

FIBRE ROPES

Fibre Ropes

For most theatre operations rope is used in some form. The rope may be of natural fibre, man-made fibre or wire rope.

Natural fibre ropes have traditionally been used in "Hemp House" theatres, i.e. to fly scenery above a stage where there is no counterweight system and all lifting is done by direct manual effort. It should be noted that the word "hemp" is often misused. Although in the past ropes made from hemp were normally used, it is more common nowadays to use either "flax hemp" or manila. Sisal is an inferior rope and rarely used. British Standards cover the manufacture and use of manila ropes. Use of man-made fibre ropes, such as polyester, is widespread in many applications where previously natural fibre ropes would have been used. Polyester is resistant to oil, chemicals, and changes in ambient temperature and humidity and is smoother to the touch than manila, which has led it to becoming a preferred counterweight line.

The most common application using two types of rope is in counterweight flying systems where the load is suspended by wire rope attached to a counterweight cradle which is restrained to move vertically on the stage side wall. The movement of a balanced counterweight set is by manual hauling of a fibre rope attached to the counterweight top and bottom. Wire ropes are normally used for all power-operated systems such as scenery and lighting hoists. Beware of using ropes made from different materials or of differing sizes of the same material in the same lifting assembly, as the stretch of the rope varies with the material from which it is made. This may result in an unsafe situation, depending on the safe working load of the weakest material.

Natural fibre ropes should comply with BS EN 698, Grade 1 special quality manila or equivalent. Synthetic ropes should comply with BS EN 697 [polyester]. The use of polyamide [nylon] and polypropylene ropes for flying is not recommended as they are susceptible to changes in humidity and temperature.

Load bearing ropes used for "hemp" or counterweight flying should be not less than 16 mm diameter, be of 3-strand construction and be free from serious defects arising from previous use or other cause. Smaller sizes of rope may be used for other purposes e.g. trick lines. Ropes should be stored protected from damp, heat, and the effects of sunlight [either directly or through glass]. The hanging of ropes on wooden or cast cleats permits adequate ventilation.

Where ropes are terminated in a loop or thimble, the splicing shall conform to good commercial practice i.e. not less than **3*** full tucks for natural rope and **4*** full tucks for synthetic ropes, which shall be against the lay of the rope, each with all the yarns in the strand. [*Please note that the Lifting Equipment Engineers Association recommends 4 full tucks for natural ropes and five full tucks for most artificial ropes].

All ropes should be in one continuous length and free from joints. Any free end of rope should be whipped to prevent unlaying.

All ropes and any associated equipment should have an identification and the safe working load marked thereon and be subject to inspection and registration in accordance with safe practice and the appropriate regulations, if any. See our Rope Label System [page 207].

All ropes should have a factor of safety of not less than **8** based on the maximum rope tension when related to the minimum breaking load of the rope.

This information is based on the ABTT Code of Practice for Flying.



Flax Hemp The price of real hemp is so high that our manufacturers have changed to using a flax yarn. The strength of this rope is similar to real hemp and it has the same soft feel. Flax hemp is much easier to handle than manila and is therefore the natural rope of choice for hauling lines on counterweight cradles. When the front cloth of *The Lion King* rises, the flyman is hauling on our 22 mm flax hemp. See also our 4-strand hauling line below. Certification: BS EN ISO 1181:2004

Flax Hemp		code	per m	code	per 220 m
diameter	breaking strain				full coil
12 mm	1,120 kg	ROP304	£1.86	ROP304D	£255.07
16 mm	1,900 kg	ROP305	£3.36	ROP305D	£472.01
18 mm	2,350 kg	ROP306	£3.81	ROP306D	£561.66
20 mm	2,910 kg	ROP307	£4.51	ROP307D	£688.40
22 mm	3,490 kg	ROP308	£5.10	ROP308D	£735.51
24 mm	4,140 kg	ROP309	£6.43	ROP309D	£950.97

See our Eye Splicing Service [page 206].



Manila Rope These 3-strand ropes are manufactured to BS EN ISO 1181:2004 which has replaced BS EN 698, Grade 1. The ropes of 16 mm and above are suitable for hand-hauled flying in theatres and for control lines on counterweight cradles. Manila is hard on the hands and tends to leave small fibre splinters in soft skin. Flax hemp [see above] is a softer option if the ropes are to be used frequently. Manila has about one-third the strength of polyester but it will not melt when left near a hot lamp [burns at 711° F]. Manila has poor resistance to shock loads because of its low stretch properties. The natural appearance of the rope makes them useful for set dressings.

Manila Rope		code	per m	code	per 220 m
diameter	breaking strain				full coil
6 mm	350 kg	ROP150	£0.43	ROP150D	£39.12
8 mm	545 kg	ROP151	£0.67	ROP151D	£71.71
10 mm	705 kg	ROP153	£0.81	ROP153D	£91.63
12 mm	1,065 kg	ROP155	£1.17	ROP155D	£149.97
14 mm	1,450 kg	ROP157	£1.45	ROP157D	£171.72
16 mm	2,030 kg	ROP159	£2.54	ROP159D	£264.91
18 mm	2,440 kg	ROP160	£3.13	ROP160D	£312.87
20 mm	3,250 kg	ROP161	£3.21	ROP161D	£384.60
22 mm	3,860 kg	ROP163	£3.50	ROP163D	£387.95
24 mm	4,570 kg	ROP165	£3.79	ROP165D	£474.20

See our Eye Splicing Service [page 206].

