

**RECOMMENDED STANDARD SPECIFICATION
FOR
SYNTHETIC WEB TIE DOWNS**

WSTDA-T-1



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\$25.00

This recommended standard specification has been formulated as a guide to users, industry and government to ensure the proper use, maintenance and inspection of synthetic web tie down assemblies. The existence of this recommended standard specification does not, however, prevent members of the Web Sling & Tie Down Association, Inc. and other manufacturers from manufacturing or selling products not conforming to this standard.

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FOREWORD

This Recommended Standard Specification applies to synthetic web tie downs constructed with webbing woven from synthetic fibers (nylon, polyester) for the purpose of securing cargo. This standard recommends construction as well as identification and marking of these synthetic web tie downs. In addition, it gives important practical advise on the use, maintenance and inspection of these synthetic webtie downs.

The exclusion from this Recommended Standard Specification of synthetic web tie downs of different synthetic materials and capacities is not intended to preclude their use and shall not be interpreted in this manner.

Synthetic web tie downs made from materials or construction other than those detailed in this Recommended Standard Specification shall be used in accordance with the recommendations of the tie down manufacturer or qualified person. The specifications contained in this Recommended Standard Specification for Synthetic Web Tie Downs were formulated under the auspices of the Web Sling & Tie Down Association, Inc. This Recommended Standard Specification is intended to assist users in specifying the proper synthetic web tie down for their particular requirements, to serve as a guide to the industry in the construction and use of synthetic web tie downs and to serve as a guide to governmental and other regulatory bodies responsible for the proper use and inspection of synthetic web tie downs.

Safety is the paramount consideration involved in the use of any synthetic web tie down. This standard does not purport to address all safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of the regulatory limitations prior to use. The appropriate synthetic web tie down shall be selected by the user for their specific application. Users of synthetic web tie downs shall have knowledge on the proper method of cargo securement. Also users shall be knowledgeable about federal, state, provincial, local and industry regulations applicable to cargo securement.

MANDATORY AND ADVISORY RULES

**Mandatory rules are characterized by the use of the word “shall”.
If a rule is of an advisory nature, it is indicated by the use of the word
“should”, or it is stated as a recommendation.**

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CHAPTER 1.0

TERMINOLOGY AND DEFINITIONS OF SYNTHETIC WEB TIE DOWNS

SECTION 1.1 PURPOSE

1.1.1 This chapter provides a description of synthetic web tie downs and definitions that apply to such tie downs.

SECTION 1.2 DESCRIPTION

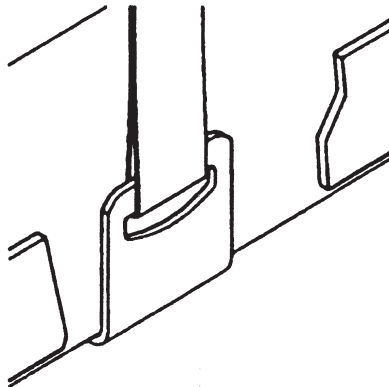
1.2.1 A synthetic web tie down is fabricated of synthetic webbing, with or without hardware, for the purpose of securing cargo.

SECTION 1.3 DEFINITION OF TERMS

ABRASION The mechanical wearing of a surface resulting from frictional contact with other materials or objects.

AGGREGATE WORKING LOAD LIMIT The summation of the working load limit (WLL) of all devices used to secure an article(s) on or to a vehicle.

ANCHOR POINT Part of the structure fitting or attachment on a vehicle or article of cargo to which a tie down is attached.



BREAKING STRENGTH The load in pounds or kilograms at which point any load bearing part of the synthetic web tie down fails.

COATING A finish applied to the webbing for a special purpose.

CREEP To slip out of place from pressure or wear: shift gradually.

DESIGN FACTOR The ratio of the breaking strength to the working load limit (WLL) for each synthetic web tie down.

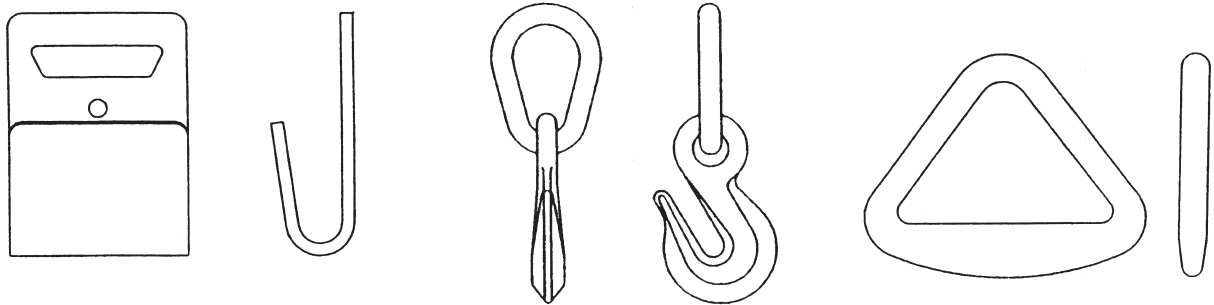
DESIGNATED PERSONNEL Selected or assigned by the employer or employer's representative as being competent to perform specific duties.

