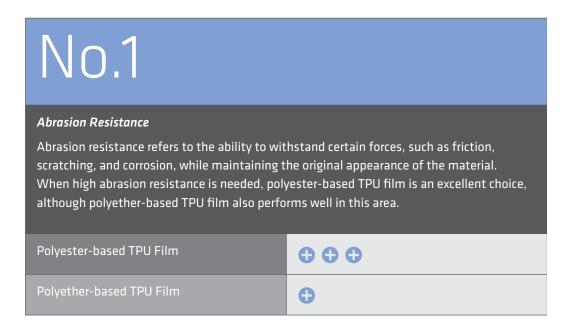
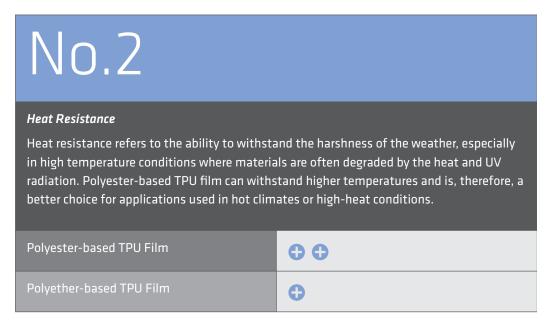


Thermoplastic polyurethane (TPU) film is being increasingly used as an alternative to rubber and traditional plastic materials. As TPU films continue to be found in more and more products and applications, it is important to have a basic understanding of their common properties and characteristics.

To begin with, there are 2 basic types of TPU film—polyester-based and polyether-based. Both are available in different levels of hardness, strength, transparency, flexibility, and elasticity, which can all affect the films' characteristics and behavior.

Below are just some of the properties that define the characteristics and behavior of polyester-based and polyether-based TPU film.







# No.3

## Low Temperature Flexibility

Low temperature flexibility refers to the ability to withstand the harshness of sub-zero environments, where materials often become brittle and crack. For extreme low temperatures, polyether-based TPU film provides a better solution than polyester-based TPU film.

Polyester-based TPU Film

Polyether-based TPU Film

+ + +

# No.4

### Hydrolysis Resistance

Hydrolysis resistance refers to the ability of materials to withstand decomposition from water, moisture, or humidity over time at normal temperature. For applications that are constantly in contact with water or in a high-humidity environment, polyether-based TPU film is the best choice.

Polyester-based TPU Film

Polyether-based TPU Film

+ + +

# No.5

### Microbial Resistance

Microbial resistance refers to the ability to protect materials from microbial attacks and degradation by bacteria and mildew. For medical and other applications where materials are reused, polyether-based TPU films are the best choices, especially when hygiene is a concern.



# Gas Permeability Gas permeability refers to the ability to hold gas, once two different materials are sealed together. For inflatable products, polyester-based TPU films are a better choice, compared to polyether-based TPU films.

To select the right TPU film for your application, the film's basic characteristics and behavior must be considered. Get in touch with us today to find out more about our technical films. Visit **www.dingzing.com** and be sure to check out our Innovation Playground, too.





Science. Innovation. Collaboration.

DingZing is a leader in the development and production of high-performance polymers. We specialize in thermoplastic polyurethane and polyurethane products and solutions, with a focus on advanced technical films.