See page 216 for the Big Block 32 Pulley

Why 220 m?

220 metres is 120 fathoms which was the British Navy's minimum requirement to anchor a ship. Ropes are still made on "Rope Walks" that are 120 fathoms long.



Counterweight Hauling Rope This is a 4-strand rope sometimes referred to as "Shroud Laid" rope. It will be found to be slightly firmer than 3-strand rope and it presents a smoother and rounder outside surface which can be helpful in rope locks or if traction is required around a pulley sheave. Ironically this rope comes in 200 m coils, not sure why!

✓ Ideal for counterweight hauling lines and climbing ropes

Counterweight Hauling Rope		code	per m	code	per 200 m
Ø	breaking strain weight				full coil
20 mm	2,610 kg 316 g/m	ROP3074	£4.63	ROP3074D	£648.92

COTTON ROPE



Cotton Rope A lightweight soft 3-strand rope often used for decorative purposes. It can easily be dyed [page 29] and flame-proofed [page 70]. Cotton rope is rather stretchy due to its soft lay up and is not normally used for lifting purposes. It is, however, very comfortable to handle and so it is very popular with aerialists. Some traditional small boats still like to use cotton mainsheets.

See also our specialist aerial splicing [page 206].

- ✓ Very soft to handle
- ✓ Excellent decorative rope

Cotton Rope	code	per m	code	per 55 m
diameter				full coil
12 mm	ROP405	£1.65	ROP405D	£75.63
18 mm	ROP407	£3.35	ROP407D	£162.48
24 mm	ROP409	£5.45	ROP409D	£265.00

Cotton Rope	code	per m	code	per 110 m
diameter				full coil
28 mm	ROP410	£4.15	ROP410D	£358.15
32 mm	ROP411	£5.50	ROP411D	£475.55

Also see Barrier Rope [page 205] for an alternative soft 3-strand decorative rope.

For paper rope see page 95

ARTIFICIAL HEMP



Artificial Hemp A natural coloured 3-strand synthetic rope with a similar feel to hemp but the strength and rot resistance of synthetics. This type of artificial hemp is made from spun polypropylene with a natural hemp colour. It is UV resistant, does not rot, floats on water and is easy to splice.

Specifications: Melting point: 165-175 °C. Resistance to short term heat: 80 °C.

- ✓ Easy to splice
- ✓ Economical
- ✓ Floats

Artificial Hemp	code	per m	code	per 100 m
diameter				full reel
6 mm	ROP190	£0.31	ROP190D	£26.07
8 mm	ROP191	£0.47	ROP191D	£42.34
10 mm	ROP195	£0.70	ROP195D	£58.29
12 mm	ROP192	£1.02	ROP192D	£86.35
14 mm	ROP193	£1.27	ROP193D	£105.74
16 mm	ROP194	£1.58	ROP194D	£133.37
18 mm	ROP196	£2.00	ROP196D	£166.95
20 mm	ROP1965	£2.52	ROP1965D	£208.70
24 mm	ROP197	£3.51	ROP197D	£297.22

For Historic 3 mm Twine on 15 m reels see page 204.

The Biggest Difference between Natural and Artificial Ropes?

Apart from the obvious, there is a very fundamental difference. Natural fibres are short, generally only a few inches long. The ropes are made by twisting these together, there is no glue, just the friction between the fibres providing the strength. Artificial ropes use continuous fibres running the length of the rope.

See page 216 for the Big Block 32 Pulley

Low-Load Pulley for Large-Diameter Ropes!



Big Block 32 This brilliant new pulley has been made especially for us by Barton Marine [see their other excellent pulleys from page 202]. Quite often when working on stage the designer requires a much larger rope than is actually required in regards to the weight it has to lift - to make it look more 'real', or to exaggerate the perceived weight. As such, a heavy duty pulley is not necessarily required,

and the expense of one not justified, thus this pulley was born!

- ✓ Up to 32 mm rope capacity
- ✓ Swing Cheeks; allows the block to inserted onto pre-rigged lines and the over large hole will take any connector.

✓ Economical

✓ Good for all large diameter ropes [page 193]

Specification: takes up to 32 mm Ø rope. WLL 225 kg [4:1 safety factor]. 316 grade stainless steel with a "Spectro" anodised aluminium sheave. CE marked.

Big Block 32	max rope Ø	WLL	code	price
sheave Ø: 72 mm	32 mm	225 kg	FHSSC32	£118.62

Taking Rope from a Coil



The inside of a new coil is in the form of a round tunnel. At one end of the tunnel is the inside end of the line. This inside end always comes out first, usually from the bottom of the tunnel and up through the tunnel. Reach through the tunnel until you find the end, and determine on which end to set the coil so the line will uncoil in a counterclockwise direction. It can be hard to find the end but it will be there. It is

well worth getting this right!

Reach in, draw the end up through the tunnel, and the entire coil will run off without a kink. The important point to bear in mind is that when you pull on the inside end, the line must uncoil in a counterclockwise direction or it will end up in a mess!

You must always coil in a clockwise direction and uncoil in a counterclockwise direction.

...and Coiling 3-Strand Rope

As you coil a rope it will encourage a slight twist. Sometimes, if the rope is long, these twists will build up and the rope will get tighter and tighter until it buckles or kinks. This happens when the rope is coiled the wrong way. Right hand lay rope [and virtually all rope is right hand lay] must be coiled in a clockwise direction. This will open up the lay slightly and prevent it from misbehaving. See our videos on youtube/flintstheatre. There are other methods, such as the gasket coil (this is the preferred technique of Julian Anderson who teaches the ABTT Bronze Course Knot & Splicing day), or the figure-of-eight coiling method. Regardless of which method you use, just make sure it's kink-free!