ELONGATION The measurement of stretch at a given load, expressed as a percentage of the original unloaded length.

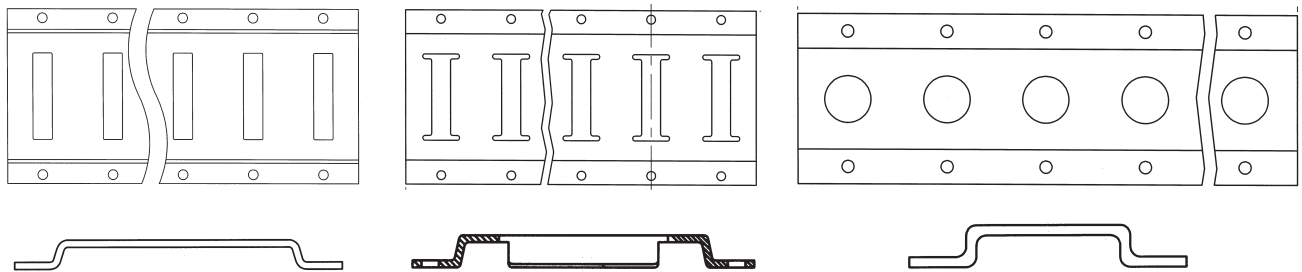
FABRICATION EFFICIENCY The ratio of a synthetic web tie down's breaking strength to the webbing breaking strength, expressed as a percentage prior to fabrication.

FILLING The yarn running from selvedge to selvedge at right angles to the warp. Also referred to as weft and picks.

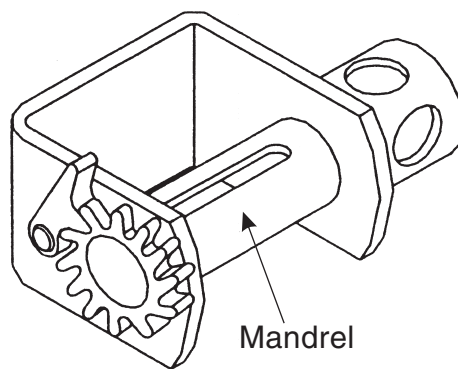
FITTING A load-bearing device that is sewn and/or attached to synthetic web tie downs.



LOGISTIC TRACK A rail made of high strength steel or aluminum that is mounted on or to a vehicle and used to secure the end fittings of a synthetic web tie down, rope tie-off, decking beam, garment beam, etc.



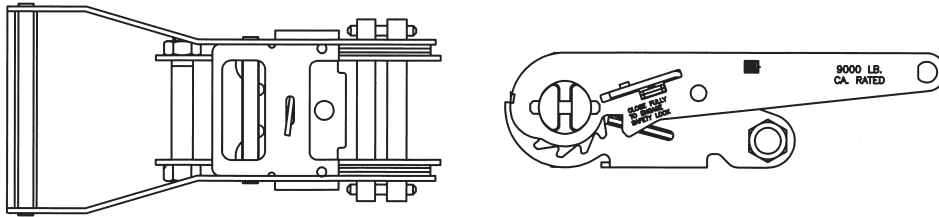
MANDREL The component of a winch and ratchet that the webbing is inserted into for tensioning the synthetic web tie down.



PROOF LOAD TEST A non-destructive pull test to some multiple of the working load limit (WLL) of the item.

QUALIFIED PERSON A person who by possession of a recognized degree, certificate of professional standing or by extensive knowledge, training and experience has successfully demonstrated the ability to solve or resolve problems related to the subject matter and work.

RATCHET A mechanical device used with synthetic web tie downs to incrementally adjust and tension the webbing.



SELVEDGE The narrow edge of woven fabric that runs parallel to the warp.

SPLICE That part of a synthetic web tie down that is lapped and sewn, with a stitch pattern determined by the manufacturer, to become an integral part of the tie down.

