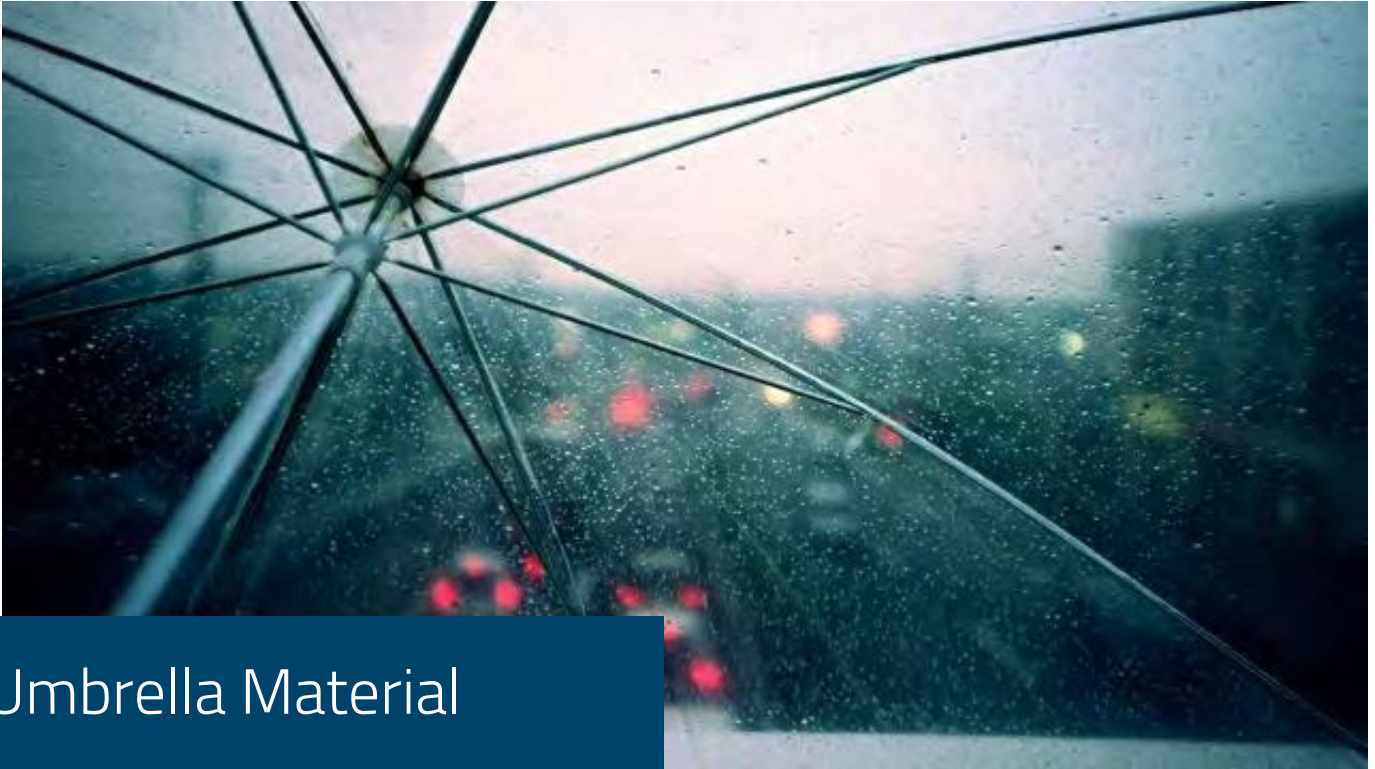
A photograph of a red umbrella on a rainy street at night. The umbrella is the central focus, with raindrops visible on its surface. The background is dark and blurry, showing a wet street and some foliage. A blue semi-transparent box is overlaid on the right side of the image, containing white text.

# The Ultimate Guide for Umbrella Material



## Umbrella Material

Umbrella Material is an important factor for the quality of an umbrella. you may know umbrellas, but you must know all detail of umbrella materials.

If you want to learn any information about umbrella material, you are in the right place, I will guide you every part of an umbrella, and the main 3 part of umbrella material is umbrella shaft, umbrella frame (umbrella ribs with umbrella stretcher), umbrella fabric.

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## Umbrella Shaft

Otherwise known as the pole, this part forms the main body of the umbrella – it's the long and usually sleek part that begins from the handle up to the tip. Within the shaft, you'll find tension springs that help owners to easily open and close their umbrella.

