

How to choose a Poly Tarp (Polyethylene Tarpaulin)

Information provide by CreativeShelters.com

Poly Tarps are one of the most popular tarps available to consumers due to the wide range of colors, sizes, weights/strength and price. This document will provide the information you need to select the right tarp for your application whether you are covering a canopy, carport, construction job, tent frame, outdoor event, yard project or wedding.

Poly Tarp Construction:

Poly Tarps are typically made of multiple layers with a woven mesh fabric sandwiched between two or more polyethylene sheets. Polyethylene is the same material used in cables, pipes and molded containers. It accounts for the largest portion of recycled plastics (recycle codes 1, 2 and 3). There are many other features that should be considered as well when evaluating your purchase. Consider the following list of tarp features before deciding on the right tarp for your application.

- **Tarp Thickness** – This is the actual thickness of the tarp measured in mils (1/1000 of an inch). The larger the number, the thicker the tarp. Typical light weight blue tarps found in most retail or hardware stores are about 6 mils. If you are planning a heavy duty use, such as covering a carport, consider a heavy duty tarp at 11 to 12 mils or a super heavy duty tarp at 23 mils.
- **Size** – The specified sizes of poly tarps will not be the actual measured size. Tarps sizes will vary from one manufacturer to another. Be sure to check the descriptions for the tarps. Tarps will typically be 4 to 6 inches smaller in each direction than the specified size. If a tarp is specified to be 10 feet the actual size will be 9 ft 6 in to 9 ft 8 in. This is due to the fact that tarps are cut to size and then hemmed at the edges. The hem uses up some of the original width leaving the tarp slightly smaller than specified.
- **Lamination** – Most poly tarps are constructed with a mesh fabric laminated between at least two layers of polyethylene film. Some heavy duty and super heavy duty tarps will have an additional layer of black polyethylene laminated in the center to prevent sun rays from penetrating the tarp.
- **Mesh Fabric** – The mesh fabric specification is the number of threads per square inch. An 8X8 mesh count would mean there are an average of 8 threads per inch in both the horizontal and vertical direction. Heavier duty tarps will have from 12 to 16 threads per inch. The thread weight may also be specified in denier. Denier is the weight in grams of 9000 ft of thread. The larger the denier the heavier the thread. Denier is not always specified but generally the heavier duty the tarp the larger the thread.
- **Grommets** – Grommets are metal rings lining a small hole at the edge of a tarp to accommodate the attachment of cords or bungees to the tarp. Spacing of grommets will vary from 18 inches to 36 inches depending on the grade of the tarp. Higher grade tarps will have the grommets spaced approximately 18 inches apart. Grommets may be made of aluminum (rust proof but not the strongest),

- brass (rust proof and strong), or plated steel (rust resistant and strong). The most durable and rustproof grommets for outdoor use are brass.
- **Reinforcement** – Tarps may have additional reinforcement around the perimeter of the tarp to help prevent ripping and tearing. There are four main types of reinforcement.
 - **Corner reinforcement** – The higher the grade of tarp the more likely you will find heavy reinforcement in the corners. Corner reinforcement helps prevent tearing out of the corner grommets and will extend the life of your tarp.
 - **Perimeter rope** – This is a rope which has been sewn inside the hem at the edge of the tarp to add reinforcement strength to the tarp.
 - **Hem** – The hem is formed by folding the edge of the tarp back onto the tarp and then stitching the entire hemmed area. Most poly tarps have a hem.
 - **Grommet reinforcement** – In addition to the corners some tarps have additional reinforcement at each grommet sometimes called a patch. This reinforcement is added to the hem area of the tarp and is typically only available in the heaviest duty tarps. Note that some heavy duty tarps may use additional reinforcement in the hem to improve grommet strength and will not have the perimeter rope.
 - **UV Treated** – This is a chemical treatment done when manufacturing the tarp to help protect degradation of the poly tarp from UV rays.
 - **Waterproof** – Most poly tarps are waterproof. The laminated film layers of polyethylene are naturally waterproof. However, some screen poly tarps designed for truck bed covers and sun screens are not waterproof.
 - **Mildew and Rot Resistant** – Since polyethylene is water proof it also is very resistant to rot and mildew.
 - **Flame Retardant** – No poly tarp is flame-proof and should not be used near open flames or other heat sources. Some flame retardant tarps are available. If you are purchasing a flame retardant tarp, be sure you know and understand the specifications.
 - **Sun Blocking** – Sun blocking tarps have an additional layer of black polyethylene and black mesh threads to form a light blocking tarp.
 - **Color** – Tarps come in a wide range of colors all of which will not be covered here. Some tarps have special features that may be required for your application.
 - **Silver Sun Blocker** – These specialty tarps are designed with black polyethylene and black mesh laminated between silver poly on one side and either a light or dark poly on the other depending on the manufacturer. The key feature of these tarps is that they block the sun light, and are cooler underneath in the summer. These tarps are great for canopies and carports.
 - **White** – These tarps are great in that they provide some shade but allow some natural light to come through. Applications include wedding receptions, dining canopies and vendor booths.
 - **Clear** – Clear poly tarps are great anywhere you need to have a lot of light but still need to have protection from the weather such as green houses.