Types of splices are:

- a. Load-Bearing Splice - Any splice that carries a portion of the total load applied to the tie down.
- b. Assembly Splice - Any splice that joins two or more parts of the tie down without bearing any of the applied loads.

SECUREMENT SYSTEM A means to secure cargo, to include a synthetic web tie down and vehicle anchor points.

SYNTHETIC FIBER Man-made fibers.

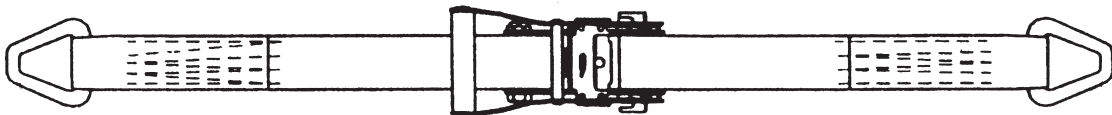
SYNTHETIC WEBBING A fabric, woven of high tenacity synthetic yarns offering suitable characteristics for use in the manufacture of synthetic web tie downs. Reference the WSTDA Recommended Standard Specification for Synthetic Webbing used for Tie Downs WSDTA-T-4.

SYNTHETIC YARN The fiber that is used to make webbing and thread.

TENSILE LOAD The force being applied expressed in pounds or kilograms.

THREAD The synthetic yarn that is used to sew a stitch pattern.

TIE DOWN An assembly fabricated of synthetic webbing, with or without hardware, for the purpose of securing cargo.



VEHICLE Any device for carrying goods or equipment, such as a truck, trailer, van or otherwise.

WARP The set of yarn in all woven fabrics that run lengthwise and parallel to the selvedge and is interwoven with the filling.

WEB WIDTH The distance across the webbing from outer selvedge to outer selvedge.

WINCH A tensioning device, which is mounted directly to the vehicle for tensioning synthetic web tie downs used to secure cargo. Reference the WSTDA Recommended Standard Specifications for Winches Used With Synthetic Web Tie Downs WSTDA-T-3.

WORKING LOAD LIMIT The maximum allowable load assigned to each synthetic web tie down by the manufacturer which is not to exceed one-third of the complete assembly breaking strength.

YARN The synthetic fiber that is used to make webbing and thread.

CHAPTER 2.0

CONSTRUCTION OF SYNTHETIC WEB TIE DOWNS

SECTION 2.1 PURPOSE

2.1.1 This chapter provides an outline of materials and construction characteristics of synthetic web tie downs.

SECTION 2.2 WEBBING

- 2.2.1 Webbing shall conform to the WSTDA Recommended Standard Specification for Synthetic Webbing Used For Tie Downs WSTDA-T-4.
- 2.2.2 The webbing shall be certifiable to tensile strength, have uniform thickness and width and have selvages.
- 2.2.3 Webbing shall be woven from a synthetic yarn that is heat and light resistant.
- 2.2.4 Nylon webbing is used in many applications where shock absorption properties are important because nylon webbing has higher elongation than polyester webbing of the same construction and strength. Nylon webbing has better natural abrasion resistance properties than polyester webbing, although some over coatings allow approximately equal performance of both types. Nylon is generally more resistant to most alkalis than polyester.
- 2.2.5 Polyester webbing is typically used in systems where low elongation and low creep are desirable. Polyester's higher density allows thinner webbing than nylon (at equal strength). Polyester webbing has better natural resistance to moisture than nylon, although some over coatings allow approximately equal performance of both types. Polyester is generally more resistant to acids than nylon.
- 2.2.6 All webbing ends shall be sealed by heat or other suitable means to prevent raveling.
- 2.2.7 Webbing may be coated with suitable materials that will impart desirable characteristics, such as:
- a. Abrasion resistance
 - b. Sealing to prevent penetration of foreign particles and matter
 - c. Increased coefficient of friction
 - d. Ultra-violet light resistance

SECTION 2.3 THREAD

2.3.1 The thread used in the sewing of synthetic web tie down assemblies shall conform to the WSTDA Recommended Standard Specification for Synthetic Sewing Threads for Slings and Tie Downs WSTDA-TH-1.

SECTION 2.4 STITCHING

- 2.4.1 The stitch pattern and length of stitching shall be in accordance with the tie down manufacturer's standard practice.
- 2.4.2 The stitching in all load-bearing stitch patterns shall be of sufficient strength to achieve a minimum design factor of three (3).
- 2.4.3 All stitches shall be lock-stitched and preferably continuous. When not continuous, they shall be backstitched at the ends to prevent raveling.