3-STRAND POLYESTER



Classic 3-Strand Polyester This is a wonderful rope, soft in feel, easy to coil, natural coloured with all the advantages of modern materials. Made from matt polyester worsted yarn which provides an historic look and excellent grip.

- ✓ A well behaved rope with a soft hand
- ✓ A joy to handle
- ✓ A good choice for use onstage by actors

Classic 3-Strand Polyester [01172]		code	per m	code	per 100 m
diameter	breaking strain				full reel
6 mm	350 kg	ROP117206	£0.74	ROP117206D	£59.81
8 mm	730 kg	ROP117208	£1.08	ROP117208D	£88.06
10 mm	1,100 kg	ROP117210	£1.65	ROP117210D	£136.66
12 mm	1,300 kg	ROP117212	£2.06	ROP117212D	£172.14

Larger diameters available to order



See our Eye Splicing Service [page 206].

Left or Right Hand Lay
Put the rope in your right palm and a right hand lay rope will point in the direction of your thumb. Easy.



Black 3-Strand Polyester This is a 100% pure polyester rope that is very easy to splice, extremely tensile and abrasion resistant and will not stiffen up. Available in very large diameters. Conformity: DIN 3331/EN 697

- ✓ Working stretch greater than 15%
- ✓ Very easy to splice
- ✓ Heat set
- ✓ Pure deep black
- ✓ Soft to handle, easy to coil
- ✓ Good choice for spliced barrier ropes etc.

Black 3-strand polyester [00111]		code	per m	code	per 100 m
diameter	breaking strain				full reel
4 mm	400 kg	ROP11104	£0.59	ROP11104D	£34.30
6 mm	800 kg	ROP11106	£0.85	ROP11106D	£72.15
8 mm	1,400 kg	ROP11108	£1.34	ROP11108D	£107.19
10 mm	2,000 kg	ROP11110	£1.92	ROP11110D	£153.85
12 mm	2,600 kg	ROP11112	£2.38	ROP11112D	£212.25
14 mm	3,600 kg	ROP11114	£2.94	ROP11114D	£256.85
16 mm	5,000 kg	ROP11116	£4.45	ROP11116D	£339.02
18 mm	6,000 kg	ROP11118	£4.75	ROP11118D	£380.00
20 mm	7,000 kg			ROP11120D	£452.01
24 mm	10,500 kg			ROP11124D	£654.15
30 mm	14,800 kg			ROP11130D	£917.89

Also see Barrier Rope [page 205]. Our Pipe and Large Rope Cutter [page 309] will cut through ropes between 24 and 42 mm diameter.

Need a pulley for a large diameter rope?

See the Big Block 32 [page 216]



BRAIDED (KERNMANTLE) ROPES

Braided or Kernmantle?

They are basically both the same thing. This type of rope construction consists of a core [German "kern" = core] protected by a sheave [German "mantel" = shell]. The core generally provides the strength while the sheave offers protection. They work well with climbing gadgets and tend to coil up easily. Braided ropes are the preferred type for industrial rope access and sport climbing. The main drawback is that they are rather difficult to splice compared to 3-strand ropes.



Black Herkules A very resilient multi-functional polyester rope of the highest quality, very durable and low stretch. Cover: spin dyed 1:1 plaited polyester. Core: High tenacity braided polyester. A very popular hauling rope.

- ✓ Working stretch is less than 5%
- ✓ Absolutely non-kinking
- ✓ Excellent adhesion to winch drums
- ✓ Withstands hard winch usage
- ✗ Knot holding not quite as good as our matt polyester

Herkules [01550]		code	per m	code	per 100 m
diameter	breaking strain				full reel
8 mm	1,600 kg	ROP155008	£1.75	ROP155008D	£142.85
10 mm	2,500 kg	ROP155010	£2.45	ROP155010D	£199.95
12 mm	3,500 kg	ROP155012	£3.69	ROP155012D	£309.11
16 mm	5,000 kg	ROP155016	£6.89	ROP155016D	£541.67

Other sizes from 4 mm to 28 mm are available to order by the full reel.

Why buy your ropes from Flints?



You will be joining thousands of clients who source their rope from us. Flints sells thousands of metres of rope every week! We are extremely discerning regarding the quality of the ropes that we supply and we have the buying power to specify that the rope is made to suit the exacting needs of our industry. The rope you buy from us will be of a consistent quality. We are able to negotiate on price to pass on real value. Typically our rope is much cheaper than buying from marine suppliers and the quality is absolutely the best. Our main manufacturers have over 100 years of experience and are DIN EN 9001:2000 certified and approved. They're able to produce ropes to tolerances of 0.1 mm or better, with heat treatment within +/-1°C. You can be assured of the best quality with real value.

Which Knot to use?

Any knot will reduce the strength of your rope. It is generally agreed that the Figure-of-Eight Loop is one of the strongest knots giving around 75% of the strength of the rope. The Clove Hitch gives around 60% and the Bowline fails between 50% and 60% [scarily it's been recorded to fail as low as 30% in some higher tech ropes]. Anyone working backstage should be able to fluently tie a Bowline and Clove Hitch (secured with an additional half hitch) as the industry standard knots. Be aware that other factors could have a greater effect on the rope's strength, and the reductions stated here are not applicable to all ropes. Tying off your rope around a large diameter smooth cylinder will have little effect on its strength but tying onto a karabiner or anything that forces the rope into a tight bend will weaken the rope. So called "High-Tech" ropes [page 202] should also be treated with caution and never knotted, but always terminated with a spliced eye.



