

Why is Hot Melt Adhesive Used in the Automotive Industry

Detail Introduction :

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The reason why hot melt adhesives can be used in the automotive industry is determined by the characteristics of hot melt adhesives:

Fast curing speed, suitable for high-speed automated assembly line production; suitable for bonding of various materials, a large number of plastics such as ABS, PE, PP, etc., are used in automobiles, as well as metal aluminum, steel, etc. These components can be used for hot melt adhesives. The hot melt adhesive has a solids content of 100%, does not contain solvents, is easy to store, is environmentally friendly and non-toxic, will not cause secondary pollution to the environment, and will not harm workers' health;

Types of Hot Melt Adhesives for Vehicles:

According to different materials, hot melt adhesives for vehicles include EVA, rubber, APAO, PUR, PA, PES, etc. Different types of hot melt adhesives will be selected for different parts and uses.

Hot melt adhesives for vehicles can be divided into two categories according to their functions: bonding and sealing. The sealing type mainly uses butyl rubber.

Hot melt adhesives for vehicles can be divided into ordinary type and heat-resistant type according to the application and application temperature. Cars are mainly driven outdoors, and hot melt adhesives are usually required to have a certain degree of heat resistance.

Application of hot melt adhesive for automobiles:

Cars are composed of thousands of parts, among which there are many parts that use hot-melt adhesive. Here are a few parts that are used more and are common:

1. Traditional headlights use rubber sealing strips with holes, which are pressed and sealed by screws. After switching to hot melt adhesive, it can not only make bond quickly but also play a sealing role, which not only reduces costs but also facilitates automated production. . There are mainly three types of adhesives: rubber type, APAO adhesive and PUR adhesive, which require good temperature resistance, high strength and shock resistance.
2. In the past, instrument panels, ventilation ducts, built-in buckles, etc., were all fixed and connected mechanically in the past, which was not only time-consuming and labour-intensive but also inefficient and poor in sealing performance. After using hot melt adhesive, production efficiency and product quality are greatly improved. These parts generally use temperature-resistant hot melt adhesive, and the base material is mainly EVA and polyolefin.
3. The roof is a composite of plastic sheets, mainly using PE or EVA hot melt adhesive film or rubber powder.
4. The door panel assembly needs to be bonded with hot melt adhesive, which involves the bonding of polypropylene parts, and the fixing of audio and wiring harnesses. APAO and temperature-resistant hot melt adhesives are mainly used.
5. Insulation pads for car carpets and floors, inner buckles of trunks, etc. These are the most commonly used hot melt adhesives on cars. The types of hot melt adhesives are block, pellet and stick. Mainly include pressure-sensitive adhesives, EVA particles, adhesive strips and APAO. It needs to be open for a long time, easy to assemble and fit large parts, has high-temperature resistance and low odour.
6. Fix the wiring harness of the car. There are a lot of wires inside the car. So many wiring harnesses cannot be fixed with wire tubes like home decoration. Fixing with hot melt glue is a time-saving and effective method, and hot melt glue has certain advantages. Its elasticity will not fall off during driving,

and it is easy to remove when maintenance is required. Adhesive strips and APAO type hot melt adhesives are mainly used here.

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