

Why is Air pillow film widely used?

Detail Introduction :

The Wide Range of Uses of Air Pillow Film

What Are the Advantages of Air Pillow Film?

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Transport packaging is used to fix the product during the product's circulation and protect the product from impact and vibration. Products are inevitably affected by external forces in any environment. The packaging to avoid damage to the product due to such external forces is cushion packaging, also known as shock-proof packaging, which plays a vital role in the product circulation process. Cushion packaging is a kind of packaging that focuses on functionality. The development of cushioning packaging materials determines the outcome of cushioning packaging. Cushioning packaging materials have evolved from the earliest rice straw to now mainly foam plastics and pulp molding—a cushioning packaging material system supplemented by cushioning packaging materials. Foam plastic has excellent cushioning and vibration-absorbing ability, and its low price has made it a cushioning packaging material that has been widely used in recent decades. However, its transportation cost is too high, recycling is complex, and its pollution to the environment is severe. Therefore, as a relatively green and environmentally friendly cushioning packaging material, Air pillow film has gradually replaced the plastic foam in recent years and has become the main force of cushioning packaging materials.

While the plastic age brings convenience, the environmental pollution it brings is becoming more and more difficult to ignore. As the demand for express packaging has increased in recent years, it has triggered a surge in packaging waste. After the new era, more and more attention has been paid to ecological protection, and the concept of green packaging has become more and more popular. The international community first produced the idea of green packaging. In the 1880s, the idea of sustainable development promoted the international requirements for green packaging; that is, packaging must comply with the 3R1D principle. Under the guidance of this principle, the development of green packaging is undergoing a process from the reduction of the packaging structure to the recyclability of packaging forms and the development of environmentally friendly packaging materials.

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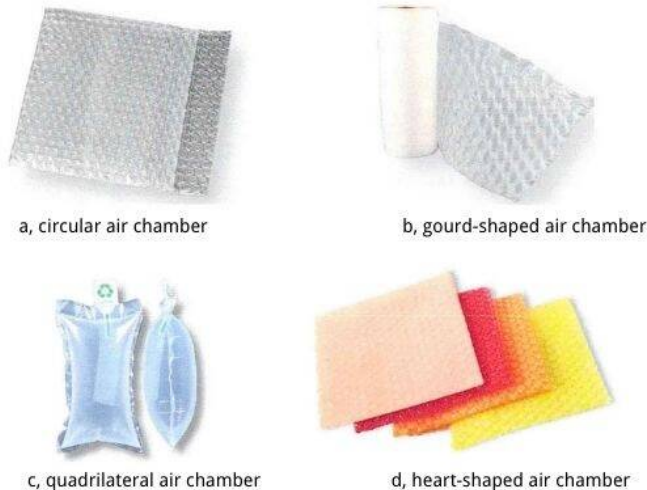
Driven by green packaging, cushioning packaging materials are gradually approaching environmentally friendly materials. For the air pillow film, the advantages of low transportation and storage costs, recyclability, and other benefits make it a green and ecologically friendly cushioning packaging material, but the material itself is still not an ecologically friendly material, and the development of a bio-based film that can be used in the air pillow film has also become a big problem in green packaging.

The structural characteristics, processing technology, and film performance of the air cushion are the key to determining its cushioning performance. According to its structural characteristics, the research on the cushioning performance of the Air pillow film has been relatively complete, and the research on the sealing performance related to its processing technology is also ongoing.

With the rapid development of the Air pillow film industry, the types of petroleum-based film materials of the Air pillow film are gradually increasing, but they are all for improving the barrier performance and other performance of the Air pillow film. On the other hand, in terms of film properties, only the effect of film thickness and film heat-sealing performance on the cushioning performance of air pillow film has been studied, and the effect of film mechanical properties on the cushioning performance of air pillow film is still very few. In fact, air pillow film has higher requirements on the mechanical properties of the film. The key difficulty in developing environmentally friendly film materials that can

be used for air pillow film is how to improve the mechanical properties of the film material to meet the cushioning performance of the air pillow film. Therefore, study the film material mechanics The impact of performance on the cushioning performance of the air pillow film is necessary and extremely important.

Air pillow film cushioning packaging is an environmentally friendly cushioning packaging material that uses the compressibility of the gas in the film to absorb the impact and vibration energy of the product. Air pillow film cushioning packaging has a variety of forms and is developing with the diversification of needs. There are also more and more forms, which are divided into the shape of the air chamber formed by pressing and inflating the film, which can be divided into round, gourd, quadrilateral, heart-shaped, and so on.



The air pillow film of the quadrilateral air chamber is generally divided into pillow type and cylindrical air cushion. A single pillow-type air cushion was first used, and in actual use, it gradually developed from a pillow-shaped air cushion to a cylindrical air cushion. The length and width of the cylindrical air cushion are relatively large, and when in use, it is generally connected and used side by side. The development of Air pillow film has evolved from the use of a single air chamber to the use of multiple air chambers side by side, and then to the airbag that can be opened and closed, and then to the bag-in-bag structure with comprehensive cushioning protection. At the same time, the trend of green packaging is guiding the development of air pillow film materials. Non-environmentally friendly film materials are expected to be replaced by biodegradable film materials, making air pillow film cushioning packaging materials completely green.

The Structural Characteristics of Air Pillow Film Make It Have Many Characteristics, As Follows:

(1) The packaging form is green and environmentally friendly

Air pillow film currently uses oil-based film materials, but 99% of the film materials are air, and the amount of film materials used is small; that is, its environmental protection is mainly reflected in the packaging form. On the other hand, Air pillow film is The damage rate during use is low, and it can be recycled many times after use. The resulting packaging waste is small, and the pollution to the ecological environment is small. It meets the requirements of green environmental protection and belongs to a new type of green buffer packaging.

(2) Low comprehensive cost and high economic benefit

The cushioning effect of the Air pillow film is mainly realized by the air in the film after inflation. There is no need to inflate before use. The uninflated air cushion is a flat sheet film bag, which is small in size, low in storage and transportation costs, simple in structure, and low in processing costs. , The plastic film technology is mature, the materials are easy to obtain, and the cost is low. It can be recycled many times without destroying the structure. Comprehensive material cost, processing cost, storage and transportation cost, and whether it can be recycled, Air pillow film has a low comprehensive cost in cushioning packaging and high economic benefits.

(3) Good performance

The plastic film used in Air pillow film has developed from the early polyvinyl chloride film to the current multi-layer composite film. The performance of the film has been greatly improved, specifically in terms of gas barrier properties, humidity resistance, temperature sensitivity, and resistance. The improvement in tensile strength and other aspects of performance, coupled with the maturity of the air pillow film processing technology, leads to the heat-sealing strength of the film can also meet the requirements of use. Therefore, the air pillow film itself is reliable in quality, and its load-bearing performance and cushioning performance when inflated are better. Stable, clean, and tidy before and after use, no debris, with excellent performance.

(4) Wide range of application

The excellent comprehensive performance of Air Pillow Film makes it occupy a large proportion in the e-commerce and express logistics industry. It is widely used in the transportation and packaging of vulnerable wine items, mobile phone electronic products, cups of daily necessities, necklace jewelry products, books and school supplies, refrigerators, home appliances, luggage and leather products, antique valuables, etc. . The packaging form determines the wide range of its use, and its environmental performance and low cost also drive it to be used in more product transportation packaging.