SECTION 2.5 HARDWARE (FITTINGS & BUCKLES)

▲ WARNING
The use of improper fittings and/or materials may result in severe personal injury or death

- 2.5.1 This section relates to the hardware, made of metal or other suitable materials, which may be attached to a synthetic web tie down for the purpose of securing cargo. The hardware may be a permanent or detachable part of the tie down.
- 2.5.1.1 **Material** - The material selected shall be compatible with the mechanical and environmental requirements imposed on the hardware and synthetic web.
- 2.5.1.2 **Finish** - All surfaces shall be cleanly finished with smooth edges to prevent cutting of the webbing. Additional corrosion resistance coatings and/or procedures are highly recommended.
- 2.5.2 **Design Criteria** - Hardware shall have a minimum design factor of three (3) and have sufficient strength to sustain a proof load test of one and one half (1.5) times the working load limit (WLL) without permanent deformation.
- 2.5.3 **Reuse of Hardware** - Hardware shall be inspected prior to reuse. Hardware shall not be reused if excessive wear, pitting, corrosion, cracks, distortion and/or breaks are visible. No repairs shall be permitted.
- 2.5.4 **Proof Load Test** - Synthetic web tie downs incorporating reused hardware shall be proof tested to a minimum of one and one half (1.5) times the working load limit (WLL) of the synthetic web tie down assembly.

SECTION 2.6 DESIGN FACTOR

WARNING

Never exceed the working load limit (WLL) of any synthetic web tie down(s). The loading of any synthetic web tie down beyond its WLL can result in severe personal injury or death. The tie down design factor is based on destructive, laboratory controlled testing conditions, which will not be exactly duplicated during actual loading conditions.

- 2.6.1 The design factor for new synthetic web tie downs with, or without hardware, shall be a minimum of three (3) when tested in accordance with Chapter 3 of this Standard Specification.

SECTION 2.7 IDENTIFICATION / MARKING REQUIREMENTS

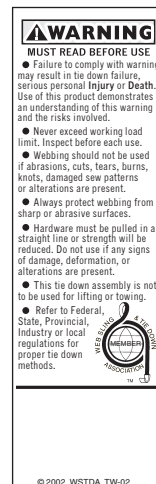
- 2.7.1 Each synthetic web tie down shall be marked or labeled, by the manufacturer, using an identification tag, stencil or other means with the following required information:
- Name and/or trademark of the tie down manufacturer
 - Working load limit (WLL) in pounds and kilograms

EXAMPLE

ABC Manufacturing Corp.
WLL 5,000 LBS (2,270 KGS)

- 2.7.2 An optional warning label is recommended.

EXAMPLE



- 2.7.3 If the required identification markings become illegible or missing, the synthetic web tie down shall be removed from service.

SECTION 2.8 RATED CAPACITIES

- 2.8.1 The working load limit (WLL) of a synthetic web tie down shall be based on one-third (1/3) of the breaking strength of the complete assembly and not individual components.
- 2.8.2 A synthetic web tie down shall not be subjected to loads greater than the working load limit (WLL) assigned by the manufacturer.
- 2.8.3 Each manufacturer shall retain test data to verify breaking strengths. Destructive tests shall be conducted according to the test procedure outlined in Chapter 3 of this Standard Specification.

CHAPTER 3.0

STANDARD PROCEDURES FOR TESTING SYNTHETIC WEB TIE DOWNS

SECTION 3.1 PURPOSE

3.1.1 This chapter provides standard procedures for the testing of synthetic web tie downs.

SECTION 3.2 TYPES OF TESTS

3.2.1 **Destructive Test** - Testing of a complete synthetic web tie down for the purpose of verifying the breaking strength. The tie down shall be tested in a straight-line pull until destroyed (broken).

3.2.2 **Proof Load Test** - Testing of a complete synthetic web tie down to some multiple of the working load limit (WLL), usually one and one half (1.5) times the working load limit (WLL).

SECTION 3.3 TEST PROCEDURES FOR THE VERIFICATION OF TIE DOWN BREAKING STRENGTH

3.3.1 Atmospheric Conditions - Synthetic web tie down assemblies should be tested at ambient temperatures, unless otherwise specified, after the samples have been conditioned for a minimum period of 24 hours in an environment of 70 degrees Fahrenheit +/- 2 degrees and a relative humidity of 65% +/- 2%, per Federal Test Method Standard No. 191A, Method 4108. In the case of disputed or conflicting test results, additional tests should be conducted.

