

## INTRODUCTION

Electrical Solutions  
**Everything to BUNDLE,  
ROUTE and MANAGE** your  
Wiring Assembly.

**The answer to your cable  
management needs.**

Complementing the complete IS-Rayfast product portfolio, a vast range of professional cable management accessories are available, from a select range of manufacturers. Products include Cable Ties and Clips, Lacing Tapes and Cords, plus Accessories and Tooling.

With access to a considerable portfolio of cable management products, a solution can be sourced and matched to your specific requirements.

Products are available in a wide range of materials, styles, sizes and colours (from Nylon to high performance Stainless Steel). Temperature capabilities range from -80°C to +538°C.

Comprehensive solutions include everything necessary to bundle, identify, route, protect and terminate wires/cables. Supporting the most demanding applications requirements customers trust IS-Rayfast for:

- **Comprehensive solutions**
- **World class quality and reliability**
- **Innovative products and tools**
- **Unmatched Technical support**

A large selection of ergonomic cable tie installation tools are available - all with consistent and reliable performance.



### Cable Ties

A wide range of cable tie products are available from Nylon to Stainless Steel, used extensively across a broad range of industries and environments to secure and aesthetically enhance wire and cable systems.

### Wiring Accessories

Used in conjunction with cable ties to speed and simplify the mounting of cable and tubing. Installation methods include self-adhesive backed, user applied adhesives, screws, rivets or through-panel designs.

### Lacing Tapes and Cords

Lacing tapes and cords are commonly used to secure cable bundles, typically in the Aerospace industry. Available in a wide range of specifications, colours and sizes to meet the demands of this demanding market and specific customer requirements.



<b>Nylon Cable Ties</b>	Material Characteristics / Selection Chart	page 346
	PLT Pan-Ty® Cable Ties	page 348
	BT Dome-Top® Cable Ties	page 350
	Nylon Tie Solutions	page 352
	Tooling for Nylon Ties	page 353
	MIL-Spec Cross Reference	page 354
<b>Steel Cable Ties</b>	MLT Standard	page 356
	MLTC and MLTFC Coated	page 358
	MLTD Double Wrapped	page 359
	Tooling for metal ties	page 360
	MIL-Spec Cross Reference	page 361
<b>Cable Accessories</b>	Products Overview	page 362
<b>Lacing Tape</b>	General and Specifying information	page 363
	Nylon, Polyester & Teflon Lacing Tape	page 365
	Glass, Nomex® and Nylon Lacing Tape and Cord	page 366
	Nomex® Yarn	page 367

Material Characteristics

Nylon Cable Ties  
Selection Guide

Range Overview

Listed on the following pages are the two most popular cable tie types which are typically supplied in Nylon 6.6 material. Alternative materials are also available that offer different characteristics, as can be established from the chart below

- Pan-Ty® Locking Cable Ties
- Dome-Top® Barb Ty Cable Ties

These two products and others are available in a broad range of materials, other than the standard Nylon 6.6 as listed.

A range of alternative materials, together with their performance characteristics are reviewed in the tables below.

The materials described are available on most variants of Pan-Ty cable tie, whilst the Dome-Top cable tie has a more limited choice of materials. For more information on these cable ties and other alternatives please contact us for additional information.

Characteristic	Test Method	Standard Cable Tie Nylon 6.6	Weather Resistant# Nylon 6.6	Heat Stabilised Nylon 6.6	Flame Retardant Nylon 6.6	Weather Resistant Nylon 12	Poly-propylene
Part No. Suffix	-	-	0	30	60	120	109
Standard Colour	-	Natural\$	Black	Black*	Black**	Black	Green
Mechanical Properties							
Tensile Yield @ 23°C (psi)	ISO 527	12,000	12,000	12,000	11,000	6,700	4,100
Water Absorption (24hrs)	ASTM D570	1.2%	1.2%	1.2%	1.1%	0.3%	0.1%
Radiation Resist* (Rads)	-	1 x 10 <sup>5</sup>	1 x 10 <sup>5</sup>	1 x 10 <sup>5</sup>	1 x 10 <sup>5</sup>	3.5 x 10 <sup>6</sup>	1 x 10 <sup>6</sup>
Weathering (Years)	-	1 - 2	7 - 9	4 - 5	1 - 2	12 - 15	1
Impact Resistance	-	Good	Good	Good	Low	Good	High
Chemical Resistance							
Salts Resistance	-	Low	Low	Low	Low	High	Excellent
Hydrocarbons Resistance	-	Excellent	Excellent	Excellent	Excellent	Excellent	Good
Acids Resistance	-	Low	Low	Low	Low	Low	Excellent
Thermal Properties							
Max. Continuous Temp.	UL 746B	85°C	85°C	115°C	100°C	90°C	115°C
Flammability Rating	UL 94	V-2	V-2	V-2	V-0	HB	HB
Low Smoke	ASTM E662	Pass	Pass	Pass	Pass	-	-
Oxygen Index	BS ISO 4589	28	28	28	34	-	-
Halogen Free	IEC 60754-2	Yes	Yes	Yes	Yes	Yes	Yes
Burning Fume Toxicity	BSS-7239	Pass	Pass	Pass	Pass	-	-
Material Availability by Product Family							
Pan-Ty® Cable Ties	PLT	•	•	•	•	•	•
Dome-Top® Barb Ty	BT	•	•	•	•		

\$ Other colours available  
# Also available in 00 material (meets Mil Spec)  
\* Also available in Natural, use suffix ref. 39:  
\*\* Also available in Natural Ivory, use suffix ref. 69

## Material Characteristics

Nylon Cable Ties

Selection Guide



Characteristic	Test Method	Weather Resistant Poly-propylene	TEFZEL®	HALAR®	PEEK	Metal Detectable Nylon 6.6	Metal Detectable Poly-propylene
Part No. Suffix	-	100	76	702Y	71	86	186
Standard Colour	-	Black	Aqua Blue	Maroon	Brown	Lt Blue	Blue
Mechanical Properties							
Tensile Yield @ 23°C (psi)	ISO 527	4,100	7,500	7,000	15,200	-	-
Water Absorption (24hrs)	ASTM D570	0.1%	<0.03%	<0.05%	0.5%	1.2%	0.1%
Radiation Resist' (Rads)	-	1 x 10 <sup>6</sup>	2 x 10 <sup>8</sup>	2 x 10 <sup>8</sup>	1 x 10 <sup>9</sup>	-	1 x 10 <sup>6</sup>
Weathering (Years)	-	7 - 9	>15	>15	-	-	1
Impact Resistance	-	High	Excellent	Excellent	Excellent	Good	High
Chemical Resistance							
Salts Resistance	-	Excellent	Excellent	Excellent	Excellent	Low	Excellent
Hydrocarbons Resistance	-	Good	Excellent	Excellent	Excellent	Excellent	Good
Acids Resistance	-	Excellent	Excellent	Excellent	Good	Low	Excellent
Thermal Properties							
Max. Continuous Temp.	UL 746B	115°C	170°C	150°C	260°C	85°C	115°C
Flammability Rating	UL 94	HB	V-0	V-0	V-0	HB	HB
Low Smoke	ASTM E662	-	-	-	Pass	-	-
Oxygen Index	BS ISO 4589	-	30	52	35	-	-
Halogen Free	IEC 60754-2	Yes	No	No	Yes	Yes	Yes
Burning Fume Toxicity	BSS-7239	-	-	-	-	-	-
Material Availability by Product Family							
Pan-Ty® Cable Ties	PLT	•	•	•	•	•	•
Dome-Top® Barb Ty	BT						

TEFZEL is a registered trademark of E.I. du Pont de Nemours and Company

HALAR is a registered trademark of Ausimont USA, Inc.