Matt Black Braided Polyester

A very strong multipurpose rope which is comfortable to handle and easy to coil. The ropes that we supply have a matt cover which, although more expensive than shiny polyester ropes, considerably adds to comfort and grip and it also helps to ensure that knots do not accidentally work loose. Polyester is marginally less strong than nylon but it does have better



chafe resistance, less stretch, and it does not weaken when wet. Synthetic ropes are not ideally suited for permanent dead hanging of equipment in theatres as the rope might weaken if brought into contact with hot lamps or if a fire occurred. Available in pure black or [unflecked] white and now also in classic hemp colour. The 8 mm x 8-plait rope is the ideal hauling line for 3-Way Track, Unitrack, and Unirail tab tracks. Use 6 mm x 8-plait in Halls T60 tracks.

Our best-selling rope!

Conformity: BS 4928 DIN EN 697.

Flints can eye splice the 16-plait braided ropes, please see page 206 for prices.

- ✓ Comfortable to handle
- ✓ Matt black finish or pure white
- ✓ Fantastic value
- ✓ Low working stretch – less than 7%
- ✓ Unaffected by moisture
- ✓ Excellent chafe resistance
- ✓ Very good electrical insulation
- ✓ Wide range of sizes
- ✓ Easy to coil
- ✓ Unflecked finish
- ✓ Long-lasting durability
- ✓ Will not rot
- ✓ Good knot holding
- ✓ Very good strength
- ✓ Very good UV resistance
- ✓ Resistant to acid

Also available as Small Cords [page 204].

Matt Black Polyester		code	per m	code	per 100 m	10+
diameter	plait	breaking strain			full reel	reels
6 mm	8	520 kg	ROP120	£1.14	ROP120D	£80.09 £71.70
8 mm	8	1,000 kg	ROP122A	£1.40	ROP122AD	£105.35 £95.68
8 mm	16	1,000 kg	ROP122	£1.40	ROP122D	£105.35 £95.68
10 mm	16	1,900 kg	ROP124	£2.19	ROP124D	£180.21 £163.55
12 mm	16	2,400 kg	ROP126	£2.69	ROP126D	£220.26 £200.09
14 mm	24	2,900 kg	ROP128	£4.22	ROP128D	£346.64 £314.62
16 mm	24	3,500 kg	ROP130	£5.58	ROP130D	£466.77 £421.71
20 mm	24	5,300 kg	ROP134	£6.83	ROP134D	£560.63 £512.18

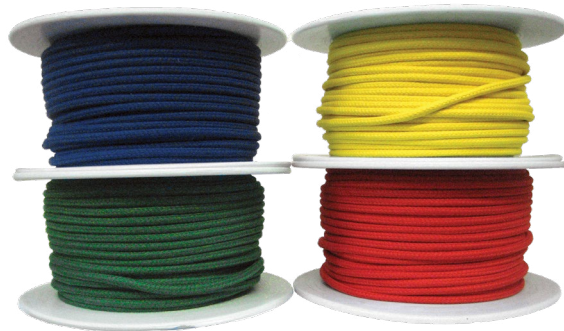


Pure white rope...

Pure Matt White Polyester Rope

The Matt Braided Polyester Ropes are also stocked in pure unflecked white. Yacht ropes normally have coloured marker flecks on them but Theatre Designers like their white ropes white. Flints has these ropes specially made.

Matt White Polyester		code	per m	code	per 100 m	10+
diameter	plait	breaking strain			full reel	reels
6 mm	8	520 kg	ROP120W	£1.14	ROP120WD	£80.09 £71.70
8 mm	8	1,000 kg	ROP122AW	£1.40	ROP122AWD	£107.45 £97.66
8 mm	16	1,000 kg	ROP122W	£1.40	ROP122WD	£107.45 £97.66
10 mm	16	1,900 kg	ROP124W	£2.19	ROP124WD	£180.21 £163.55
12 mm	16	2,400 kg	ROP126W	£2.69	ROP126WD	£220.26 £200.09
14 mm	24	2,900 kg	ROP128W	£4.22	ROP128WD	£346.64 £314.62
16 mm	24	3,500 kg	ROP130W	£5.58	ROP130WD	£466.77 £421.71
20 mm	24	5,300 kg	ROP134W	£6.83	ROP134WD	£560.63 £512.18



Polyester Ropes in Pure Colours

Flints can supply blue, yellow, green and red matt polyester. These ropes are made especially for us and are pure colour without the usual marker flecks so they can be used for digital keying effects. We can have other diameters made but subject to minimum quantity restrictions. Please phone for details.