3.3.2 Tie down assemblies with fittings shall be pulled in such a manner that allows the fittings to be properly seated. In the case of a tie down assembly that incorporates a logistic track fitting, the tie down shall be pulled with the fitting in a sample of track.

3.3.3 A minimum of three (3) samples shall be tested to establish the breaking strength of a synthetic web tie down. The lowest test result shall be used to determine the breaking strength of the assembly.

3.3.4 The test samples should be taken from a production lot. However, to accommodate testing apparatus, specific test samples may be provided for testing purposes. Such test samples should be representative of production products.

3.3.5 All synthetic web tie downs are to be tested in a straight-line pull with force applied to both ends of the assembly. The ram shall be retracted at a uniform speed of 2 to 10 inches (50 to 250mm) per minute, or 100 to 1,000 pounds per second until failure. The tensile load at failure is the breaking strength.

3.3.6 The test machine shall be certified annually to ASTM E4 or equivalent.

3.3.7 Test results shall be kept on file by the synthetic web tie down manufacturer.

3.3.8 The synthetic web tie down manufacturer or an independent testing laboratory shall perform the testing of synthetic web tie downs.

SECTION 3.4 CERTIFICATION

3.4.1 When certification is required, a certificate shall be issued describing the type, date and results of test by the company performing the test.

CHAPTER 4.0

RECOMMENDED OPERATING PRACTICES

SECTION 4.1 PURPOSE

4.1.1 The purpose of this chapter is to provide guidelines to end users and enforcement personnel for proper selection, use and care, environmental considerations and inspection of synthetic web tie downs. These guidelines are not intended to replace proper training, experience and learned knowledge regarding proper tie down procedures.

SECTION 4.2 PROPER SELECTION

4.2.1 Select a synthetic web tie down having suitable characteristics for the type of load, environment and attachment to vehicle anchor point. Fittings shall have the required shape and size to attach properly to the vehicle anchor points.

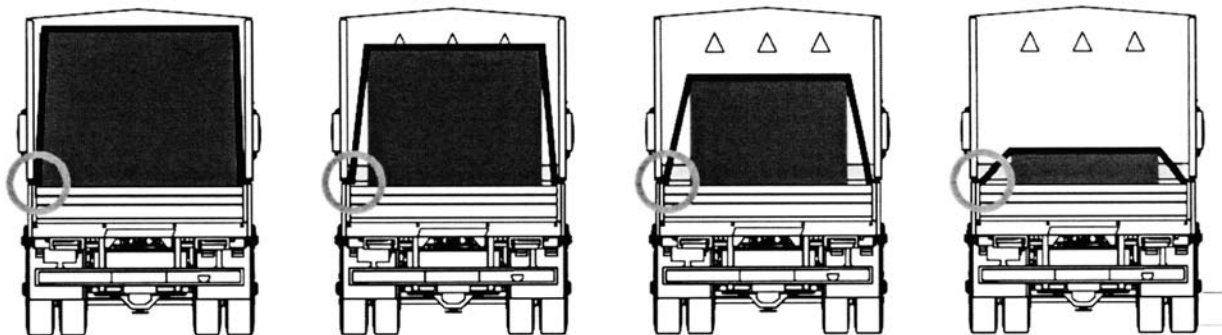
4.2.2 Identify the working load limit (WLL) marked on the synthetic web tie down by the manufacturer. If the required markings are illegible or missing, remove from service. Read all warnings and/or instructions provided by the manufacturer.

4.2.3 Identify the working load limit (WLL) of the vehicle anchor points. If no rating is visible contact the vehicle manufacturer for tie down instructions. The lesser-rated working load limit (WLL), whether that is the anchor point or the synthetic web tie down, shall determine the working load limit (WLL) of the securement system.

4.2.4 Determine the proper number of synthetic web tie downs required based upon the weight of the cargo, the type of commodity, the aggregate working load limit of the securement system and the length/weight ratio of the cargo being secured. Additionally, end users and enforcement personnel are required to know commodity specific rules governing proper tie down determination as published by the Federal Motor Carrier Safety Administration Standard for Protection Against Shifting and Falling Cargo; Final Rule effective December 26, 2002.