### 1.1 Stick Umbrellas Shaft

The first main type is the stick shaft, which gives a solid feel. It doesn't fold for a more compact storage, but you can always utilize its length for improved stability whenever you walk. Furthermore, you can pick among five materials to create the stick shaft.

## 1) Stick Umbrellas Wooden Shaft

For this type, you can pick between three diameters: 12MM, 14MM, or 16mm. We use plywood to make regular wood shaft umbrellas since they are quite affordable.

The pure wooden shaft also provides, the quality is better but the price is more expensive

We can produce light and dark-colored variants. Here's the color swatch for our wooden stick-type umbrella shafts:



wooden shafts matching with metal and fiberglass frames

## 2) Stick Umbrellas Metal Shaft

Stick Umbrellas metal shafts have five diameter options: 8mm, 10mm, 12mm, 14mm, and 16mm.

for kids umbrella usually use 8mm shaft, golf umbrella usually use 14mm shaft, and inverted umbrella used 12mm shaft.

As the metal stick shaft is hollow, Diameter isn't the only measurement as we also have shaft thickness, which is represented by "T".





A higher number is indicative of a thicker shaft with more materials used. There are seven options: 21T, 23T, 25T, 28T, 30T, 35T, and 40T. With a 40T metal stick shaft, you'd get superior shaft strength and material quality at a premium price.

Once you've chosen the diameter and thickness, you can then pick your preferred surface finish: nickel coating, black coating, chrome plating, or glitter coating.



A nickel-coated shaft is resistant to corrosion and gives a reflective characteristic. In contrast, the black-coated shaft offers a uniform look that reduces light reflection. Chrome plating gives resistant not only to corrosion but also to abrasion. Lastly, a glitter coating gives the shaft a shiny and decorative aesthetic.

### 3) Stick Umbrella Aluminum Shaft

The stick umbrella aluminum shaft is lightweight and cost is higher than the metal shaft. For this shaft, you only have one shaft thickness amounting to 65T – an assurance of durability and material quality.

The diameter gives you more options: 8mm, 10mm, 12mm, and 14mm.





Stick umbrella aluminum shafts are usually silver in color, but we can have the surface coated with any color you like, black, navy, or red finish. Check out the color swatch below, which also gives you an idea of the differences in thickness. When the stick umbrella aluminum frame is combined with fiberglass ribs, you have a lightweight combination that is great for the windy environment. The above is the aluminum shaft with fiberglass ribs.

#### 4) Stick Umbrella Fiberglass Stick Shaft

Fiberglass is a composite material typically used for the shaft of golf umbrellas. The primary material is fiber, but secondary materials such as resin, light calcium, and any hardener also used to form the fiberglass shaft.



Fiberglass Shaft Color & Size: Ø10mm-16mm

The fiberglass is sturdy and no easy broken, it is usually used for the middle and high-quality umbrella, and golf umbrella uses a lot.

This type has four diameter options: 10, 12, 14, and 16mm. In addition, the thickness can either be 1.4 or 1.5mm. It can be of any color, but the usual choices include black and snake coating.

## 5) Stick Umbrella Acrylic Shaft

The final material for a stick shaft is acrylic. It's certainly not a common material, but it proves its worth when a client wants LED umbrellas.

Acrylic is a good substitute for glass – and an umbrella shaft of this type can have light-emitting diodes installed within to provide illumination.



## 1.2 Folding Umbrella Shaft

Apart from the fact that this type isn't just one long stick like the former, the folding umbrella shaft is also characterized by its round, hexagonal shape. Plus, there are only two primary materials used to manufacture this.

### 1) Folding Umbrella Metal Shaft

There are six shaft thickness measurements for the folding umbrella metal shaft is 23T, 25T, 30T, 35T, 40T, and 45T.



The surface finish options here are similar to those of the metal stick shaft, except that you can't have a glitter-coated folding shaft. Thus, you can pick among nickel coating, black coating, and chrome plating.



One weakness of a black-coated umbrella shaft is that it can be easily scratched. The best option of surfaces finishes than is to employ double-coating. Compare with black-coated, chrome-plated is easy rusty. The quality of nickel coating umbrella shaft is better than chrome-plated, not easy rusty.