## PLT Series

### Pan-Ty® Locking Nylon Cable Ties Features and Benefits

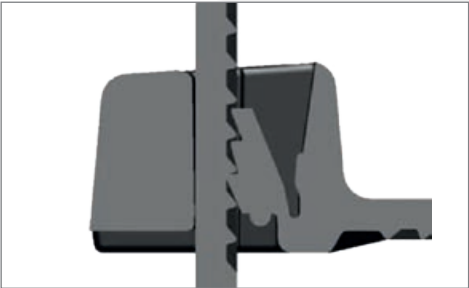
These versatile cable ties can be used in countless applications wherever you need to bundle wire, cable, or hoses. Available in standard (Natural) and weather resistant (Black) Nylon, with other colours and materials available to special order.

#### Features & Benefits

- Curved tip is easy to pick up from flat surface and allows faster initial threading.
- High strength and low initial insertion force.
- One piece construction for consistent performance and reliability.
- Versatile cable ties can be used in countless applications.
- A variety of materials and colours are available for specific applications.
- UL Listed for use in plenum or air handling spaces per NEC.



This product section covers the more popular standard locking tie, for variants such as Clamp, Flag, Marker Push Mount and Locking Tie please contact us for additional information.



One-piece locking wedge provides consistent, reliable performance. Plus design offers low threading force reducing operator fatigue and improves productivity.



Curved tip threads easily and installs faster. Finger grip ensures positive grip during threading of tie.

#### Table of Colours

Suffix	Colour	Material
-	Natural	Nylon 6.6
0	Black*	Nylon 6.6*
00	Black**	Nylon 6.6**
1	Brown	Nylon 6.6
2	Red	Nylon 6.6
3	Orange	Nylon 6.6
4Y	Yellow	Nylon 6.6
5	Green	Nylon 6.6
6	Blue	Nylon 6.6
7	Purple	Nylon 6.6
8	Grey	Nylon 6.6
10	White	Nylon 6.6
14	Telephone Grey	Nylon 6.6
20	Black	Nylon 6.6

\* Weather resistant black

\*\* Weather resistant black to Mil Spec

## Part Number System

Various packaging and material options are also available as outlined below;

	<b>PLT</b>	Type
	<b>1.5</b>	Size. Approx bundle Dia. (Inch)
	<b>M</b>	Miniature
	<b>SM</b>	Sub-Miniature
	<b>I</b>	Intermediate
	<b>S</b>	Standard
	<b>LH</b>	Light Heavy
	<b>PLT1.5M-</b>	
	<b>C</b>	Standard packaging 100 pcs.
	<b>D</b>	Packaging 500 pcs
	<b>M</b>	Bulk packaging of 1,000 pcs.
	<b>PLT1.5M-C</b>	
	<b>0</b>	Weather resistant Black tie. Leave blank for Natural

**PLT1.5M-C** Part Number example

Miniature Nylon cable tie, for max bundle diameter of 32mm, colour Natural, bulk packed in 100pcs.

## Supplementary Products

Additional products also available in this range are;

<b>PRT</b>	Releasable Tie
<b>PLC</b>	Locking Clamp
<b>PLF</b>	Locking Flag
<b>PLM</b>	Locking Marker
<b>PLP</b>	Locking Push Mount
<b>PLWP</b>	Locking Wing Push Mount
<b>PRLWP</b>	Releasable Ladder Wing Push Mount
<b>PRWP</b>	releasable Wing Push Mount
<b>PLUP</b>	Locking Umbrella Push Mount

For additional product information or queries please contact us directly.

Order Description	Length	Width	Thick	Head Height	Head Width	Max Bundle Dia.	Min. Tensile Strength	Recommended Installation Tool
Sub-Miniature and Miniature Cross Section Ties								
PLT6SM-C	71	1.8	0.8	2.4	3.2	15	36N	GTS, GTSL, PTS
PLT7M-C	79	2.3	0.8	2.9	4.6	17	80N	GTS, GTSL, GS2B, PTS, PPTS, STS2
PLT1M-C	99	2.5	1.1	3.9	4.6	22		
PLT1.5M-C	142	2.5	1.1	3.9	4.6	32		
PLT2M-C	203	2.5	1.1	3.9	4.6	51		
Intermediate Cross Section Ties								
PLT1.5I-C	142	3.6	1.1	4.6	6.1	35	178N	GTS, GTSL, GS2B, PTS, PPTS, STS2
PLT2I-C	203	3.6	1.1	4.6	6.1	51		
PLT2.5-C	246	3.7	1.3	4.6	6.6	64		
PLT3I-C	290	3.7	1.3	4.6	6.6	76		
PLT4I-C	368	3.7	1.3	4.6	6.6	102		
Standard Cross Section Ties								
PLT1S-C	122	4.8	1.3	5.6	8.0	25	222N	GTS, GTSL, GS2B, GTH, GS4H, PTS, STS2, STH2
PLT1.5S-C	157	4.8	1.3	5.6	8.0	38		
PLT2S-C	188	4.8	1.3	5.6	8.0	48		
PLT2.5S-C	249	4.8	1.3	5.6	8.6	64		
PLT3S-C	292	4.8	1.3	5.6	8.6	76		
PLT4S-C	368	4.8	1.3	5.6	8.6	102		
PLT4.5S-C	394	4.8	1.3	5.6	8.6	114		
PLT5S-C	445	4.8	1.3	5.6	8.6	127		

Dimension in millimeters unless otherwise stated.

## BT Series

### Dome-Top® Barb Ty Nylon Cable Ties

#### Features and Benefits

Non-serated cable tie with stainless steel barb for high performance applications where a semi-smooth cable tie binding surface is desired. Two piece design incorporates a stainless steel locking barb (AISI 316 grade) in a nylon cable tie. Offering a high loop tensile strength that exceeds industry standards.