SECTION 4.3 USE AND CARE

4.3.1 Synthetic web tie downs shall not be loaded in excess of the working load limit (WLL) provided by the manufacturer. Consideration should be given to the angle from the horizontal (tie down to trailer) that affects the downward pressure. (see chart below)



Angle: 90 degrees

60 degrees

45 degrees

30 degrees

Effective
Downward
Pressure

100%

87%

71%

50%

- 4.3.2 Synthetic web tie downs shall be attached to the vehicle and positioned in accordance with applicable regulations for the commodity being transported to prevent against shifting and/or loss of cargo.
- 4.3.3 Synthetic web tie downs should not be dropped or dragged on the floor, ground or any abrasive surface.
- 4.3.4 Synthetic web tie downs shall not be shortened, joined, repaired or lengthened by being tied into knots.
- 4.3.5 Synthetic web tie downs should not be pulled from under cargo when the cargo is resting on the tie down.
- 4.3.6 Synthetic web tie downs shall always be protected from corners, edges, protrusions and abrasive surfaces with edge protection that resists abrasion, cutting or crushing.
- 4.3.7 Synthetic web tie downs designed to secure cargo shall not be used for lifting, lowering or suspending cargo or for towing.
- 4.3.8 Before operating any synthetic web tie down assembly the user shall secure his footing to prevent slipping or falling. In adverse weather conditions, including freezing temperatures, additional caution should be exercised.
- 4.3.9 When using winch or ratchet straps a minimum of two (2) and a maximum of four (4) wraps of webbing shall be on the winch or ratchet mandrel. Excessive wraps of webbing on the mandrel may reduce the working load limit (WLL) of the synthetic web tie down and may interfere with proper operation.
- 4.3.10 Synthetic web tie downs shall be used, inspected and adjusted during the transportation of cargo per applicable federal, state, provincial, local and industry regulations.

SECTION 4.4 ENVIRONMENTAL CONSIDERATIONS

- 4.4.1 Synthetic web tie downs should be stored in a cool, dry and dark place when not in use to prevent loss of strength through exposure to ultra-violet light.
- 4.4.2 Chemically active environments can affect the strength of synthetic web tie downs in varying degrees ranging from little to total degradation. The tie down manufacturer should be consulted before any synthetic tie down is used or stored in chemically active environments.
 - 4.4.2.1 **ACIDS**
 - 4.4.2.1.1 Nylon is subject to degradation in acids, ranging from little to total degradation.
 - 4.4.2.1.2 Polyester is resistant to many acids, but is subject to degradation ranging from little to moderate with some acids.
 - 4.4.2.1.3 Each application shall be evaluated, taking into consideration the following:
 - i. Type of Acid
 - ii. Exposure Conditions
 - iii. Concentration
 - iv. Temperature

4.4.2.2 ALKALIS

4.4.2.2.1 Polyester is subject to degradation in alkalis, ranging from little to total degradation.

4.4.2.2.3 Nylon is resistant to many alkalis, but is subject to degradation ranging from little to moderate with some alkalis.

4.4.2.2.3 Each application shall be evaluated, taking into consideration the following:

- i. Type of Alkali
- ii. Exposure Conditions
- iii. Concentration
- iv. Temperature

4.4.3 Tie downs using nylon or polyester webbing shall not be used at temperatures in excess of 194 degrees F (90 degrees C) or below -40 degrees F (-40 degrees C).

4.4.4 Tie downs using nylon or polyester webbing shall not come in contact with any object with a temperature in excess of 194 degrees F (90 degrees C) or below -40 degrees F (-40 degrees C). This includes the cargo being secured, vehicle and anchor points.

4.4.5 Synthetic web tie downs incorporating aluminum fittings shall not be used where fumes, vapors, sprays, mists or liquids of alkalis or acids are present.

4.4.6 Environments in which synthetic web tie downs are continuously exposed to ultra-violet light affect the strength of the tie downs in varying degrees ranging from slight to total degradation.

4.4.6.1 Factors that affect the degree of strength loss:

- i. Length of time of continuous exposure
- ii. Webbing construction and design
- iii. Other environmental factors such as weather conditions and geographic location

4.4.6.2 Suggested procedures to minimize the affects of ultra-violet light:

- i. Store synthetic web tie downs in a cool, dry and dark place when not in use
- ii. Consult tie down manufacturer for coatings that may be applied to the webbing

4.4.6.3 Some visual indications of possible ultra-violet light degradation are:

- i. Bleaching out of webbing color
- ii. Increased stiffness of webbing
- iii. Surface abrasion in areas not normally in contact with the load

CAUTION: Degradation can take place without visible indications. If in doubt, contact the tie down manufacturer for possible proof load test.

4.4.7 Synthetic web tie downs and associated hardware may be subjected to dirt, mud, snow, ice, road salt, cleaning solutions, etc. Frequent inspection, cleaning and lubrication as appropriate will ensure proper operating condition. Aluminum fittings should not be cleaned with chlorine based cleaning agents, or used in high chlorine environments.

