

**CAUDWELL TEXTILES**  
**LION-TEX AGENCIES**



Stephen P. Caudwell

IMPORTERS AND DISTRIBUTORS OF QUALITY THREADS:  
Aman - Ackermann Embroidery - Donisthorpe - Beka Needles

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Phone: 527-4017 Fax: 527-4016

**GORE™ TENARA® Textile Products**

*Timeless Beauty*



GORE™ TENARA®  
SEWING THREAD  
WARRANTY

GORE™  
**Tenara**®  
SEWING THREAD

W. L. Gore &  
Associates GmbH  
guarantees that its  
GORE™ TENARA®

M 1000 sewing thread will be free from defects in material and workmanship and will not be damaged by exposure to sunlight, weather or water for a period of 15 years after purchase.

This warranty covers all applications for sun protection (e.g. awnings and shade sails) and marine applications (tarpaulins, boat awnings) except yacht sails.

This warranty extends to the original user of the article with which GORE™ TENARA® M 1000 sewing thread is used and to all subsequent owners of the article.

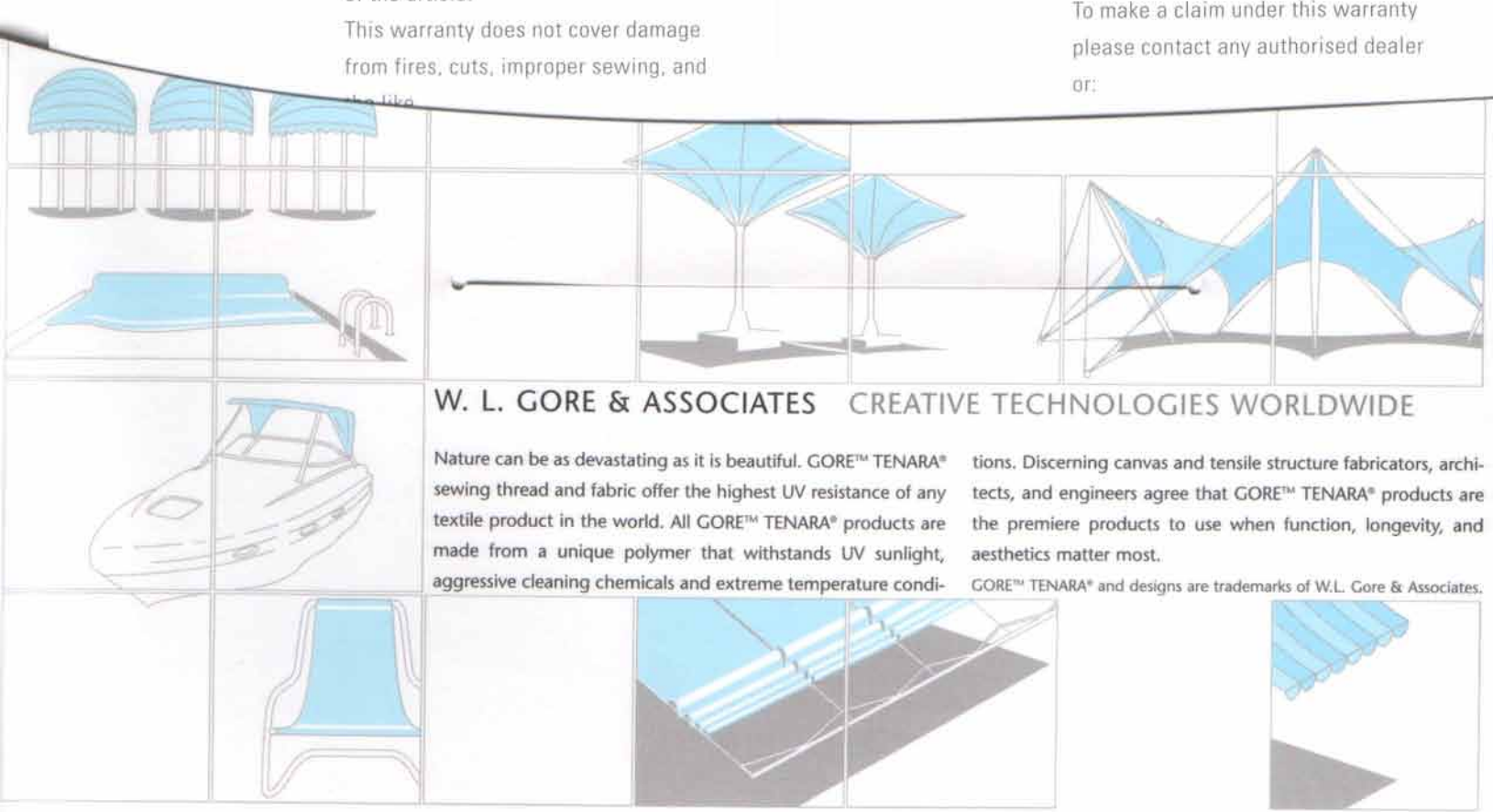
This warranty does not cover damage from fires, cuts, improper sewing, and