#### Features & Benefits

- Dome-Top head features unique patented design with round, smooth edges.
- Stainless steel locking barb, provides consistent performance, reliability and infinite adjustability through entire bundle range.
- High strength and low initial insertion force.
- A variety of materials and colours are available for specific applications.
- UL Listed for use in plenum or air handling spaces per NEC.



This product section covers the more popular standard locking tie, for variants such as Clamp, Flag, Marker Push Mount and Locking Tie please contact us for additional information.



Dome-Top head features unique patented design with round smooth edges. Plus stainless steel locking barb provides infinite adjustability through bundle range.



Patented low thread force design reduces operator fatigue and improves productivity.



Curved tip threads easily and installs faster. Finger grip ensures positive grip during threading of tie.



Ribbed and stippled strap body prevents lateral movement on the bundle.



## Part Number System

Various packaging and material options are also available as outlined below;

	<b>BT</b>	Type
	<b>9</b>	Size. Approx bundle Dia. (inch)
<b>BT9</b>	<b>LH</b>	Light Heavy
	<b>M</b>	Miniature
	<b>I</b>	Intermediate
	<b>S</b>	Standard
<b>BT9LH-</b>	<b>C</b>	Standard packaging 100 pcs.
	<b>L</b>	Standard packaging of 50 pcs.
	<b>M</b>	Bulk packaging of 1,000 pcs.
<b>BT9LH-C</b>	<b>O</b>	Weather resistant Black tie

## Variants Available

- Clamp Ties
- Wing Push Mount Ties
- Push Mount Ties
- Marker and Flag Ties

## BT9LH-CO

Nylon 6.6 cable tie, for max bundle dia. of 152mm, colour black, packed in 100pcs.

Order Description	Length	Width	Thick	Head Height	Head Width	Max Bundle Dia.	Min. Tensile Strength	Recommended Installation Tool
Miniature Cross Section Ties								
BT1M-C	102	2.4	0.9	4.0	4.4	23	80N	GTS, GTSL, GS2B, PTS, PPTS, STS2
BT1.5M-C	160	2.4	1.2	4.0	4.6	38		
BT2M-C	201	2.4	1.2	4.0	4.6	51		
BT4M-C	361	2.4	1.2	4.0	4.6	105		
Intermediate Cross Section Ties								
BT1.5I-C	155	3.6	1.0	4.7	6.3	38	178N	GTS, GTSL, GS2B, PTS, PPTS, STS2
BT2I-C	203	3.6	1.0	4.7	6.3	51		
BT3I-C	287	3.6	1.2	4.7	6.3	76		
BT4I-C	363	3.6	1.2	4.7	6.3	102		
Standard Cross Section Ties								
BT2S-C	203	4.7	1.1	5.6	8.1	51	222N	GTS, GTSL, GS2B, GTH, GS4H, PTS, STS2, STH2
BT3S-C	305	4.7	1.3	5.6	8.1	76		
BR4S-C	384	4.7	1.3	5.6	8.1	102		
Light-Heavy Cross Section (straight tip) Ties								
BT2LH-L	221	7.0	1.7	8.1	13.2	51	534N	GTH, GS4H, GS4EH, PTH, STH2, ST3EH
BT3LH-L	300	7.0	1.7	8.1	13.2	76		
BT4LH-L	378	7.0	1.7	8.1	13.2	102		
BT5LH-L	460	7.0	1.7	8.1	13.2	127		
BT7LH-L	620	7.0	1.7	8.1	13.2	178		
BT9LH-L	780	7.0	1.7	8.1	13.2	229		

Dimension in millimeters unless otherwise stated.



## Nylon Tie Solutions

### Complimentary Product Options

#### Product Overview

#### Broad Range

A comprehensive selection of cable tie styles, sizes, materials and colours to meet customers needs are available. Available cable ties bundle, mount and identify in countless indoor, outdoor and harsh environment applications. Outlined below are a few examples of additional cable tie variants to the two key ones listed earlier in this section.

For more details on our range for your specific application please contact us directly as we shall be able to help you.

#### Clamp Ties

Design allows for bundling before or after screwing clamp in place. Used to secure a cable bundle to another surface such as a control panel, communication rack, wall or ceiling.

#### Wing Push Mount Ties

Attached bundles to flat panels, with the wings providing constant tension for a stable, secure and rattle free installation. Single piece moulding for performance and reliability.

#### Push Mount Ties

Cable ties, mount and fastener in a single part, used to attach bundles to another surface such as a flat panel. Wingless design allows tie to be used in confined spaces.

#### Marker and Flag Ties

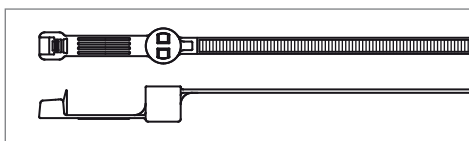
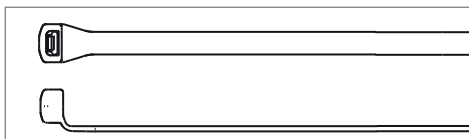
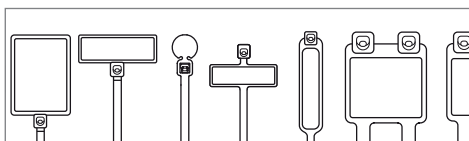
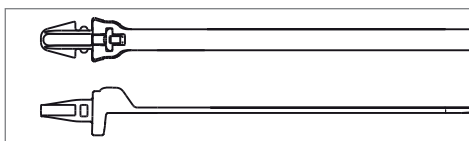
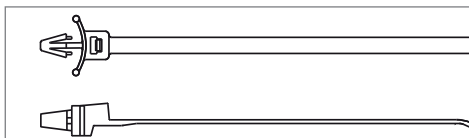
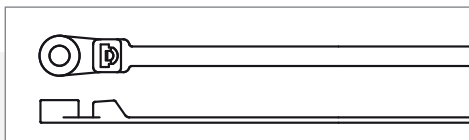
Ideal for fastening and identifying bundles at the same time, with a one piece construction for consistent performance and reliability. Various designs available.

#### Parallel-Entry Ties

Parallel-entry ties minimise exposure to sharp edges offering greater protection during installation. The ties are designed with a low profile head to avoid snags and reduce overall bundle size.

#### Stud Mounted Ties

Integrated mount pushes onto a threaded stud and tie wraps around bundle. Tie can be removed from the stud by turning counterclockwise. Also available as Mid-mount style and Releasable style.



## TOOLING for Nylon Ties

Tool Controlled Tension Cut Off

Product Guide



### Features & Benefits

- Tool controlled tension provides flush cut off and speeds installation to lower installed costs.
- Lightweight and balanced.
- Simple to change tension adjustment and easy to operate.
- A combination of functional design, operation and construction features, providing a long service life.
- Replacement blades available.
- No special maintenance required.