SECTION 4.5 INSPECTIONS

4.5.1 Type of Inspection

- a. INITIAL INSPECTION** - Designated personnel shall inspect any synthetic web tie down before it is placed in service to ensure that the correct tie down is being used and to determine that the tie down meets the requirements of this standard specification.
- b. FREQUENT INSPECTION** - The person handling the synthetic web tie down each time it is used shall make this inspection.
- c. PERIODIC INSPECTION** - Designated personnel shall conduct this inspection. Frequency of a periodic inspection shall be based on, but not limited to:
 - i. Frequency of use
 - ii. Severity of service conditions
 - iii. Experience gained on the service life of synthetic web tie downs used in similar applications

SECTION 4.6 INSPECTION RECORDS

- 4.6.1 The user(s) of synthetic web tie downs should establish written inspection records to be kept on file. These records should show a description of the tie down(s), the condition at the time of the inspection, the date the inspection was performed and the person who performed the inspection.

SECTION 4.7 REMOVAL FROM SERVICE

- 4.7.1 A synthetic web tie down shall be removed from service if any of the following are visible:
- a. Holes, tears, cuts, snags or embedded particles which cause doubt as to the strength of the tie down. Figures 1 & 8
 - b. Broken or worn stitching in load bearing stitch patterns. Figure 2
 - c. Excessive abrasive wear. Figure 3
 - d. Knots in any part of the webbing. Figure 4
 - e. Melting, charring or weld spatter on any part of the webbing. Figure 5
 - f. Acid or alkali burns. Figure 6
 - g. Signs of ultra-violet light degradation.
 - h. Excessive pitting, corrosion, cracked, distorted or broken buckles or end fittings.
 - i. The working load limit (WLL) assigned by the tie down manufacturer is no longer visible.
 - j. Any other visible damage which causes doubt as to the strength of the tie down. Figures 7, 8 and 9

FIGURES - DAMAGED SYNTHETIC WEB TIE DOWNS

Figure 1
Holes, Tears
Cuts, Snags



Figure 2
Broken Or Worn Stitching
In Load Bearing Sew
Patterns

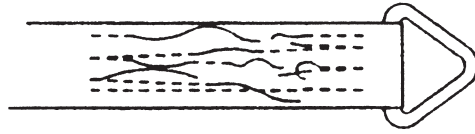


Figure 3
Excessive
Abrasive Wear

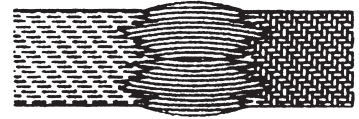


Figure 4
Knots In The
Tie Down



Figure 5
Melting Or Charring
Of The Tie Down,
Or Weld Spatter
On The Tie Down

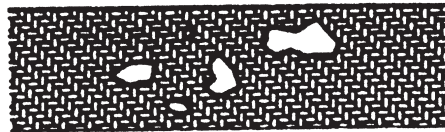


Figure 6
Chemical
Burns



Figure 7
Damaged Loop,
Eye Hook Too
Small Or Too Rough



Figure 8
Tear In Webbing
At The Fitting

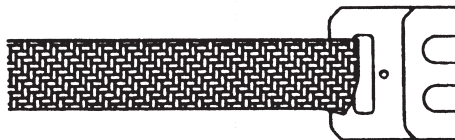


Figure 9
Other Apparent Damages
That May Affect Strength
Ratings; Such As Crushed
Webbing, Etc.



SECTION 4.8 REPAIRS OF SYNTHETIC WEB TIE DOWNS

- 4.8.1 No repairs of webbing, fittings, buckles or stitching/sew patterns shall be permitted.
- 4.8.2 Synthetic web tie downs may be re-webbed utilizing existing hardware if the tie down manufacturer determines the hardware is reusable.
- 4.8.3 Each synthetic web tie down re-webbed utilizing used hardware shall be proof load tested to one and one half (1.5) times the working load limit (WLL). The tie down manufacturer performing the re-web shall do this proof test and a certificate shall be provided to the user and kept on file by the tie down manufacturer.
- 4.8.4 When re-webbed, the tie down shall be marked with a label to identify when the re-web was performed and the name or trademark of the tie down manufacturer that performed the work.