W. L. Gore & Associates GmbH will replace the sewing thread which does not meet this warranty, or, at your opinion, give a full refund for the thread. In addition, GORE will pay any authorised dealer for the reasonable and customary expense of repair for any article sewn completely with GORE™ TENARA® M 1000 sewing thread.

This warranty does not cover costs that incur in indirect connection with the repair such as removal, transportation or reinstallation.

This warranty does not in any way affect the purchaser's statutory rights.

To make a claim under this warranty please contact any authorised dealer or:



W. L. GORE & ASSOCIATES CREATIVE TECHNOLOGIES WORLDWIDE

Nature can be as devastating as it is beautiful. GORE™ TENARA® sewing thread and fabric offer the highest UV resistance of any textile product in the world. All GORE™ TENARA® products are made from a unique polymer that withstands UV sunlight, aggressive cleaning chemicals and extreme temperature condi-

tions. Discerning canvas and tensile structure fabricators, architects, and engineers agree that GORE™ TENARA® products are the premiere products to use when function, longevity, and aesthetics matter most.

GORE™ TENARA® and designs are trademarks of W.L. Gore & Associates.



**FOR SEAMS THAT ARE GUARANTEED  
TO HOLD LONGER: GORE™ TENARA® THREAD**



*Creative Technologies  
Worldwide*

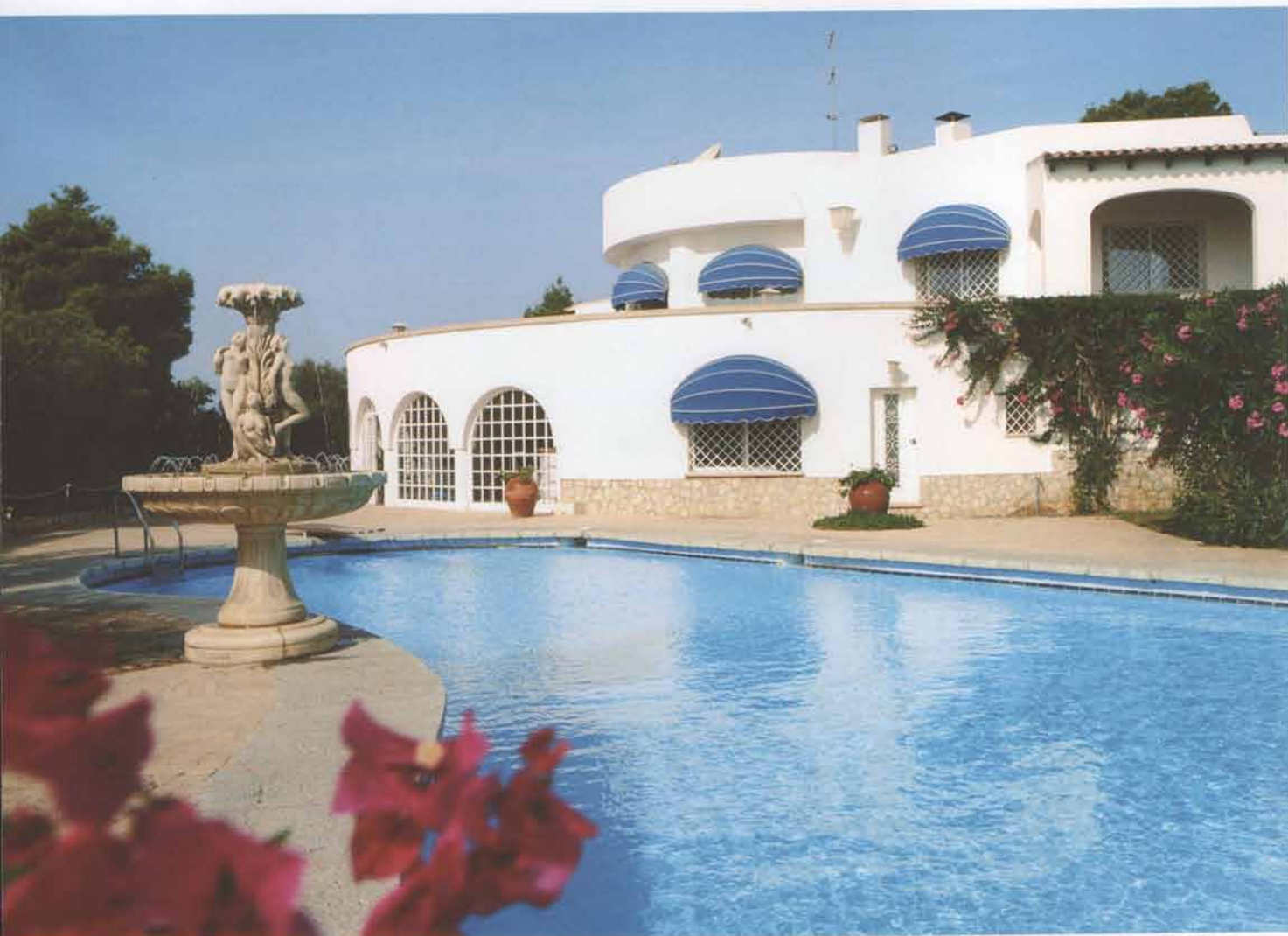


Awnings stiched with GORE™ TENARA® thread – guaranteed to retain their value

