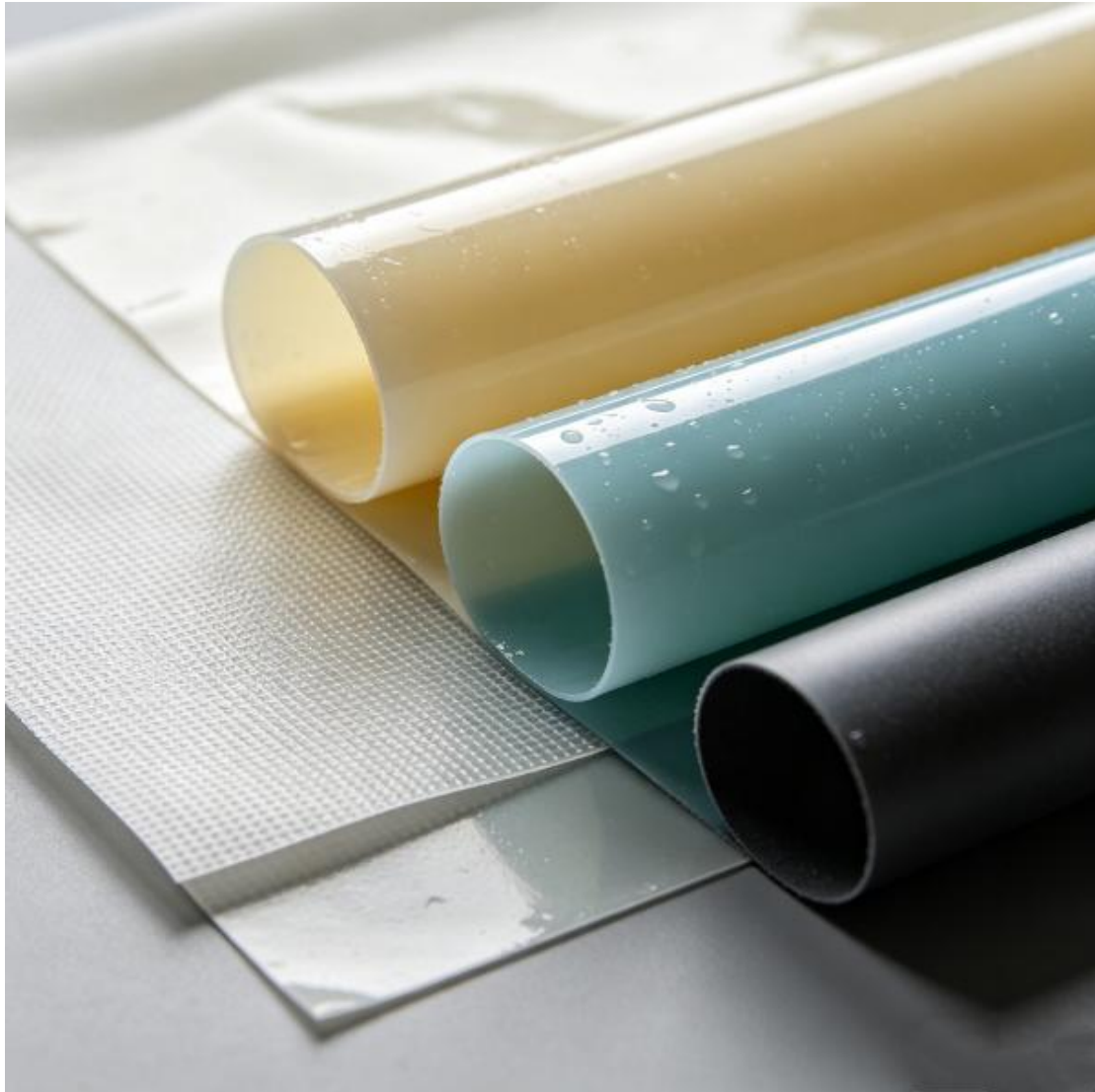


TPU & Hot Melt Adhesive Waterproof Materials: Classification, Product Introduction and Application Scenarios



1. Product Classification (TPU & Hot Melt Adhesive Waterproof Materials)

The product line covers two core categories: TPU waterproof materials and hot melt adhesive waterproof materials, with multiple subdivided products to meet different application needs of various industries, especially focusing on shoe materials, outdoor products and textile processing.