## 2) Folding Umbrella Aluminum Shaft

A folding umbrella shaft of this material has an excellent thickness of 60T, Due to the sleek and modern aesthetic, the aluminum is usually coated with a bright or dark shade of silver.



### Umbrella Ribs and Stretchers

These two parts work together to ensure that the canopy looks as intended when opened. The ribs underneath are the supporting system for the cover. In fact, their design determines the form the canopy will take.

On the other hand, stretchers begin from the runner and are tasked with connecting all the ribs to the shaft. They help the umbrella cover to stretch as needed and prevent any unsightly creases.

We can use vernier calipers to measure the ribs& stretchers, difference umbrella size used difference ribs and stretchers. The more thickness ribs&stretchers, the frame will be stronger.

Ribs can either be U-shaped or round shape.

These golf umbrella frames show how the ribs and stretchers will eventually assist the canopy.

## 2.1 Stick Umbrella Ribs

For stick-type umbrellas, there are six options for the total rib count: 6, 8, 10, 12, 14, and 16 ribs.

There are two kinds of material of stick umbrella ribs, one is metal, the other is fiberglass.

Metal ribs are easily broken when used on the strong wind.

Compare with metal ribs, fiberglass ribs is stronger than metal “U” ribs, the fiberglass ribs is windproof and no easy broken, but the price is more expensive.

Usually, kids umbrellas, golf umbrellas, and middle-high quality umbrellas use fiberglass ribs.

### 1) Stick Umbrella Metal Ribs

Metal ribs have 2 shapes. One is U shape, the other is round shape.

shaped ribs can have the following measurements: 5.6mm, 5.8mm, 6.0mm, 6.3mm, and 7.0mm.

For round ribs, the diameter of ribs has the options: 1.5mm, 1.6mm, 1.65mm, 1.7mm, 1.8mm, 1.9mm, and 2.0mm.



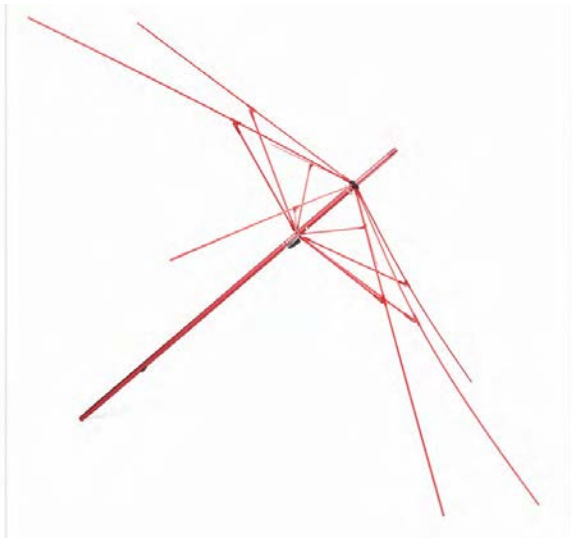
Whichever you pick, you can pick among the four surface finishes that are also applied to the metal stick shaft: nickel coating, black coating, chrome plating, and glitter coating.

## 2) Stick Umbrella Fiberglass Ribs

This material only comes in round shape, but there are eight sizes: 2.6mm, 2.8mm, 3.0mm, 3.2mm, 3.5mm, 4.0mm, 4.5mm, and 5mm.

Clients typically prefer either a white or black color, but you can ask for any other color.

Below, you'll see fiberglass ribs along with an aluminum shaft



## 2.2 Folding Umbrella Long Ribs

The folding variant can have 6, 8, or 10 ribs.

### <h3id="step16" >1) Folding Umbrella Aluminum Long Ribs

The thickness comes at 60T, but this type doesn't just rely on aluminum.

The long ribs here have two parts. First comes the aluminum part, then the second part is made of either round metal or fiberglass, the latter material being chosen for its windproof characteristic.

The aluminum ribs will be in silver color.

### 1) Folding Umbrella Metal Long Ribs

There are four other thickness options: 30T, 35T, 40T, and 45T. As expected, you can pick among nickel coating, black coating, chrome plating, and glitter coating for the surface finish.

### 2) Folding Umbrella Fiberglass Long Ribs

Fiberglass grants umbrellas better resistance against harsh winds. There are six thickness options: 2.8mm, 3.0mm, 3.5mm, 4.0mm, 4.5mm, and 5mm. fiberglass bending is not easy to break.