# GORE™ TENARA® THREAD: GUARANTEED TO HOLD!

Wind and weather pose a serious challenge to the seams of awnings, sun shade fabrics and other types of outdoor textiles. Within only a few years, they can rupture and tear. GORE™

TENARA® thread gives you the reliability you need. It is absolutely resistant to weathering – and that's guaranteed!



The endurance test – strong UV radiation, day after day. GORE™ TENARA® thread guarantees a long life for the seams on all types of outdoor textiles.



Awnings stitched with GORE™ TENARA® thread retain their shape and appearance even after many years' use.

#### **15-year guaranteed service life**

Awnings, sailcloth and tarpaulins are made of weather-resistant material. But even the best outdoor textiles suffer from the same weak points – namely the seams! Ultraviolet radiation, cleansing agents, dirt, saltwater, rain and snow all take their toll on every material. Wear often takes the form of ruptured or broken seams that then need to be repaired.

**GORE™ TENARA® thread puts an end to all this, since it comes with a 15-year guarantee from GORE.**

#### **The thread for extreme wear**

While ultraviolet light weakens other threads, GORE™ TENARA® thread retains its strength year after year. GORE™ TENARA® thread consists of pure expanded PTFE (polytetrafluoroethylene). This material is absolutely weather-resistant and non-fading. GORE™ TENARA® seams therefore retain their stability and strength even in extreme and prolonged sunshine.

Good reason indeed for NASA to choose GORE™ PTFE fibres for their space suits. After all, even the smallest weakness in a material can have fatal consequences in space.