Coloured Polyester Ropes		code	per m	code	per 100 m	10+	
Ø	plait	colour	breaking strain		full reel	reels	
8 mm	16	Blue	1,000 kg	ROP122B	£1.53	ROP122BD	£126.39 £111.06
		Yellow	1,000 kg	ROP122Y	£1.53	ROP122YD	£126.39 £111.06
		Green	1,000 kg	ROP122G	£1.53	ROP122GD	£126.39 £111.06
		Red	1,000 kg	ROP122R	£1.53	ROP122RD	£126.39 £111.06
10 mm	16	Blue	1,900 kg	ROP124B	£2.40	ROP124BD	£197.73 £177.95
		Yellow	1,900 kg	ROP124Y	£2.40	ROP124YD	£197.73 £177.95
		Green	1,900 kg	ROP124G	£2.40	ROP124GD	£197.73 £177.95
		Red	1,900 kg	ROP124R	£2.40	ROP124RD	£197.73 £177.95



Classic Polyester Braided

All the advantages of a modern braided rope but in a traditional natural colour. The outer braid is made from matt polyester yarn which gives excellent grip. The core is plaited polyester. The 20 mm Ø would make for an excellent counterweight line.

- ✓ Traditional appearance
- ✓ Easy to handle
- ✓ Excellent grip

Classic Polyester [00173]		code	per m	code	per 100 m	
diameter	plait	breaking strain			full reel	
6 mm	16	520 kg	ROP117306	£0.83	ROP117306D	£68.34
8 mm	16	1,000 kg	ROP117308	£1.39	ROP117308D	£111.04
10 mm	16	1,900 kg	ROP117310	£2.24	ROP117310D	£181.99
12 mm	24	2,400 kg	ROP117312	£2.76	ROP117312D	£222.73
14 mm	24	2,900 kg	ROP117314	£3.53	ROP117314D	£287.77
16 mm	24	3,500 kg	ROP117316	£4.94	ROP117316D	£400.78

Larger diameters available to order

Problems with rope sizes?

Take care when choosing a rope to fit existing pulleys. Rope diameters will reduce when a load is applied. Short lengths of 3-strand rope will expand when cut off a coil as the tension is released. Natural fibre ropes will sometimes vary in dimensions slightly from batch to batch. If you think the rope that you need is going to be a close fit please seek advice or ask for a sample before placing an order.

HIGH TECH ROPES



Technora 12 Plait Rope A modern para-aramid fibre rope widely used on camera dollies for accurate positioning.

- ✓ Eight times stronger than steel (weight for weight)
- ✓ Extremely low stretch – ideal for accurate positioning.
- ✓ Does not burn or melt
- ✓ Survives brief exposure up to 400°C.
- ✗ Degrades rapidly when exposed to UV light

Technora Rope		code	per m	code	per 100 m
diameter	breaking strain				full reel
6 mm	2600 kg	ROP15806	£3.93	ROP15806D	£333.15
8 mm	4000 kg	ROP15808	£6.04	ROP15808D	£512.18
10 mm	6300 kg	ROP15810	£9.31	ROP15810D	£789.75



Dyneema® D-Pro With this technical line you will achieve optimised breaking strengths with minimal creep due to the Liros Heat Stretch System. Resistance to abrasion, low weight, and ease of splicing are features that make this line the optimum for any application where very high strength and very low stretch are desired. Black.

- ✓ Good choice for high load tab tracks or scenery carriers as it has no outer cover to cause slippage on rope clamps
- ✓ Working stretch less than 1.3% therefore no whiplash
- ✓ Generally higher breaking strength than wire rope with minimal weight
- ✗ Not suitable for knots - must be terminated with a spliced eye

Dyneema® Pro [01505] [E0148]		code	per m	code	per 100 m
diameter	breaking strain				full reel
1 mm	195 kg	ROP150501	£0.72	ROP150501D	£50.03
1.5 mm	230 kg	ROP1505015	£0.78	ROP1505015D	£59.30
2 mm	410 kg	ROP150502	£0.99	ROP150502D	£80.07
3 mm	950 kg	ROP150503	£1.49	ROP150503D	£123.72
4 mm	1,300 kg	ROP150504	£2.26	ROP150504D	£188.68
5 mm	2,600 kg	ROP150505	£3.31	ROP150505D	£275.94
6 mm	4,300 kg	ROP150506	£5.42	ROP150506D	£454.34
8 mm	5,300 kg	ROP150508	£7.05	ROP150508D	£597.42
10 mm	9,000 kg	ROP150510	£10.47	ROP150510D	£822.30



Matt Black Dyneema® Rope [polyester cover] These matt pure black Dyneema® ropes have exceptional strength with a low stretch of less than 1.5%. They are covered with a high quality matt 16-plait polyester cover so that they are comfortable to handle. Unlike Kevlar, these ropes are not prone to catastrophic failure and can be run around sheaves with a diameter just five times the rope diameter. The low stretch properties can be very helpful to avoid sagging return lines on long tab tracks.

Dyneema® Ropes		code	per m	code	per 100 m
diameter	breaking strain				full reel
3 mm	400 kg	ROP433	£1.25	ROP433D	£102.68
6 mm	1,000 kg	ROP436	£2.64	ROP436D	£221.68
8 mm	1,500 kg	ROP438	£4.36	ROP438D	£317.26
10 mm	2,400 kg	ROP4310	£6.17	ROP4310D	£530.04

A Word of Warning

High Tech ropes are immensely strong but that doesn't necessarily mean they are a better choice for all applications. If a falling weight is arrested by a nylon or polyester rope, the rope will stretch and absorb a great deal of the shock loading.

If a falling weight is arrested by a Dyneema® line there will be virtually no stretch and huge impact forces are liable to break the line or tear out the anchor point. I have seen many examples of "weaker" ropes successfully arresting falling weights while much "stronger" Dyneema® ropes have failed.