## 2.3 Stick Umbrella Stretchers

**1) Metal Stretchers:** These stretchers for U-shaped ribs come in 5.6mm, 5.8mm, 6.0mm, 6.3mm, or 7.0mm.

**2) Fiberglass Stretchers:** Umbrellas utilizing round ribs can have fiberglass stretchers with the following size options: 2.8mm, 3.0mm, 3.5mm, 4mm, 4.5mm, and 5mm.

## 2.4 Folding Umbrella Stretchers

**1) Metal Stretchers:** There are four thickness options: 30T, 35T, 40T, and 45T.

**2) Aluminum Stretchers:** The thickness options: 60T. and it is lightweight.





## 3.1 Umbrella Tips

Umbrella tips are made of plastic, metal, or poly-wood.

Plastic is lightweight and usually used for golf umbrella, while both metal and wood materials add a strong and firm feel.

we used metal or plastic for golf umbrella, poly-wood umbrella for the umbrella with wooden shaft and handle.

a children's umbrella must always have a tip of at least 10 millimeters in length for safety reasons.

## 3.2 Umbrella Runner

This is the T-shaped part that moves up or down the shaft during the opening or closing of the umbrella. It is made of plastic material.

For the folding umbrella, Without a runner, the umbrella cannot be compact again when you're done using it.

## 3.3 Umbrella Connectors

Umbrellas need a variety of connectors to keep each and every part integrated.

### 1) Connector for the Ribs to the Shaft

The ribs that form the canopy shape must be firmly attached to the upper segment of the shaft. Thus, a connector made of plastic and Bundled with thin iron wire.

### 2) Connector for the Stretchers to the Shaft

Likewise, the umbrella runner keeps the stretchers and shaft together. It's made of either plastic.

### 3) Connector for Ribs and Stretchers

We used iron or copper eyelet to fixed the ribs and stretchers.



## Umbrella Fabric

The fabric is what is used to cover the umbrella canopy. It covers the overall umbrella and it's responsible for creating shelter for you. This is what protects you from the sun and rain. All the umbrella fabric needs to be waterproof.

### 4.1 Umbrella Fabric Size, Color, and Printing

The most common types of umbrella fabrics on the base fabric are called “polyester spinning” and “chun Yafang”.

“Polyester spinning” is treated with a waterproof coating, which is usually made of PVC glue, which becomes a waterproof fabric and extends into the “polyester” fabric of the umbrella industry.

After the coating of “Chun Yafang” was made into a “pongee” in the umbrella industry. The quality is mainly determined by the density of the base fabric. Each fabric material can have a density of 172T, 190T, or 210T. T represents the density (sum of the warp and weft density within 1 square inch) Measurement method: use density mirror to measure the warp density and weft density, multiply by 2.54 is equal to the T number. The width of fabric is 62 inches, 66 inches, and 68 inches. The fabric width for regular umbrellas is 66 inches.

For the fabric color, can be the solid color and printed color.

Solid colors: can be made according to Pantone Color or any color you like. pls refer to the below fabric color swatch.

Printed colors: can make flowers, strip, polka dot, or any printed color you like. also, custom printed color fabric are welcome.



There are four kinds of fabric-printing methods:

Circular screen printing, flat screen printing, digital printing, roll heat transfer.

## 4.2 Umbrella Fabric Types

### A. Nylon

The nylon fabric is more expensive than polyester and pongee fabric. nylon fabric color is bright and feels like silk. People also like how there’s barely any friction when it rubs against other materials due to its silky attribute.

However, a nylon canopy shrinks when affected by air humidity and sometimes even affecting the normal opening and closing of the umbrella. and right now many umbrella factories used pongee for replacing.

## B. Polyester

Polyester is cheapest and the quality is no good as pongee or nylon fabric. And not soft like pongee.

And it doesn't suffer any fabric expansion or shrinkage due to changes in the air humidity.

It also provides bright colors like nylon.

However, the Crease of polyester fabric cannot restore when folding the umbrella. You have a sense of resistance with rustling sound when rubbing it.

## C. Pongee

It is a soft unbleached Chinese fabric. It is made of raw silk threads and other fibers. The color of Pongee is dark and matte. It is a high-density fabric. It feels like cotton to touch. It is medium weight and balanced because it is tightly woven. pongee is more expensive than polyester and quality is better. middle and high-quality umbrella usually uses pongee fabric.

the raindrop is easy Slide off from Pongee fabric, just like Slide off Lotus leaf. and easily keep umbrella dry.