1.1 TPU Waterproof Materials

- TPU Waterproof Film: Divided into breathable type and non-breathable type, with different thicknesses (0.05mm-0.5mm) and hardness grades.
- TPU Breathable Waterproof Membrane: High-performance type, integrating waterproof, breathable and moisture-permeable functions.
- TPU Composite Film: Compound with fabrics (knitted, woven) to enhance waterproof and wear-resistant performance.
- TPU Elastic Waterproof Film: With high elasticity, suitable for products requiring flexibility and waterproofness.

1.2 Hot Melt Adhesive Waterproof Materials

- Hot Melt Adhesive Film: Subdivided into low-temperature, medium-temperature and high-temperature types, with different melting points (80°C-180°C).
- Hot Melt Adhesive Web: Net-like structure, suitable for seamless lamination and waterproof bonding.
- Waterproof Breathable Hot Melt Film: Integrates hot melt bonding and waterproof breathable functions, no need for additional waterproof layers.
- Eco-friendly Hot Melt Adhesive Film: Non-toxic, odorless, compliant with environmental protection standards (REACH, RoHS).

2. Product Introduction

2.1 TPU Waterproof Materials

TPU (Thermoplastic Polyurethane) waterproof materials are high-molecular synthetic materials with excellent comprehensive performance. They feature strong waterproof performance, good toughness, wear resistance, high transparency and environmental protection. They can be processed into films, composite fabrics and other forms, and are not easy to age, yellow or crack under long-term use. They are resistant to low temperature (-40°C) and high temperature (80°C), and can maintain stable performance in various harsh environments. The breathable type TPU film can realize the two-way transmission of moisture, while blocking water molecules, ensuring the comfort of the product while being waterproof.

2.2 Hot Melt Adhesive Waterproof Materials

Hot melt adhesive waterproof materials are solid adhesive films at room temperature, which melt quickly when heated (according to different types, the melting point ranges from 80°C to 180°C), and bond firmly with various substrates (fabrics, TPU, leather, plastic) after cooling and solidification. They have the characteristics of strong adhesion, fast bonding speed, no solvent, environmental protection and energy saving. The waterproof hot melt adhesive film not only plays the role of bonding, but also forms a dense waterproof layer at the bonding interface, effectively preventing water from seeping through the gap. It is easy to operate, suitable for automatic production lines, and can improve production efficiency.

3. Application Scenarios

The products are widely used in shoe materials, outdoor products, textiles, bags and other fields, focusing on waterproof, bonding and functional enhancement, and are especially suitable for high-demand scenarios such as outdoor sports and daily waterproofing.

3.1 Shoe Materials Field (Core Application)

- Shoe Upper: TPU waterproof film and hot melt adhesive film are used for bonding and waterproofing of shoe uppers (especially outdoor shoes, waterproof leather shoes), to prevent water from entering the shoe interior and keep feet dry.
- Shoe Lining: TPU breathable waterproof membrane is compounded with shoe lining fabric to realize breathable and waterproof functions, improving the comfort of wearing shoes for a long

time.

- Shoe Accessories: Used for waterproof bonding of shoe soles, shoe collars, shoe tongues and other parts, enhancing the overall waterproof performance of shoes.



3.2 Outdoor Products Field

- Outdoor Clothing: TPU composite fabric and hot melt adhesive film are used for jackets, raincoats, ski suits, etc., to achieve waterproof, windproof and breathable effects, adapting to outdoor harsh weather.

- Outdoor Equipment: Waterproof bonding of tents, sleeping bags, backpacks and other products, ensuring that the equipment remains dry in rainy or humid environments.

- Outdoor Sports Products: Waterproof treatment of sports gloves, sports shoes, knee pads and other products, protecting the human body from moisture and cold.

3.3 Textile and Bag Field

- Textile Processing: Seamless bonding and waterproof treatment of knitted and woven fabrics, used for making waterproof blankets, waterproof aprons, etc.

- Bags and Luggage: Waterproof bonding of bag surfaces, linings and zippers, making bags (backpacks, handbags, travel bags) waterproof and moisture-proof, protecting internal items from being damp.

3.4 Other Fields

- Medical Supplies: Waterproof bonding of medical protective clothing, surgical gowns, etc., enhancing the protective performance and preventing the penetration of liquid and bacteria.
- Automotive Supplies: Waterproof treatment of automotive seat covers, door panels and other interior parts, improving the durability and comfort of automotive interior.