. Today's non-marking garments, waterproof clothing, etc., all rely on the development of hot melt adhesive film.

PES hot melt adhesive film is mainly composed of PES, which is polyester, has a good adhesive performance to metal materials, and is currently used to bond some components in the field of electronics and the compounding of materials in the field of new energy.

PA hot melt adhesive film mainly comprises PA, which is polyamide. PA hot melt adhesive film has good high-temperature resistance, but low-temperature resistance is relatively poor. In sub-zero temperature conditions, the material will become hard, lose toughness, and do more modification processing. PA adhesive film is mainly used in clothing, packaging, and other fields.

PO hot melt adhesive film is mainly composed of polyolefin, a generic term for a large group of materials including polyethylene and polypropylene, namely PE and PP. PO hot melt adhesive film has better performance and better adhesive properties than metal materials. It is a class of hot melt adhesive film with great potential in application.

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