

THREAD & NEEDLE RECOMMENDATIONS

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THREAD MATERIAL OVERVIEW

POLYESTER

Best Choice for Outdoor Projects

Polyester is the most common choice for outdoor applications. Perfect for sail and canvas work polyester thread has high strength and stretch control, stability in sunlight (UVR) and resistance to needle heat, abrasion, saltwater and mildew. Use a lighter weight polyester thread in sewing machines that struggle in heavy canvas.

PTFE/FLUOROPOLYMER

Lasts a Lifetime

PTFE and fluoropolymer threads (Helios & Tenara) come with a lifetime guarantee. These are the best threads to use for outdoor applications where your projects will see frequent, intense sun or other weather extremes. These threads are unaffected by exposure to UV rays, cleaning agents, pollution, saltwater, air, rain, and snow. These threads are an excellent choice for awnings, biminis, boat covers and more.

NYLON

Perfect for Upholstery

Nylon threads have excellent elasticity, which makes them the perfect choice for upholstery projects. When you sit on a seat, you want the thread to be able to give and rebound under your weight. Nylon is excellent for indoor upholstery, automotive upholstery, luggage and more.

MONOFILAMENT

Clear Thread for Hidden Stitches

Monofilament thread is a clear, strong nylon thread that blends in with fabrics. This thread sews well, and comes in three sizes. Use #18 for quilting, stretchy or heavy garments, and tacking and binding stitches; #40 for fine leather goods and upholstery; and #52 for binding and serging carpets and upholstery.

THREAD SIZES

THREAD SIZE	GOV. SIZE	TEXTILE SIZE	TENSILE STRENGTH	NEEDLE SIZE	FABRIC WEIGHT REC.
V-30	AA	30	4.5 lb.	#12 or 14	< 1.5 oz.
V-46	B	45	7.1 lb.	#14 or 16	< 3 oz.
V-69	E	70	10.6 lb.	#16 or 18	3–6 oz. & Sunbrella
V-92	F	90	14.2 lb.	#18 or 20	6–10 oz. & Sunbrella
V-138	FF	135	21.2 lb.	#20 or 22	> 10 oz.

6 QUICK TIPS ABOUT THREAD SIZE

- #1** V-69 is the heaviest commercial size recommended for home sewing machines.
- #2** Heavier threads make your stitching more visible.
- #3** The thread size measures the thread's thickness. If another weight is given for thread (like ounces), it refers to the amount of thread on the spool.
- #4** Thread tends to get stronger as it gets heavier.
- #5** The tension on your sewing machine will need adjusting when you switch thread weights.
- #6** Try to use a needle where the eye is 40% larger than the thickness of the thread.

MARINE

For marine applications like dodgers, biminis, boat cabins, awnings, sail covers, cockpit cushions and more.

NEEDLE SIZE & THREAD	HOME MACHINE								INDUSTRIAL MACHINE									
SPECIFICATIONS	NEEDLE POINT	NEEDLE SIZE	V-30 POLY	V-46 POLY	V-69 POLY	V-69 UV NYLON	TENARA*, HELIOS	MONOFILAMENT	NEEDLE SIZE	V-30 POLY	V-46 POLY	V-69 POLY	V-69 UV NYLON	V-92 POLY	V-92 UV NYLON	TENARA*, HELIOS	HEAVY TENARA*	MONOFILAMENT
ALLSPORT VINYL	Sharp	#18			✓				#20					✓	✓			
BAG/FLAG NYLON	Sharp	#14		✓					#14		✓							
BAG MESH	Sharp	#16			✓				#16			✓						
BOAT BLANKET	Sharp	#18			✓		✓		#20					✓		✓		
BRISA OUTDOOR	Sharp	#18			✓		✓		#20					✓	✓	✓		
CARPET HEADLINER	Sharp	#20			✓				#20					✓				
CHANNELING FABRIC	Sharp	#18			✓		✓		#18					✓		✓		
CHILEWICH	Sharp	N/A							#20					✓				
COTTON DUCK (LIGHT)	Sharp	#18			✓				#18			✓						
COTTON DUCK (HEAVY)	Sharp	#20			✓				#20					✓				
CUSHION UNDERLINING	Sharp	#18			✓			✓	#18					✓				✓
DACRON (3.9 OZ)	Sharp	#16			✓		✓		#16			✓				✓		
DACRON (5-9 OZ.)	S,DI,SD1	#16, 18			✓		✓		#18-22					✓		✓		
DRY LEATHER	DI	N/A							#18-23					✓	✓			
FIRESIST	Sharp	#18			✓		✓		#20					✓		✓	✓	

Ball = Ballpoint **DI** = Diamond Point **S** = Sharp

*Use a #14 or #16 needle with Tenara thread or a #19 or #20 with Heavy Tenara thread.