GTS



GTSL



GS2B



GTH



GS4H



GS4EH

Part Number	Used with Cable Ties	Weight	Features
GTS	Sub-Miniature Miniature Intermediate Standard	278g	Ergonomic design with impact resistant resin housing, narrow nose and cushion handle
GTSL	Sub-Miniature Miniature Intermediate Standard	249g	Ergonomic design with impact resistant resin housing, narrow nose and cushion handle. Shorter handle reach than GTS for users with smaller hands.
GS2B	Miniature Intermediate Standard	327g	Metal tool with durable powder coated finish.
GTH	Standard Heavy Standard Light Heavy Heavy	340g	Ergonomic design with impact resistant resin housing, narrow nose and cushion handle.
GS4	Standard Heavy Standard Light Heavy Heavy	454g	Metal tool with durable powder coated finish.
GS4H	Light Heavy Heavy Extra Heavy	454g	Metal tool with durable powder coated finish.

## MIL-Spec Cross Reference for PLT and BT Series Nylon Cable Ties

The products listed in the following table meet all of the testing requirements of Aerospace Standard SAE-AS23190A (formerly MIL-S-23190E) and the

dimensional requirements of Aerospace Standards SAE-AS33671 (formerly MS3367) and SAE-AS3681 (formerly MS3368).

Mil. Std. Number	Colour	PLT Series Pan-Ty®	BT Series Dome-Top®
MS3367-1-0	Black	PLT2S-C00, -M00	-
MS3367-1-1	Brown	PLT2S-C1, -M1	BT2S-M1
MS3367-1-2	Red	PLT2S-C2, -M2	BT2S-M2
MS3367-1-3	Orange	PLT2S-C3, -M3	BT2S-M3
MS3367-1-4	Yellow	PLT2S-C4, -M4	BT2S-M4
MS3367-1-5	Green	PLT2S-C5, -M5	BT2S-M5
MS3367-1-6	Blue	PLT2S-C6, -M6	BT2S-M6
MS3367-1-7	Purple	PLT2S-C7, -M7	BT2S-M7
MS3367-1-8	Grey	PLT2S-C8, -M8	BT2S-M8
MS3367-1-9	Natural	PLT2S-C, -M, -VMR	BT2S-C, -M
MS3367-2-0	Black*	PLT4S-C00	-
MS3367-2-1	Brown	PLT4S-M1	-
MS3367-2-2	Red	PLT4S-C2, -M2	BT4S-M2
MS3367-2-3	Orange	PLT4S-C3, -M3	BT4S-M3
MS3367-2-4	Yellow	PLT4S-C4Y, -M4Y	BT4S-M4Y
MS3367-2-5	Green	PLT4S-C5, -M5	BT4S-M5
MS3367-2-6	Blue	PLT4S-C6, -M6	BT4S-M6
MS3367-2-7	Purple	PLT4S-C7, -M7	BT4S-M7
MS3367-2-8	Grey	PLT4S-C8, -M8	BT4S-M8
MS3367-2-9	Natural	PLT4S-C, -M	BT4S-C, -M
MS3367-3-0	Black*	PLT4H-L00, -TL00	-
MS3367-3-1	Brown	PLT4H-TL1	-
MS3367-3-2	Red	PLT4H-TL2	-
MS3367-3-3	Orange	PLT4H-TL3	-
MS3367-3-4	Yellow	PLT4H-TL4	-
MS3367-3-5	Green	PLT4H-TL5	-
MS3367-3-6	Blue	PLT4H-TL6	-
MS3367-3-9	Natural	PLT4H-L, -C -TL	BT4LH-L, -TL
MS3367-4-0	Black*	PLT1M-C00, M00, XMR00	-
MS3367-4-0	Black*	PLT1.5M-XMR00	-
MS3367-4-1	Brown	PLT1M-C1, M1, -XMR1	BT1M-M1
MS3367-4-2	Red	PLT1M-C2, M2, -XMR2	BT1M-M2
MS3367-4-3	Orange	PLT1M-C3, -M3, -XMR3	BT1M-M3

\* Denotes weather resistant to ASTM D 4066-94B

## MIL-Spec Cross reference for PLT and BT Series Nylon Cable Ties

The products listed in the following table meet all of the testing requirements of Aerospace Standard SAE-AS23190A (formerly MIL-S-23190E) and the

dimensional requirements of Aerospace Standards SAE-AS33671 (formerly MS3367) and SAE-AS3681 (formerly MS3368).

Mil. Std. Number	Colour	PLT Series Pan-Ty®	BT Series Dome-Top®
MS3367-4-4	Yellow	PLT1M-C4Y, -M4Y, -XMR4Y	BT1M-M4Y
MS3367-4-5	Green	PLT1M-C5, -M5, -XMR5	BT1M-M5
MS3367-4-6	Blue	PLT1M-C6, -M6, -XMR6	BT1M-M6
MS3367-4-7	Purple	PLT1M-C7, -M7, -XMR7	BT1M-M7
MS3367-4-8	Grey	PLT1M-C8, -M8, -XMR8	BT1M-M8
MS3367-4-9	Natural	PLT1M-C, -M, -XMR	BT1M-C, -M, -XMR
MS3367-4-9	Natural	PLT7M-C, -M	-
MS3367-4-9	Natural	PLT1.5M-XMR	BT1.5M-XMR
MS3367-5-0	Black*	PLT1.5I-M00	-
MS3367-5-1	Brown	PLT1.5I-C1, -M1	BT1.5I-M1
MS3367-5-2	Red	PLT1.5I-C2, -M2	BT1.5I-M2
MS3367-5-3	Orange	PLT1.5I-C3, -M3	BT1.5I-M3
MS3367-5-4	Yellow	PLT1.5I-C4Y, -M4Y	BT1.5I-M4Y
MS3367-5-5	Green	PLT1.5I-C5, -M5	BT1.5I-M5
MS3367-5-6	Blue	PLT1.5I-C6, -M6	BT1.5I-M6
MS3367-5-7	Purple	PLT1.5I-C7, -M7	BT1.5I-M7
MS3367-5-8	Grey	PLT1.5I-C8, -M8	BT1.5I-M8
MS3367-5-9	Natural	PLT1.5-C, -M	BT1.5-C, -M
MS3367-6-9	Natural	PLT8LH-L, -C	BT8LH-L, -C
MS3367-6-9	Natural	-	BT9LH-L, -C
MS3367-7-0	Black*	PLT1.5I-M00	-
MS3367-7-1	Brown	PLT3S-M1	-
MS3367-7-2	Red	PLT3S-C2, M2	BT3S-C2
MS3367-7-3	Orange	PLT3S-M3	-
MS3367-7-4	Yellow	PLT3S-M4Y	-
MS3367-7-5	Green	PLT3S-M5	-
MS3367-7-6	Blue	PLT3S-M6	-
MS3367-7-7	Purple	PLT3S-M7	-
MS3367-7-8	Grey	PLT3S-M8	-
MS3367-7-9	Natural	PLT3S-C, -M	BT3S-C, -M
MS3367-8-9	Natural	PLT5H-L, -C	-
MS3367-9-9	Natural	PLT6H-L, -C	-
MS3367-11-9	Natural	PLT8H-L, -C	-