On the plus side, there will be no whiplash which is why many tug drivers are choosing Dyneema® for their tow lines. So choose Dyneema® when the loads are constant and the lack of stretch is advantageous.

High tech ropes can be useful because of the smaller diameter to strength ratio, provided their limitations are taken into account.

Generally these ropes should be treated as one would treat wire ropes and only terminated with a spliced eye. If in doubt as to the suitability of the rope for the application, check.

Dynamic, Semi-Static or Static?

Ropes used for industrial access, climbing and fall arrest can be classified as three types:

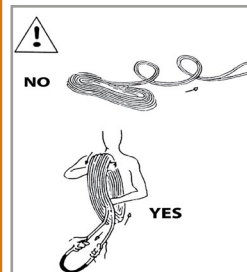
- Dynamic = elongation at break above 40%
- Semi-Static = elongation at break 35 - 40%
- Static = elongation at break below 35%

As nylon [polyamide] is the most stretchy rope it is used almost exclusively as dynamic and semi-static lines. But nylon in its yarn state stretches only 16 - 27% so extra stretch is added by braiding and by heat treatments to ensure a 40% stretch is achieved.

The stretch is an important safety factor as the G-force of a falling object can be roughly calculated by the fall distance divided by the arrest distance. Therefore a person falling 2 m being arrested by a nylon rope which stretched 200 mm would be subjected to a G-force of 10 but if the rope was Dyneema® with just 2 mm stretch the G-force would be 1,000 and possibly fatal.

Dynamic and semi-static lines are classed as PPE [Personal Protective Equipment] Category 3, C-type inspection. They must be made by an ISO 9001 registered company.

Uncoiling Hanks



courtesy of Beal Ropes

Climbing and industrial access ropes are often supplied as hanks. Be careful because the method of manufacture and hanking varies with different manufacturers. Some have made them more user-friendly but normally if you just grab a new hank of a climbing rope and throw it on the floor you will be in for a very unpleasant surprise! You will end up with a kinked-up mess which could take an hour to sort out. Always read

the instructions before unwrapping the rope. Generally, the way to uncoil a new hanked climbing rope is to slip both your arms through it and then unwind it as if it is rotating on a drum. You will need two people. Don't forget that many semi-static ropes require soaking before they are unbound. Read the instructions!

For demo videos of coiling techniques visit our YouTube channel – <http://www.youtube.com/FlintsTheatre> or simply scan the QR code



INDUSTRIAL ROPE ACCESS

NEW TYPE



Beal Dynamic Apollo 11mm diameter

This popular industrial rope is manufactured to the exacting standards you would expect. Supplied as 50 m hanks. They are constructed to withstand an "F2" fall [page 335]. Dynamic ropes are also designed to reduce the impact of a fall. UIAA norm states the impact must be less than 1,200 daN – this rope will transmit 840 daN. EN 892.



Cow's Tails create anchor lanyards [Cow's Tails] for the attachment of the user's harness to an anchor point. Check with the harness manufacturer which harness points are suitable for cow's tails. Must not be used to make a fall arrest lanyard in conjunction with an energy absorber. Knots used must have a minimum static strength of 15 kN. Tests show a correctly tied Figure-of-Eight knot gives a minimum static strength in excess of 15 kN. Other knots may not meet the 15 kN strength.

Dynamic Rope			code	price
diameter	type	colour	weight length	
11 mm	Rope	Red	5 g/m 50 m	ROPBC11A50R £116.38
11 mm	Cow's Tail	can vary	330 g 4 m	ROPLICT4A £24.26
11 mm	Cow's Tail	can vary	410 g 5 m	ROPLICT5A £27.84



PPE



Semi-Static

These ropes are ideal for fixed rigging used exclusively for descender-descent and ascender-ascent. Minimum elasticity is desirable yet the ropes are semi-static to protect against "F1" falls [page 335]. Soak the ropes before use and dry [expect 5% shrinkage]. The ropes are constructed from 100% nylon [polyamide]. Suitable for use with the ASAP Mobile Fall Arrester [page 337]. Conformity: EN 1891 Type A. Breaking load: 3,263 kgf [3,200 daN]. Breaking load with Figure-of-Eight knot: 2,141 kgf [2,100 daN].

Semi-Static Rope			code	price
type	colour	length		
11 mm Ø	Industry	White	50 m	ROPBCST1150 £108.26
	Intervention	Black	50 m	ROPBCSTN1150 £136.42
	Intervention	Black	100 m	ROPBCSTN11100 £267.94
	Intervention	Black	200 m	ROPBCSTN11200 £535.88

PPE



Orange Rescue Rope Beal's bright orange Rescue rope. Highly visible semi-static rope designed especially for easy location in rescue situations. This rope features a polyester sheath. Conformity: EN 1891 Type A. SPECIFICATION: Breaking load: 3,000 daN [kg]. Strength with sewn terminations: 2,400 daN [kg]. Weight: 65 g per metre.

Rescue Rope		length	code	price
10.5 mm Ø		50 m	ROPBCSR105050	£122.77

SASH CORDS

Sash Cord

Originally made to counterbalance sash windows. Sash cords were made of natural jute but they were sometimes waxed to help prevent rot. The stiff waxed type was not suitable for stage use. Years ago there wasn't much choice when it came to small cords and jute sash was very popular. Then black cotton "Sash" arrived to fill a need for a black small cord. Pure black polyester "Sash" is now readily available. Polyester is much stronger than jute and less stretchy than cotton. It will not rot but it is more expensive. Matt black polyester sash is listed on page 201. The 6 mm size [ROP120] is the equivalent of No 4, and the 8 mm size [ROP122A] is the equivalent of No 6. So now there's a choice!