NEEDLE SIZE & THREAD	HOME MACHINE								INDUSTRIAL MACHINE									
SPECIFICATIONS	NEEDLE POINT	NEEDLE SIZE	V-30 POLY	V-46 POLY	V-69 POLY	V-69 UV NYLON	TENARA*, HELIOS	MONOFILAMENT	NEEDLE SIZE	V-30 POLY	V-46 POLY	V-69 POLY	V-69 UV NYLON	V-92 POLY	V-92 UV NYLON	TENARA*, HELIOS	HEAVY TENARA*	MONOFILAMENT
HEADLINER	Sharp	#18			✓			✓	#20			✓						✓
HERCULITE RIVIERA	Sharp	#18			✓		✓		#20					✓		✓		
MARINE TOPPING	Sharp	#18			✓		✓		#20					✓		✓		
MARITIME	Sharp	#18			✓		✓		#20					✓		✓	✓	
MOSQUITO NETTING	Ball	#14	✓						#14	✓								
NAUGAHYDE	Sharp	#18			✓		✓		#20					✓		✓		
NAUGA SOFT	Sharp	#18			✓	✓			#18			✓	✓					
ODYSSEY III	Sharp	#18			✓		✓		#18					✓		✓		
PHIFERTEX & PLUS	Sharp	#18			✓		✓		#20					✓		✓		
PLASTIPANE CLEAR VINYL	Sharp	#16			✓				#18			✓						
POLYESTER MESH	Sharp	#14		✓					#14		✓							
SEABROOK	Sharp	#18			✓		✓		#20					✓		✓		
SEAGUARD FLEX	Sharp	#18			✓		✓		#20					✓		✓		
SEA MARK™	Sharp	#18			✓		✓		#18					✓		✓		
SHELTER-RITE	Sharp	#18			✓		✓		#20					✓		✓	✓	
SPINNAKER CLOTH (.5-.75 OZ.)	Sharp	#12	✓						#12	✓								
SPINNAKER CLOTH (≥ 1.5 OZ.)	Sharp	#14		✓					#14		✓							
STAMOID®	Sharp	#18			✓		✓		#20					✓		✓		
SUNBRELLA® MARINE, AWNING, DECORATIVE SHADE	Sharp	#18			✓		✓		#20					✓		✓	✓	
SUNBRELLA® SHEER & SHADOW	Sharp	#14		✓					#14		✓							
SUNBRELLA® SLING	Sharp	#18			✓		✓		#20					✓		✓		

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Needle Size & Thread	Home Machine								Industrial Machine									
Specifications	Needle Point	Needle Size	V-30 Poly	V-46 Poly	V-69 Poly	V-69 UV Nylon	TENARA*, HELIOS	Monofilament	Needle Size	V-30 Poly	V-46 Poly	V-69 Poly	V-69 UV Nylon	V-92 Poly	V-92 UV Nylon	TENARA*, HELIOS	Heavy TENARA*	Monofilament
SUNBRELLA® UPHOLSTERY FABRIC	Sharp	#16			✓	✓			#16			✓	✓					
SUR LAST®	Sharp	#18			✓		✓		#18					✓		✓		
TRAMP MESH	S, DI	#20			✓		✓		#20			✓		✓		✓	✓	
TOP GUN	Sharp	#18			✓		✓		#20					✓		✓	✓	
ULTRALEATHER™	Ball	#18				✓		✓	#18				✓		✓			✓
WEBLON	Sharp	#16			✓		✓		#18					✓		✓		
WINDOW MATERIAL	Sharp	#18			✓		✓		#20					✓		✓		

Ball = Ballpoint DI = Diamond Point S = Sharp

*Use a #14 or #16 needle with Tenara thread or a #19 or #20 with Heavy Tenara thread.