- **Blue, Green, Brown** – These tarps have no special color features but are great utility tarps for use in general construction or landscape maintenance.
- **Orange, Red, Yellow** - These brightly colored tarps are used where high visibility is preferred.

Special Canopy Tarps – Specialty poly tarps are tarps that are cut and sewn to meet a special requirement. These include peak drop or end cap tarps and valance tarps. These types of tarps have all the same features of standard rectangle or square tarps plus they are designed for a specific canopy function.

- **Peak Drop or End Cap tarps** – These tarps are cut to cover the peak end of the canopy. When ordering one of these tarps it is important to know the exact dimensions of your canopy and the style of the peak (low, medium or high). If you are designing your own canopy and plan to use an end cap tarp it would be a good idea to check out available sizes before you start your design. They can be ordered with and without zippers that act like a door entry.
- **Valance Poly Tarps** – Valance canopy tarps are designed to cover the top of the canopy frame with a flap (the valance) that hangs down over the side by 8 - 10 inches giving a cleaner and more finished look to a canopy. Side tarps and end cap tarps can be tucked up under the valance to provide more protection from rain. The sizing on a valance tarp is for the main part of the tarp, not accounting for the valance portion. Actual sizes on valance tarps are typically short by 2-4 inches of specified sizes in both directions. Valance tarps are not recommended for use with low peak canopy designs as they do not have enough slope to guarantee water run off over the frame edge. If used on low peak canopies, there is a risk of water accumulating on the top of the canopy causing either tarp damages or collapsing the canopy frame.

Replacement Tarps – Replacement of existing canopy tarps is common since canopy frames tend to outlast tarps. Many retail stores that sell canopy kits do not sell replacement tarps or you may want to get a higher quality tarp. Ordering a replacement tarp is easy if you follow the measurement instructions found at www.creativeshelters.com/ReplacementTarpMeasurements.asp.

Poly Tarp Comparison Table:

This table is intended to provide as a quick comparison of typical tarp features. It is not based on any know document or specification but was compiled from many online sources. Use this as a guideline not as an actual specification.

	Light weight	Medium Weight	Heavy duty	Super Heavy Duty
Thickness	5-6 mil	9-10 mil	11-12 mil	23-24 mil
Laminate layers	3	3	3-4	3-4
Mesh Count	8 x 8 / sq in.	10 x 10 / sq in.	12 to 14 / sq in.	16x16 / sq in.
Mesh Denier	800	1000	1200	
Weight (per sq. yard)	~2 to 3 oz.	~ 4.5 oz.	~6 oz.	~11 to 12 oz.
Grommet spacing	~18-36 inches	~18-36 inches	~18 inches	~18 inches
Grommet type	Varies	Varies	Brass	Brass
Rope	Available	Available	Available	Hem reinforced
UV Treated	Available	Available	Available	Available
Waterproof	Yes	Yes	Yes	Yes
Rot resistant	Yes	Yes	Yes	Yes
Mildew resistant	Yes	Yes	Yes	Yes
Uses				