Jute Sash Cord A natural coloured multipurpose cord suitable for non-load bearing applications. No 6 is the standard cord for throw lines. Widely used in tab tracks [Halls T60 uses No 4] although many people now prefer to use matt polyester [page 201]. Please note: to find the

approximate diameter of the cord add 2 mm to the size of rope quoted [e.g. No 4 sash is approximately 6 mm diameter]. Some clients prefer to order their sash cord in traditional hanks as they find it easier to divvy up the cord amongst the crew. We also stock eight 12.5 m hanks joined to make 100 m. The size 8 is now available in BLACK.

Jute Sash Cord	code	per 100 m
No 4 Jute Sash	ROP042MD100	£27.15
No 6 Jute Sash	ROP044MD100	£44.00
No 8 Jute Sash	ROP046MD100	£53.08
BLACK No. 6 Jute Sash	ROP060BD100	£34.15

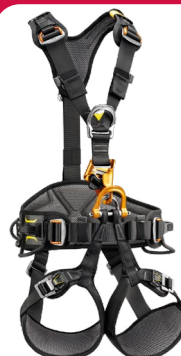
8 hanks [100 m - 8 x 12.5 m hanks]	code	price
Joined Hanks of No.6 Jute Sash	ROP044JSJHK	£59.22



Black Cotton Sash Cord

A very soft natural cotton braided cord dyed black. Rather stretchy but soft to handle. See also 8 mm Matt Black Polyester [page 201].

Black Cotton Sash Cord	code	per m	code	per 100 m
No 6 Cotton Sash	ROP052M	£1.31	ROP052MD100	£91.71



Petzl ASTRO@ BOD FAST

Working at Height?

To see our full range of harness, ascenders, rope grabs, lanyards and fall arrest equipment, see our Working at Height section on page 319.



Petzl RIG

CORDS AND STRINGS



Nylon Cord A very strong braided cord. Useful for trip lines and lacing. Nylon has high stretch characteristics when under heavy load. If stretch could pose a problem then choose polyester below or Dyneema® [page 202]. Ends can be sealed with a hot knife. Available in black or white. Polyamide and nylon are two names for the same material. NB: the breaking strain is 10% less when wet.

Nylon Cord	black code	white code	10+
diameter	breaking strain [when dry]	100 m reel	100 m reel
1 mm	35 kg	ROPNC10B £14.66	ROPNC10W £14.66
1.5 mm	40 kg	ROPNC15B £17.40	ROPNC15W £17.40
2 mm	100 kg	ROPNC20B £18.99	ROPNC20W £18.99
2.5 mm	140 kg	ROPNC25B £20.54	ROPNC25W £20.54
3 mm	180 kg	ROPNC30B £25.31	ROPNC30W £25.31
3.5 mm	260 kg	ROPNC35B £28.00	ROPNC35W £28.00
4 mm	340 kg	ROPNC40B £29.98	ROPNC40W £29.98

For extreme use with constant loads we list pure Dyneema® with a higher breaking strength than wire of the same diameter and with a stretch of less than 1.3% [page 202].



Matt Polyester Cord These matt polyester cords which have less stretch than nylon and hold their knots perfectly. They make ideal ties for lacing, tying up cables and general use where natural string or sash line would not be strong enough. Available in black or white. Conformity: EN 697.

Matt Polyester Cord	code	per m	code	per 100 m
diameter	colour	breaking strain		full reel
3 mm	Black	110 kg	ROP117	£0.65
	White	110 kg	ROP117W	£0.65
4 mm	Black	170 kg	ROP118	£0.78
	White	170 kg	ROP118W	£0.78
5 mm	Black	300 kg	ROP119	£0.81
	White	300 kg	ROP119W	£0.81



Boxes of Coloured Polyester Line Handy boxes of 2 mm or 3 mm diameter brightly coloured polyester line which is very UV resistant, will not stiffen up and is very flexible. Each box has an assortment of red, yellow, green, black and blue. We also sell the 3 mm cords as individual reels.

Box of Ten Assorted Coloured Lines	code	price
diameter	reel length	
2 mm	30 m	ROP10402 £53.81
3 mm	15 m	ROP10403 £64.14

Coloured Polyester Line	code	price	
diameter	colour	reel length	
3 mm	Black	15 m	ROP1043188 £7.20
	White	15 m	ROP1043228 £7.20
	Red	15 m	ROP1043171 £7.20
	Blue	15 m	ROP1043010 £7.20
	Green	15 m	ROP1043086 £7.20
	Yellow	15 m	ROP1043059 £7.20

NATURAL STRINGS



Sisal A useful traditional ball of string. How long is a ball of string? Twice the distance from one end to the centre.

Sisal String	approx. length	size	code	price
	33 m	250 g ball	ROP058	£2.79
	330 m	2.5 kg ball	ROP055	£12.58



Tarred Marlin A wonderful dark brown natural twine which smells of old ships. Heaven. We've sourced the same quality but at a much lower price. See below for Historic Cord.

Tarred Marlin	diameter	size	code	price
Whipping Twine	approx 1 mm	250 g ball	ROP250WT	£14.40
Serving Twine	approx 3 mm	250 g ball	ROP250ST	£14.40

3-STRAND POLYESTER CORD



3-Strand Polyester Cord Hemp performance, but softer, more weather resistant, and with a higher load performance. Made from spun polyester. Ideal for whipping, lashing and model boat rigging. This is a 3mm version of the Classic 3 Strand Polyester Rope [page 200].