OUTDOOR & PATIO

For outdoor home and patio applications like patio cushions, throw pillows, home awnings, outdoor drapery, and outdoor covers and more.

NEEDLE SIZE & THREAD	HOME MACHINE								INDUSTRIAL MACHINE							
SPECIFICATIONS	NEEDLE POINT	NEEDLE SIZE	V-30 POLY	V-46 POLY	V-69 POLY	V-69 UV NYLON	TENARA*, HELIOS	MONOFILAMENT	NEEDLE SIZE	V-30 POLY	V-46 POLY	V-69 POLY	V-92 POLY	TENARA*, HELIOS	HEAVY TENARA*	MONOFILAMENT
BRISA OUTDOOR	Sharp	#18			✓	✓	✓		#20				✓	✓		
COVINGTON OUTDOOR	Sharp	#16			✓	✓			#16			✓				
CUSHION UNDERLINING	Sharp	#18			✓	✓		✓	#18				✓			✓
FIRESIST	Sharp	#18			✓		✓		#20				✓	✓	✓	
GEOBELLA	Sharp	#16			✓	✓			#16			✓				
MARITIME	Sharp	#18			✓		✓		#20				✓	✓	✓	
MOSQUITO NETTING	Ballpoint	#14	✓						#14	✓						
OLY*FUN	Sharp	#14			✓	✓			#14			✓				
PHIFERTEX & PLUS	Sharp	#18			✓		✓		#20				✓	✓		
P/K LIFESTYLES OUTDOOR	Sharp	#16			✓	✓			#16			✓				
P/KAUFMANN OUTDOOR	Sharp	#16			✓	✓			#16			✓				
SUNBRELLA® MARINE, AWNING, DECORATIVE SHADE	Sharp	#18			✓		✓		#20				✓	✓	✓	
SUNBRELLA® SHEER & SHADOW	Sharp	#14		✓					#14		✓					
SUNBRELLA® SLING	Sharp	#18			✓		✓		#20				✓	✓		
SUNBRELLA® UPHOLSTERY FABRIC	Sharp	#16			✓	✓			#16			✓				
SUR LAST®	Sharp	#18			✓		✓		#18				✓	✓		
TOMMY BAHAMA OUTDOOR	Sharp	#16			✓	✓			#16			✓				
WAVERLY SUN N SHADE	Sharp	#16			✓	✓			#16			✓				

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HOME & UPHOLSTERY

For interior home and upholstery projects like pillows, slip covers, window treatments, cushions and more.

NEEDLE SIZE & THREAD	HOME & INDUSTRIAL MACHINE							
SPECIFICATIONS	NEEDLE POINT	NEEDLE SIZE	COATS DUAL DUTY XP POLY	V-46 POLY	V-69 POLY	V-69 NYLON	COATS EXTRA STRONG NYLON	MONOFILAMENT
BRAEMORE	Sharp	#16	✓			✓	✓	
BRISA	Ballpoint	#18				✓	✓	✓
COVINGTON	Sharp	#16	✓			✓	✓	
DENA HOME	Sharp	#16	✓			✓	✓	
EUROPATEX	Sharp	#16	✓			✓	✓	
HARPER HOME	Sharp	#16	✓			✓	✓	
HGTV HOME	Sharp	#16	✓			✓	✓	
JENNIFER ADAMS	Sharp	#16	✓			✓	✓	
NAUGA SOFT	Sharp	#18			✓	✓		
OLY*FUN	Sharp	#14	✓		✓	✓	✓	
P/K LIFESTYLES	Sharp	#16	✓			✓	✓	
P/KAUFMANN	Sharp	#16	✓			✓	✓	
SOFTLINE	Sharp	#10-14	✓					✓
SUNBRELLA® SHEER & SHADOW	Sharp	#14	✓	✓				
SUNBRELLA® UPHOLSTERY FABRIC	Sharp	#16			✓	✓	✓	
TOMMY BAHAMA HOME	Sharp	#16	✓			✓	✓	
ULTRALEATHER™	Ballpoint	#18				✓	✓	✓
WAVERLY	Sharp	#16	✓			✓	✓	
WILLIAMSBURG	Sharp	#16	✓			✓	✓	