**If you too are looking for reliability and strength, be sure to insist on GORE™ TENARA® sewing thread.**



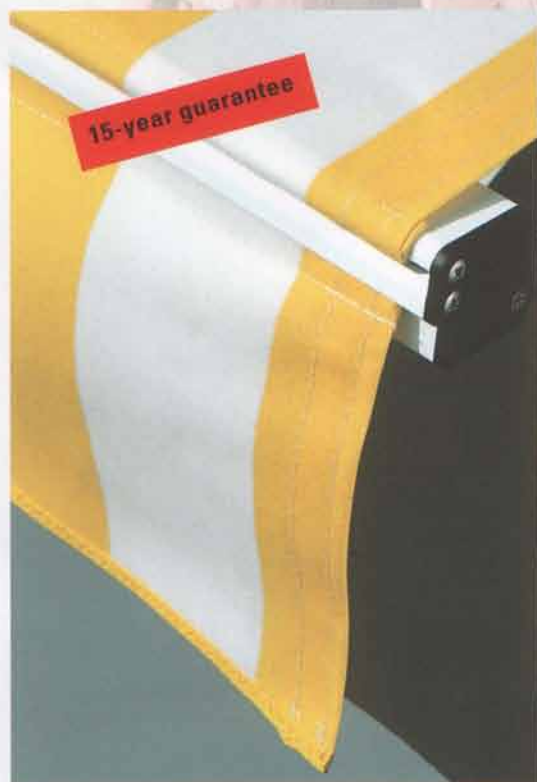
**Our thread keeps its strength – and our promise!**

# ENDURANCE TESTING IN ARIZONA: THE PROOF OF A LONG SERVICE LIFE

We know the value of our GORE™  
TENARA® thread ...

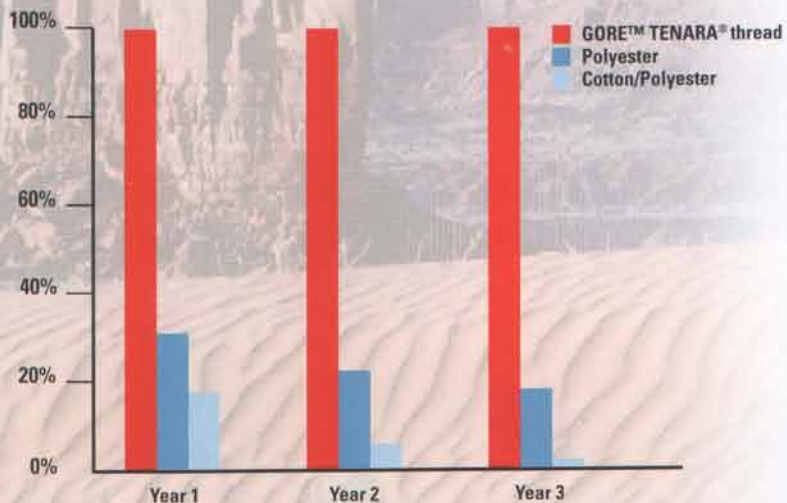
... and therefore give it a 15-year guarantee. If the seams of your tarpaulin or awning suffer from the effects of weathering during this time, we will assume the costs as set down in our guarantee conditions.

Look out for  
this sign!



GORE™ TENARA® thread:  
durability guaranteed

We tested GORE™ TENARA® thread under the harshest possible conditions in the Arizona desert. The results – after only a single year, a cotton thread had only one fifth of its original tear strength. But GORE™ TENARA® thread maintained the same high strength over the entire period.



W. L. Gore & Associates GmbH, Industrial Products

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W. L. Gore & Associates (UK) Ltd., Kirkton South Road, Kirkton Campus, Livingston,  
West Lothian EH54 7BT, SCOTLAND, Telephone 00 44/15 06 46 06 07, Telefax 00 44/15 06 46 22 70

Available colours  
 (01/2000)



### Characteristics

New GORE™TENARA® sewing thread style "TR" has been specially developed for high speed industrial sewing machines. The elasticity of GORE™TENARA® sewing thread style "TR" is similar to conventional polyester sewing thread. This means that no major adjustments need to be made to sewing machines when changing from polyester to GORE™TENARA® sewing thread. This "TR" style GORE™TENARA® sewing thread enables high speed sewing and has greater abrasion resistance.