\* Denotes weather resistant to ASTM D 4066-94B

# Cable Management

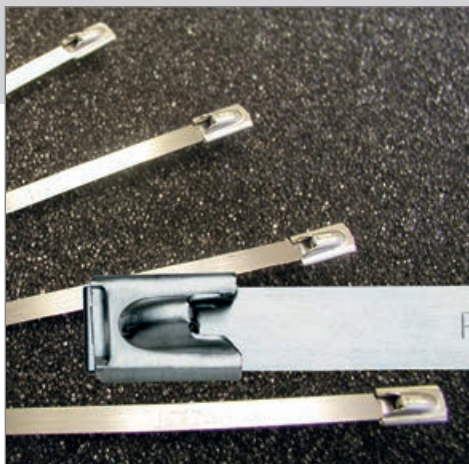
## MLT Series

### Pan-Steel® Steel Cable Ties

#### Features and Benefits

Perfect for indoor, outdoor, underground, offshore and RMT applications offering excellent resistance to abrasion, radiation, weathering, corrosion and extreme temperatures. Stainless Steel ties are self-locking for fast cabling and can be installed by hand or with tooling.

Manufactured with fully rounded sides and no sharp edges, making them safe to handle during installation. Strap goes through a secondary process which removes the top and bottom corners of the material.



#### Features & Benefits

- Self locking design speeds installation and locks into place at any length along the body.
- Provides a strong durable method of cable bundling.
- Fully radiused sides and edges.
- Temperature tolerance -80°C to 538°C

#### Approvals

- UL Listed E56854
- SAE AS 23190 (formerly MS23109E)
- Det Norske Cert. # E-6540, E-6539 (AISI 316)
- Lloyds Cert. # 89/60123
- MIL-STD-202
- MIL-STD-167 and MIL-S-901D for Extra heavy and super heavy cross sections.

#### Material Options

- Grade AISI 304 Stainless Steel, for general purpose applications. Supplied as standard.
- Grade AISI 316 Stainless Steel, for the most corrosive environments. Add suffix '316' to the part number.

#### Self Locking Head Construction

##### \*Aggressive Locking Head

Quicker locking, tighter installation

##### \*Lead in Design

Wider entrance for easier threading

##### Unique Locking Ramp

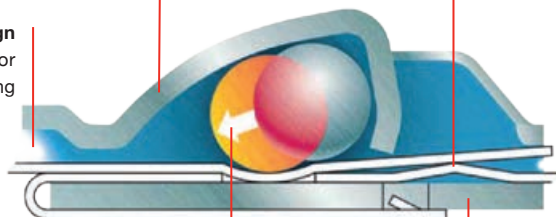
Assures locking in any position

##### \*Innovative Displacement Lock

Assures superior locking strength

##### Extended Retaining Tab

Increases overall tie strength



\* Patented

### Part Number System

Various packaging and material options are also available as outlined below;

	<b>MLT</b>	<b>6</b>	Size. Approx bundle Dia. (inch)
	<b>MLT6</b>	<b>S</b>	Standard
		<b>LH</b>	Light Heavy
		<b>H</b>	Heavy
		<b>EH</b>	Extra Heavy
		<b>SH</b>	Super Heavy
	<b>MLT6S-</b>	<b>CP</b>	Standard packaging 100 pcs.
		<b>L</b>	Standard packaging of 50 pcs.
		<b>Q</b>	Standard packaging of 25 pcs.
	<b>MLT6S-CP</b>	<b>-</b>	AISI 304 Stainless Steel (blank)
		<b>316</b>	AISI 316 Stainless Steel

### Additional Variants Available

- **LH.** Light Heavy cross section, offering tensile strength up to 1112N.
- **EH.** Extra Heavy cross section, offering tensile strength up to 3115N.
- **SH.** Super Heavy cross section, offering tensile strength up to 4005N.

Available in broadly similar sizes as per table below.  
Other lengths are also available to special order.

For enquiries on standard or specials please contact us for further details.

**MLT6S-CP316** Part Number example  
Stainless Steel cable tie, for max bundle dia. of  
152mm, packed in 100pcs, AISI 316 grade.

Order Description	Length	Width	Thick	Max. Bundle Dia.	Min. Bundle Dia.	Min. Tensile Strength	Recommended Installation Tool
MLT - Standard Cross Section Ties - AISI 304 Stainless Steel							
MLT1S-CP	127	4.6	0.25	25	12.7	890N	GS4MT, HTMT, PPTMT, ST2MT.
MLT2S-CP	201	4.6	0.25	51	12.7		
MLT2.7S-CP	259	4.6	0.25	69	12.7		
MLT4S-CP	362	4.6	0.25	102	12.7		
MLT6S-CP	521	4.6	0.25	152	12.7		
MLT8S-CP	679	4.6	0.25	203	12.7		
MLT10S-CP	838	4.6	0.25	254	12.7		
MLT12S-Q	998	4.6	0.25	304	12.7		
MLT14S-Q	1156	4.6	0.25	355	12.7		
MLT15S-Q	1250	4.6	0.25	380	12.7		
MLT - Heavy Cross Section Ties - AISI 304 Stainless Steel							
MLT2H-LP	201	7.9	0.25	51	12.7	2000N	GS4MT, ST2MT, HTMT, PPTMT, PBTMT
MLT2.7H-LP	259	7.9	0.25	69	12.7		
MLT4H-LP	362	7.9	0.25	102	12.7		
MLT6H-LP	521	7.9	0.25	152	12.7		
MLT8H-LP	679	7.9	0.25	203	12.7		
MLT10H-LP	838	7.9	0.25	254	12.7		
MLT12H-Q	998	7.9	0.25	304	12.7		
MLT14H-Q	1156	7.9	0.25	355	12.7		

Dimension in millimeters unless otherwise stated.