## 4.3 Pongee and Polyester Coating

**1. Silver coated:** UV protected, the fabric is more thickness.

However, after a long period of use, the folded silver glue will be separated.

**2. Black coated:** UV protect, the fabric is more thickness.

**Black coated VS silver coated:**

Black coated is not easy to aging. The silver plastic fabric is easy to cause the coating to age and fall off after being used for a long time. 2) Cooling, the parasol made of black rubber layer fabric can effectively cool down 3-5 °C under sunlight. Super strong UV protection The umbrella on the market have different UV protection properties due to different coating process or fabric quality.

The more convenient inspection method is: use the flashlight on the mobile phone and use the umbrella fabric in the dark. Flash to see if there is light leakage.

**3) Golden coated:**

Color coated: A golden coating gives the canopy a stellar color and good looking. Also, provide UV protection.

The fabric is more thickness.



**4) Pearl-coated:**

The fabric is coated with a layer of pearl glue. When the light is sufficient, the pearl is shining and good-looking, which is generally used for ladies umbrellas. and more thickness.

## D. Plastic: PVC/POE, EVA

PVC&POE plastic material allows manufacturers to create clear umbrellas. Likewise, it is easy to work on various pattern and color designs using this fabric. superain flower clear umbrella wholesales  
PVC cover will stick together when they become too hot during transit or storage. when mass production, all PVC umbrellas need to put talcum powder on the inside in order to avoid this problem. and right now umbrella manufacturers use better POE material instead.  
EVA is an opaque plastic material, it is softer than PVC and does not stick to the umbrella surface.

## E. Polyester Satin

Soft texture, Umbrellas using this fabric are known for their thick and shiny properties.

## F. Yarn Dyed

A fabric woven from dyed yarn is unique in its style compared to printed fabric, you cannot go wrong with its bright-colored appearance and no-fade quality. it is usually used for check design. but at a price that is expensive.





## Umbrella Handle

This is where you should hold the umbrella whether it's open or closed. Wood and plastic are the most common handle materials. Still, others such as EVA foam, rubber, acrylics, aluminum, and any combination of them can be used as well.

### 5.1 Wood Handle

Two kind material: Polywood and wooden. Usually used plywood, wooden is too expensive.

In the umbrella file, we usually call wooden for poly-wood material.

Umbrella manufacturers usually engraved corporation brand logo on the umbrella handle, it is good for promotion purpose!



## 5.2 Plastic Handle

Plastic handle is lightweight, Umbrella manufacturers can make any color handles according to customer requirement.

And the handle surface can be a coating of four options:

1. silver coating
2. rubber coating
3. nickel coating
4. imitation leather coating

This material also comes in many forms: PS, ABS, and PP.

Polypropylene (PP) and acrylonitrile butadiene styrene (ABS) plastics are used for regular umbrellas.

3 fold auto open umbrella handle is made of ABS material, the crook handle is made of PP material.

Moreover, ABS is more expensive than PP plastic.

## 5.3 EVA Foam Handle

Usually, this material is used for golf umbrella. And the popular color is black.



## 5.4 Rubber Handle

Usually, this material is used for golf umbrella, the price is too expensive.

## 5.5 Acrylics Handle

Usually Acrylics material is for transparent color, and it is very expensive.

## 5.6 Aluminium Handle

This style handle is lightweight

## 5.7 Bamboo Handle

This type of handle is currently used less, mostly used for Japanese umbrellas.

## 5.8 Silica Gel Handle

The cost is high, and the handle feels soft. It is like touching the human skin.



## 5.9 Light Handle

In the evening, walking on the rain day used the umbrella with light handle is very safe.



## Conclusion

When it comes to umbrella materials, choose what will endure the rain, sun, and other weather elements. There are many varieties in the market today but always go for good quality. That way you can enjoy your umbrella for a very long time.

Don't forget to consider all the factors before buying your umbrella. Know the purpose and the type of umbrella you need. This will make it easy to choose.

If you are not sure what to do, you can get to touch with us. We will advise you professionally and help you get your desired result.

Superain umbrella factory always offer the best umbrella project solution base on the customer requirements and local market needs, tell us what you need now!