### Technical Details

*250 Gms.*

GORE™TENARA® Sewing Thread	M1000TR	M1000HTR
Denier / Tex*:	156 tex / 1400 denier	311 tex / 2800 denier
Tensile Strength*:	35 N	70 N
Elongation*:	16 %	16 %
Length:	1700 m/Spool	850 m/Spool
Material:	expanded PTFE (polytetrafluoroethylene); hydrophobic	
Resistance:	unaffected by UV radiation, salt water, acid rain, cleaning agents, industrial pollutants, snow, micro-organisms	

\* Average production values

Information from Amann's sewing technology department

## Processing advice for TENARA<sup>®</sup> M 1000 TR

The manufacture of awning fabric is undertaken with either lockstitch or two-thread chainstitch sewing machinery. The following parameters should be taken into account to ensure optimum sewing quality:

- The basic setting of the stitch-forming sewing machine parts; such as the needle rise, lateral distance, needle to hook, needle bar height, must be set properly in relation to one another.
- The thread guiding paths, needle hole bore in the feed or in the needle plate and hook must be free from burrs.
- The threading schematic designated for the machine to be used is to be adhered to; Tenara should not be pulled through thread guiding eyelets with sharp edges.
- Thread tensions should be minimised as far as is possible; although a well balanced stitch formation must never the less be ensured.

### Recommendations when using lockstitch sewing machinery

(e.g. Jentschmann, Schulte)

- Sewing speed approx. 2300 rpm.
- Use light metal lower thread bobbins to prevent after running when the machine stops.



- Sharp knives and suitable thread catchers are necessary to ensure precise cutting of the upper and lower threads.
- Needle for the right hand side: Nm 100, point shape R or RCL.  
Needle for the left hand side: Nm 100, point shape RCR.
- The latest machine model from Jentschmann uses a special hook, which allows a sewing speed of up to approx. 2600 rpm. Older sewing machinery can be retro-fitted with this hook.
- The correct thread distribution has been achieved when the thread knots are in the middle of the workpiece.

LOCKSTITCH (stitch type 301)

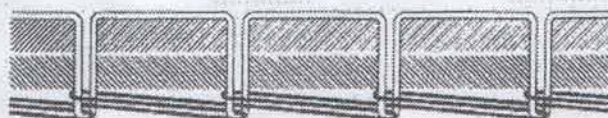


Balanced stitch formation: maximum seam elasticity and tensile strength.

**Recommendations when using two-thread chainstitch sewing machinery (e.g. Schulte)**

- Sewing speed approx. 2600 rpm.
- Needles Nm 100, point shape R
- The stitch formation should correspond with the following drawing:

TWO-THREAD CHAINSTITCH (stitch type 401)



Correct thread distribution

<b>Tenara (Gore Fibers)</b>	<b>Amann</b>
colour-name	colour-number
TR-Clear	1000
TR-White	2001
TR-Light Blue	1318
TR-Chesapeake Bay Blue	24
TR-Yellow	607
TR-Orange	450
TR-Red	105
TR-Forest Green	240
TR-Grey	416
TR-Light Grey	411
TR-Chocolate Brown	173
TR-Black	4000

## Product data sheet TENARA® M 1000 TR

TENARA® M 1000 TR and M 1000 HTR are sewing threads, made of expanded polytetrafluor-ethylene (ePTFE) fibres from Gore being extremely resistant against UV-rays, atmospheric conditions and chemicals. A 15 years warranty exists for sun protective fabrics and boat-covers when sewn with TENARA®\*

\* The warranty-conditions, sewing tips and product descriptions are shown in a product-brochure.

### Application

For sun protective fabrics (awnings and others), boat-covers, sails, cabriolet tops, tents.

### Technical data<sup>Ⓞ</sup>

TENARA® M 1000 TR (HTR on request)

Material	expanded PTFE
Construction	monofilament-tape lubricated
Linear density (ISO 2060)	approx. Nm 6.0 / 1 (dtex 1,671 * 1)
Tensile strength (ISO 2062)	approx. 3,400 cN
Elongation at break (ISO 2062)	approx. 18 %

### Colour range

TENARA® M 1000 TR and M 1000 HTR are available translucent and in 11 very lightfast colours contained in our product brochure.

### Make-up

1.700 m kingspool (TENARA® M 1000 TR - *article number 2103*) and  
850 m kingspool (TENARA® M 1000 HTR - *article number 1734*)

### Needle size

The following needle sizes are recommended: TENARA® M 1000 TR - Nm 100 - 110 and  
TENARA® M 1000 HTR - Nm 120 - 140.



Ⓞ: data based on 2003; Technical data for clear  
These details and data are provided purely for informational purposes.