## MLTC and MLTFC Series

### Pan-Steel® Coated Steel Cable Ties

#### Features and Benefits

Ideal for applications where extra protection is required from edges and dissimilar metal applications. With the advantages of the MLT range on the previous page

#### Features & Benefits

- **MLTC:** Nylon 11 selective coating provides additional edge protection and prevents corrosion between dissimilar metals.
- **MLTFC:** Polyester overall coating, available in various colours for identification purposes, please contact us for information.
- Self-locking head design speeds installation and locks into place at any length along the tie body.
- AISI 316 Stainless steel.
- UV resistant, low smoke, halogen-free material.
- Temperature tolerance -40°C to + 140°C



#### Approvals

- UL Listing E56854
- CE EN50146
- Det Norske Veritas Cert. # E-6540, E-6539
- SAE AS 23190 (formerly MS23109E)

Order Description	Length	Width	Thick <sup>#</sup>	Max. Bundle Dia.	Min. Bundle Dia.	Min. Tensile Strength	Recommended Installation Tool
MLTC - Heavy Cross Section Selectively Coated Ties - AISI 316 Stainless Steel							
MLTC2H-LP316	201	7.9	0.25	51	12.7	1112	GS4MT, HTMT, PPTMT, ST2MT, PBTMT
MLTC4H-LP316	362	7.9	0.25	102	12.7		
MLTC6H-LP316	521	7.9	0.25	152	12.7		
MLTC8H-LP316	679	7.9	0.25	203	12.7		
MLTC10H-LP316	838	7.9	0.25	254	12.7		
MLTFC* - Heavy Cross Section Coated Ties - AISI 316 Stainless Steel							
MLTFC2H-LP316RD	201	7.9	0.25	51	12.7	1112	GS4MT, HTMT, PPTMT, ST2MT, PBTMT
MLTFC4H-LP316RD	362	7.9	0.25	102	12.7		
MLTFC6H-LP316RD	521	7.9	0.25	152	12.7		
MLTFC2H-LP316YL	201	7.9	0.25	51	12.7		
MLTFC4H-LP316YL	362	7.9	0.25	102	12.7		
MLTFC6H-LP316YL	521	7.9	0.25	152	12.7		
MLTFC2H-LP316GR	201	7.9	0.25	51	12.7		
MLTFC4H-LP316GR	362	7.9	0.25	102	12.7		
MLTFC6H-LP316GR	521	7.9	0.25	152	12.7		
MLTFC2H-LP316BU	201	7.9	0.25	51	12.7		
MLTFC4H-LP316BU	362	7.9	0.25	102	12.7		
MLTFC6H-LP316BU	521	7.9	0.25	152	12.7		

\*MLTFC: Above table only shows colours Red (RD), Yellow (YL), Green (GN), and Blue (BU). Also available are Black(-) and White (WH).

<sup>#</sup> Base material less coating

Dimension in millimeters unless otherwise stated.



## MLTD Series

### Pan-Steel® Double Wrapped Steel Cable Tie Features and Benefits



For the maximum tensile strength, Pan-Steel double wrapped Pan-Steel® cable ties offer the premium solution with load strength up to 5340N.

For details of MOD approved stainless steel cable ties and corresponding NATO Stock Number ref 5975-01 please contact us for more details.

#### Features & Benefits

- Self-locking head design speeds installation and locks into place at any length along the tie body.
- Available in AISI 304 stainless steel for general purpose applications.
- Available in AISI 316 stainless steel for the most corrosive environments. Just add suffix '316' to the part number (EH and SH products only).
- Super heavy double wrapped tested for short circuit applications up to 71.5 kA.

#### Approvals

- SAE AS 23190 (formerly MS23109E)

Order Description	Length	Width	Thick <sup>#</sup>	Max. Bundle Dia.	Min. Bundle Dia.	Min. Tensile Strength	Recommended Installation Tool
MLTD - Heavy Cross Section Selectively Coated Ties - AISI 304 Stainless Steel							
MLT2DH-L	470	7.9	0.25	51	25.4	2670	GS4MT, HTMT, PPTMT, ST2MT
MLT4DH-L	711	7.9	0.25	102	25.4		
MLT5DH-L	863	7.9	0.25	127	25.4		
MLT6DH-Q	1016	7.9	0.25	152	25.4		
MLTD - Extra-Heavy Cross Section Coated Ties - AISI 304 Stainless Steel							
MLT4DEH-Q	749	12.7	0.25	102	25.4	3560	ST2MT, RT2HT, RT2HTN, PBTMT
MLT6DEH-Q	1054	12.7	0.25	152	25.4		
MLT8DEH-Q	1359	12.7	0.25	203	25.4		
MLT4DEH15-Q	749	12.7	0.38	102	25.4	4450	
MLT6DEH15-Q	1054	12.7	0.38	152	25.4		
MLT8DEH15-Q	1359	12.7	0.38	203	25.4		
MLTD - Super-Heavy Cross Section Coated Ties - AISI 304 Stainless Steel							
MLT4DSH-Q	749	15.9	0.38	102	25.4	5340	RT2HT, RT2HTN, PBTMT
MLT6DSH-Q	1054	15.9	0.38	152	25.4		
MLT8DSH-Q	1359	15.9	0.38	203	25.4		

Dimension in millimeters unless otherwise stated.

## Tooling for Metal Ties

### Tool Controlled Tension Cut Off

#### Product Guide

A broad range of hand tool solutions are available for stainless steel ties, ranging including hand operated and battery or pneumatic assisted. They are all designed to maximise efficiency and ensure consistency of installation.

In addition a range of accessories are also available that include 'Tool Tension locking Kits', replacement cutter blades and parts.

Below is a selection of what we can supply, for more information on these and other products in the range please contact us.



Part Number	Used with Cable Ties	Features
GS4MT	Standard Light-Heavy Heavy	Single handed operation for fast installation. Qualified per MIL Standard MS90387-3. Automatically tensions & cuts off tie when pre-determined tension is reached.
ST2MT	Standard Light-Heavy Heavy Extra-Heavy	Rugged, lightweight, easy-to-operate pliers-type tool provides mechanical advantage. Cable tie side entry for immediate positioning of tie and tool.
RT2HT	Extra-Heavy Extra Heavy 15 Super Heavy	Cable tie side entry for immediate positioning of tie and tool to speed installation. Multi-position rear handle provides flexibility for a one or two hand installation.
RT2HTN	Extra-Heavy Extra Heavy 15 Super Heavy	As RT2HT but with narrow nose design for applications requiring installations in tight confined spaces.
PPTMT	Standard Light-Heavy Heavy	Pneumatic hand tool. Automatically tensions and cuts off tie when pre-determined tension is reached, for more reliable and consistent installations.
PBTMT	Heavy Extra Heavy Super Heavy	Battery powered installation tool. Ergonomic tool design provides a compact lightweight body, reducing operator fatigue.



## MIL-Spec Cross reference

for MLT Series Steel Cable Ties

The products listed in the following table meet the various testing requirements of Aerospace Standard SAE-AS23190A (formerly MIL-S-23190E) and the

temperature and shock requirements of MIL-STD-202 for details please contact us.