ADDITIONAL RESOURCES

U.S. Department of Transportation
Federal Highway Administration (FHWA)
Federal Motor Carrier Safety Regulations
(FMCSRs 0, Title 49 of the Code of
Federal Regulations (CFR): Sections
392.9, Safe Loading; Part 393, Subpart 1
Protection Against Shifting or Falling Cargo
Copies of 49 CFR Parts 200-399 may be
purchased from the U.S. Government
Printing Office, (202) 512-1800.
For questions concerning specific
requirements you can contact the
Federal Highway Administration,
Office of Motor Carrier Research
and Standards (HCS-10),
400 Seventh Street, SW Washington,
D.C., 20590. Telephone (202) 366-4009
FAX (202) 366-8842.

WEB SLING & TIE DOWN ASSOCIATION, INC.
2105 Laurel Bush Road, Suite 200
Bel Air, Maryland 21015
Phone (443) 640-1070
Fax (443) 640-1031
Email: wstda@ksgroup.org
Website: www.wstda.com

Specialized Carriers & Rigging
Association **Cargo Securement On Motor
Vehicles; Steel.** Specialized Carriers &
Rigging Association, 2750 Prosperity Avenue,
Suite 620, Fairfax, VA 22031-4312.
Telephone (703) 698-0291
Fax (703) 698-0297

California Administrative Code:
California Highway Patrol (CHP)
Title 13: Barclays Lay Publisher,
50 California St. 18th Floor
San Francisco, CA 94111-4624
Telephone (800) 888-3600
Fax (415) 732-8861

In Canada Contact:
The Ministry of Transportation
In Each Province.

In Mexico Contact:
Director General de Transporte
Terreste Sub-Director de
Inspeccion del Transporte
(Rep. En el C.V.S.A.)
Calzada de las Bombas Number
411-11-Piso
Col. San Bartolo Coapa
Mexico, D.F.C.P. 04500



OTHER WEB SLING & TIE DOWN ASSOCIATION PUBLICATIONS

Recommended Standard Specifications:

Printed Books

Synthetic Web Slings	WSTDA-WS-1
Synthetic Polyester Roundslings	WSTDA-RS-1
Webbing for Synthetic Web Slings	WSTDA-WB-1
Sewing Threads for Slings & Tie Downs	WSTDA-TH-1
Synthetic Web Tie Downs	WSTDA-T-1
Winches Used With Web Tie Downs	WSTDA-T-3
Synthetic Webbing Used for Tie Downs	WSTDA-T-4
All Standards In A Three-Ring Binder	WSTDA-ASB-2006

Recommended Standard Specifications:

PDF Files On CD

Synthetic Web Slings	WSTDA-SCD-WS-1
Synthetic Polyester Roundslings	WSTDA-SCD-RS-1
Webbing for Synthetic Web Slings	WSTDA-SCD-WB-1
Sewing Threads for Slings & Tie Downs	WSTDA-SCD-TH-1
Synthetic Web Tie Downs	WSTDA-SCD-T-1
Winches Used With Web Tie Downs	WSTDA-SCD-T-3
Synthetic Webbing Used for Tie Downs	WSTDA-SCD-T-4
All Standards CD - (All above on one CD)	WSTDA-ASCD-2006

Operating & Inspection Manuals

Synthetic Web Slings	WSTDA-WS-2
Synthetic Web Slings	WSTDA-WS-PS-2 (pocket sized)
Synthetic Polyester Roundslings	WSTDA-RS-2
Synthetic Polyester Roundslings	WSTDA-RS-2-PS (pocket sized)
Synthetic Web Tie Downs	WSTDA-T-2

Video

Synthetic Web Sling Care & Inspection	WSTDA-WSV-1-VHS
Synthetic Web Sling Care & Inspection	WSTDA-WSV-1-CD

Illustrated Wall Chart

Inspection of Web Slings & Round Slings	WSTDA-WSWC-1
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UV Degradation Reports

Summary Report UV Degradation	WSTDA-UV-Sling-2003
UV Degradation Mini Manual	WSTDA-UV-MM-2005
UV Degradation Report	WSTDA-UVDR-1981 (Revised 2005)

Training CD-Rom

North America Cargo Securement Standard	WSTDA-CD-TP-2003
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Fabric Warning Labels

Nylon Web Slings	WSTDA-SW-02-N
Polyester Web Slings	WSTDA-SW-02-P
Tie Downs	WSTDA-TW-02
Round Slings	WSTDA-RSW-03

Paper Warning Sheets

Synthetic Web Slings	WSTDA-WSWS-02
Polyester Roundslings	WSTDA-RSWS-04
Tie Downs	WSTDA-TWS-97

For ordering information and prices, contact the association office or visit our website:

Web Sling & Tie Down Association, Inc.

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