Mil. Std. Number	MTL Series Pan-Steel®
AS23190/3-1	MLT2S-CP
AS23190/3-1	MLT2S-CP316
AS23190/3-2	MLT4S-CP
AS23190/3-2	MLT4S-CP316
AS23190/3-3	MLT6S-CP
AS23190/3-3	MLT6S-CP316
AS23190/3-4	MLT8S-CP
AS23190/3-4	MLT8S-CP316
AS23190/3-5	MLT2H-LP
AS23190/3-5	MLT2H-LP316
AS23190/3-6	MLT4H-LP
AS23190/3-6	MLT4H-LP316
AS23190/3-7	MLT6H-LP
AS23190/3-7	MLT6H-LP316
AS23190/3-8	MLT8H-LP
AS23190/3-8	MLT8H-LP316
AS23190/3-9	MLT10H-LP
AS23190/3-9	MLT10H-LP316

## Cable Accessories

### Wiring and Harness Board Products Overview

Outlined on this page is a quick overview for the comprehensive range of cable management accessories available.

For more information on these products and others please contact us.



#### Adhesive Backed Cable Tie Mounts



#### Screw Applied Cable Tie Mounts



#### Other Cable Tie Mounts



#### Adhesive Backed Clips and Clamps



#### Other Clips and Clamps



#### Harness Board Accessories



## Lacing Tape Cords and Yarns General Information



### Colours

The standard lacing tape colours are Natural and Black, dependent on the type of material used. For further information on additional colours available, please contact us.

### Finishes

The table right shows the finishes that are available that meet the requirements of CID-A-A-52080 to CID-A-A52084 (MIL-T-43435), as well as demanding industrial and commercial applications. Finishes are generally used to improve a lacing tapes physical properties and performance characteristics. Not all finishes are available on all products, for further information please contact us.

The selected designation is added as a suffix to the respective **Gu** or **Br** part number. Ordering example based on CID-A-A-52080 Type I, would be

- Mil ref                      Type I, Size 3, Finish B
- Gu                            **18W**
- Br                            **103-2**

Then state colour

- Gu                            **18W Black**
- Br                            **103-2 Black**



We offer a comprehensive range of high performance lacing tapes, cords and braiding yarns, used throughout the aerospace, electronics, medical and many smaller specialist manufacturing industries. The lacing tapes are manufactured to meet the CID A-A-52080-4 (MIL-T-43435) specification and cover the five materials most commonly used:

- Polyamide (Nylon)
- Polyester (Dacron®)
- Polytetrafluoroethylene (Teflon®)
- Glassfibre
- Heat Resistant Polyamide (Nomex®)

When specifying a lacing tape, performance parameters such as fibre type (raw materials), size (physical dimensions), form (flat or round), finish, tensile strength and colours should be considered.

### Table of Finishes

Designation			Description
MIL	Gu	Br	
A	U	-1	No Finish
B	W	-2	Microcrystalline, Fungicidal Wax
C	H	-3	Synthetic Rubber or Elastomer
C	Z	n/a	Flame Retarded Rubber
C	PTH	n/a	Low Outgassing Rubber
D	T	-4	Teflon
E	R	-5	Vinyl
F	S	-6	Silicone Resin
G	B/G	-7	Liquid Nylon
#	n/a	-8	Self extinguishing

# Meets requirements of Finish C  
(Gu = Gudebrod and Br = Breyden)

### Approvals Overview

- Airbus NSA 8420
- Boeing BMS-13-54D
- Eurofighter J96.502 and JN1127
- Lockheed
- Panavia 6481
- Raytheon 268-10-11
- Rolls Royce ESW 1900
- Sikorsky SS 7057
- Westland EE 423 (M-T43435T5-3C)

## Specifying Information

### Lacing Tapes and Yarns

#### Fibre Type

##### **NYLON Tape CID-A-A-52080** (formerly MIL-T-43435 Type I)

Flat braid manufactured from high tenacity, continuous filament nylon yarn. Temperature range: -55°C to 121°C, melting point 248°C. Available with a variety of finishes as per table.

- General purpose

##### **POLYESTER Tape CID-A-A-52081** (formerly MIL-T-43435 Type II)

Flat braid manufactured from high tenacity, continuous filament polyester yarn. Temperature range -73°C to 177°C, melting point 250°C. Available with a variety of finishes as per table.

- Superior knot tying properties to Nylon
- High temperature performance, available in a range of finishes
- Suitable for aerospace/NASA applications
- Also available 'Pre-shrunk' to reduce longitudinal shrinkage.

##### **TEFLON Tape CID-A-A-52082** (formerly MIL-T-43435 Type III)

Flat braid manufactured from high tenacity, continuous filament teflon yarn. Temperature range -73°C to 232°C, melting point 327°C. Available with a variety of finishes as per table.

- High temperature performance, available in a range of finishes
- Good resistance to fluids and solvents
- Suitable for aircraft engine applications
- Also available 'Pre-shrunk' to reduce longitudinal shrinkage.

##### **GLASS Tape CID-A-A-52083** (formerly MIL-T-43435 Type IV)

Flat braid manufactured from high tenacity, continuous filament glass yarn coated with Teflon before braiding. Temperature range to -55°C to 427°C, melting point 1150°C. Available with a variety of finishes as per table.

- Extremely high temperature performance
- Very low elongation
- Minimal fibre to fibre abrasion
- Produced from continuous filament electrical grade glass (E-Glass).

##### **NOMEX® Tape CID-A-A-52084** (formerly MIL-T-43435 Type V)

Flat braid manufactured from high tenacity, continuous filament Nomex yarn. Temperature range -55°C to 260°C, melting point 371°C. Available with a variety of finishes as per table.

- Excellent high temperature performance and Non flammable
- Highly resistant to fluids and lubricants
- Suitable for critical aircraft harness applications, identifiable by a green coloured tracer.

##### **NYLON Cord MIL-T-713 Type P, Class 1**

Meets or exceeds MIL-T-713 Type P. Round twisted 3 ply nylon cord manufactured from high tenacity, continuous filament yarn. Temperature range -55°C to 121°C. Available with no finish, or microcrystalline fungicidal wax finish.

##### **NOMEX® Overbraiding Yarn PAA MIL-C-572**

Continuous Filament Nomex yarn twisted to form an essentially round bundle. Available unbonded or bonded with a non-corrosive liquid nylon finish. Temperature range -55°C to 260°C, melting point 371°C. Packaged on cardboard tubes or plastic ratchet bobbins for use on New England Butt #2 braiding machines, other packages are available.

- General purpose
- Superior abrasion and fluid resistance

Polyester overbraiding yarn (MIL-C-572 Type PSTR) also available, please contact us for further information.



## Nylon, Polyester and Teflon

## Braided Lacing Tapes

## Selection Guide

**TYPE I • NYLON Tape CID-A-A-52080 Braided Lacing Tape**

Part Number		Size	Breaking Strength	Tape Width		Tape Thickness		Spool Sizes
Br	Gu	Mil-Spec	Kg (Min.)	mm (Min.)	mm (Max.)	mm (Min.)	mm (Max.)	Metres
101	26	1	61.23	4.57	5.59	0.33	0.48	228
102	23	2	36.29	2.51	3.07	0.30	0.46	228
103	18	3	22.68	1.96	2.39	0.28	0.43	457
104	22	4	11.34	1.37	1.68	0.23	0.38	457
105	20	5	6.80	1.14	1.40	0.15	0.36	457
n/a	21	n/a	9.07	1.42	1.73	0.13	0.28	457
n/a	15	n/a	3.18	0.74	0.89	0.03	0.23	457

Standard colours are Natural and Black, for additional colour choices please contact us.  
Dimension in Metric unless otherwise stated

**TYPE II • POLYESTER Tape CID-A-A-52081 Braided Lacing Tape**

Part Number		Size	Breaking Strength	Tape Width		Tape Thickness		Spool Sizes
Br	Gu	Mil-Spec	Kg (Min.)	mm (Min.)	mm (Max.)	mm (Min.)	mm (Max.)	Metres
201	26D	1	61.23	4.57	5.59	0.33	0.48	228
202	23D	2	36.29	2.51	3.07	0.30	0.46	228
203	18D	3	22.68	1.96	2.39	0.28	0.43	457
204	22D	4	11.34	1.37	1.68	0.23	0.38	457
205	21D	5	6.80	1.14	1.40	0.15	0.36	457
n/a	20D	n/a	5.44	1.09	1.35	0.10	0.25	457
n/a	15D	n/a	1.81	0.74	0.89	0.05	0.20	457

Standard colours are Natural and Black, for additional colour choices please contact us.  
Dimension in Metric unless otherwise stated

**TYPE III • TEFLON Tape CID-A-A-52082 Braided Lacing Tape**

Part Number		Size	Breaking Strength	Tape Width		Tape Thickness		Spool Sizes
Br	Gu	Mil-Spec	Kg (Min.)	mm (Min.)	mm (Max.)	mm (Min.)	mm (Max.)	Metres
302	256	2	13.61	2.74	3.35	0.23	0.36	228
304	231	4	6.80	1.5	1.83	0.23	0.36	457
305	n/a	5	4.50	0.58	0.71	0.23	0.36	457
n/a	230	n/a	6.35	0.71	0.86	0.64	0.79	457
n/a	302	n/a	1.81	0.25	-	-	-	457

Standard colours: Natural (Dark Brown) only, Teflon fibres cannot be dyed or coloured.  
Finishes available: 'unfinished' and 'synthetic' only  
Dimension in Metric unless otherwise stated



## Glass, Nomex® and Nylon

### Braided Lacing Tape and Twisted Cord

#### Selection Guide

#### TYPE IV • GLASS Tape CID-A-A-52083 Braided Lacing Tape

Part Number		Size	Breaking Strength	Tape Width		Tape Thickness		Spool Sizes
Br	Gu	Mil-Spec	Kg (Min.)	mm (Min.)	mm (Max.)	mm (Min.)	mm (Max.)	Metres
401	26X	1	90.72	5.16	6.30	0.33	0.48	228
402	23X	2	45.36	2.51	3.07	0.33	0.48	228
403	18X	3	34.02	1.96	2.39	0.33	0.48	457
404	22X	4	22.68	1.37	1.68	0.33	0.48	457
405	n/a	5	22.68	1.14	1.40	0.33	0.48	457
n/a	21X	n/a	31.75	1.73	2.11	0.30	0.46	457

Standard colours are Natural (White) and Black, fibreglass cannot be dyed but finish may be pigmented Black.  
Dimension in Metric unless otherwise stated

#### TYPE V • NOMEX® Tape CID-A-A-52084 Braided Lacing Tape

Part Number		Size	Breaking Strength	Tape Width		Tape Thickness		Spool Sizes
Br	Gu	Mil-Spec	Kg (Min.)	mm (Min.)	mm (Max.)	mm (Min.)	mm (Max.)	Metres
501	726	1	38.56	4.57	5.59	0.33	0.48	228
502	723	2	22.68	2.51	3.07	0.28	0.43	228
503	718	3	15.88	1.73	2.11	0.23	0.38	457
504	722	4	11.34	1.27	1.55	0.18	0.33	457
n/a	1342	n/a	31.75	2.06	2.51	0.43	0.58	228
n/a	946	n/a	2.27	0.30	-	-	-	457

Standard colours are Natural (off White) with a Green tracer. Additional colour choices with or without tracer please contact us.  
Dimension in Metric unless otherwise stated

#### TYPE P • NYLON Cord MIL-T-713 Twisted cord

Part Number		Size	Breaking Strength	Approximate Yield	Diameter		Spool Sizes
Br	Gu	Mil-Spec	Kg (Min.)	Metres per Kg	mm (Min.)	mm (Max.)	Kg
111-2	n/a	1	31.75	273 Wax Finish	0.91	1.12	0.45
111-1	n/a	1	31.75	350 No Finish	0.91	1.12	0.45
112-2	n/a	2	21.77	446 Wax Finish	0.53	0.74	0.45
112-1	n/a	2	21.77	595 No Finish	0.53	0.74	0.45
113-2	n/a	3	14.51	558 Wax Finish	0.48	0.69	0.45
113-1	n/a	3	14.51	744 No Finish	0.48	0.69	0.45

Standard colours are Natural (off White) or Black, no other colours available.  
Dimension in Metric unless otherwise stated

## Nomex® Overbraiding Yarn Selection Guide



Continuous Filament Nomex yarn twisted to form an essentially round bundle. Material is available unbonded or bonded with a non-corrosive liquid nylon finish. Temperature range -55°C to 260°C, melting point 371°C.

Material packaged on cardboard tubes or plastic ratchet bobbins for use on New England Butt #2 braiding machines, other packages are available.

### Ordering Information

When ordering please specify the denier, finish, colour, number of ply per end x number of ends, material and bobbin requirement, as per example shown below;

**200 B Natural 1x4 Nomex® R.**

### TYPE PAA • NOMEX® MIL-C-572 Overbraiding Yarn

Yarn Size	Number of Filaments	Breaking Strength	Nominal Diameter	Yarn Elongation	Parallel Ends per Bobbin	Spool Sizes
		Kg (Min.)	mm (Min.)			Metres
200 Denier	100	1.24	0.152	35%	1-8	4,572
1200 Denier	600	6.45	0.305	37%	1-4	914.4

Code	Finishes	Comments
U	Untreated	General Purpose
B	Bonded with non-corrosive, flame retardant Polyamide	Superior abrasion resistance. Excellent fluid resistance

Put-Up	Length tube	Length braid	Width	Height	Tube Ø	Taper
T	133.50	120.65	6.35 tube	47.63	20.96	30°
R	155.58	134.94	46.04 bobbin	44.45	7.94	-

Standard colours are Natural (Off White) Olive Drab, Black and Red, other colours are available in bond dyed form or with unbonded yarn in minimum dye lots, for details please contact us.  
Dimension in millimeters unless otherwise stated

### TYPE PSTR • POLYESTER Mil-C-572 Overbraiding Yarn

Also available please contact us for details