3-Strand Polyester Cord	code	price	10+
diameter	reel length		
3 mm	10 m	ROPHC3N10	£6.79

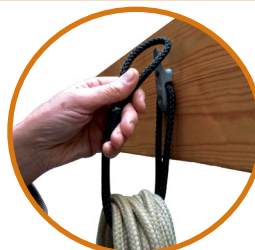
FISHING LINE



Flints Nylon Monofilament Fishing Line Use for suspending when wire isn't appropriate and you want the thread to be inconspicuous. Can also be used for fishing. Natural nylon colour.

Fishing Line	breaking strain	code	price
diameter	kg	lb	reel length
0.30 mm	4	8.8	100 m
0.60 mm	14	30.8	100 m
1.20 mm	48	105.8	100 m

BRAIDED LOOPS



Braided Loops These loops are made from black 8 mm polyester braided cord. They are 450 mm long [circumference 900 mm]. When used with a Clummet® they are very useful for keeping your ropes and cables organised. Just trap a loop under the Clummet®, draw it through the coil of rope to be hung up and then hook the loop back over the Clummet®.

For Clummet® see page 149.

Braided Loop	code	price
diameter	EWL	
8 mm	450 mm	FHS006LOOP £3.45

BARRIER ROPES



Barrier Rope Soft textured staple fibre polypropylene rope specially made for use as decorative barriers. We now only stock the 24 mm Ø.

Barrier Rope	colour	code	price
per m	Bright Red	ROP420BR	£5.67
	Wine Red	ROP420WR	£5.67
	Green	ROP420V	£5.67
	Royal Blue	ROP420RB	£5.67
	Black	ROP420N	£5.67
	Natural	ROP420E	£5.67
per 25 m coil	Bright Red	ROP420BRD	£106.57
	Wine Red	ROP420WRD	£106.57
	Green	ROP420VD	£106.57
	Royal Blue	ROP420RBD	£106.57
	Black	ROP420ND	£106.57
	Natural	ROP420ED	£106.57



Barrier Rope Fittings and Standards Easy to fit good quality fittings to make up rope barriers for theatre foyer and museum use.



End Fittings	code	price
Brass hook for 24 mm	ROP420BH	£6.01
Chrome-plated hook for 24 mm	ROP420BHC	£6.53
1 m high ball topped brass-plated standard	ROPBWS32	£77.17
1 m high ball topped chrome-plated standard	ROPBWS32C	£71.66
Brass eye plates [for wall fixing]	ROPBRS2322	£4.19
Chrome-plated eye plates [for wall fixing]	ROPBRS2322C	£4.19

ECONOMY ROPE AND STAKES



Rope and Stakes Economy grade polypropylene rope suitable for fencing off outdoor areas at festivals and show grounds. Two coil sizes.

The stakes are steel and sold singly. To complete the job you may need Club Hammers [page 297] and Line Marking Chalk Sprays [page 68].

Rope and Stakes	coil size	code	price	10+	
10 mm Ø	Blue Rope	220 m	ROPBC220	£72.02	-
	Blue Rope	30 m	ROPBC30	£14.04	-
	Stake	-	ROPSTAKE	£5.25	£4.71



Take a look at Rescue Tape [page 279].

SHOCK CORD LOOPS



Spanfixes – shock cord loops These loops of shock cord with a nylon hook at one end are hugely popular. They are perfect for stretching projection screens but also useful for

awnings, banners and cloths. The elastic will exert a constant tension giving a totally wrinkle-free cloth even under variable heat, humidity and weather conditions. The loops are made from 5 mm diameter shock cord and measure 250 mm end to end. They will stretch by 100% [+/-10%]. In black or white. Supplied in bags of 10

Shock Cord Loops	code	code	10+	100+
Ø length	black	white	bag of 10	bag of 10
5 mm 250 mm	ROP090	ROP090W	£9.53	£9.53
			£8.10	£7.21



Spaniflex – adjustable shock cord loops A quickly adjustable black shock cord loop. Made from 5 mm shock cord approx. 500 mm long. Will make a maximum loop of 200 mm. Useful for touring situations when the distance between the cloth and the eyelet can be variable.

Spaniflex	open length	code	bag of 10	10+ bags
5 mm Ø	500 mm approx.	ROP090S10	£13.30	£11.90

We can supply custom Bungee Straps made to your requirements!

BUNGEE SHOCK CORD



Bungee Shock Cord Highly elastic rubber with excellent stretch characteristics. The cover is braided out of abrasion resistant and highly resilient polyester. Core from high quality latex rubber. Available in black or white. When the Dangerous Sports Club were on trial for bungee jumping off the Clifton Suspension Bridge the judge was undecided whether to give them a suspended sentence or a long stretch. Supplied by the metre or in a full drum which is 100 m.

Bungee	code	per m	code	per m	code	100 m	code	100 m
Ø	black		white		black	full drum	white	full drum
3 mm	ROP072M	£0.35	ROP072	£0.35	ROP072MD	£29.00	ROP072D	£29.00
5 mm	ROP074M	£0.49	ROP074	£0.49	ROP074MD	£39.00	ROP074D	£39.00
7mm	ROP076M	£0.85	ROP076	£0.85	ROP076MD	£59.00	ROP076D	£59.00
8 mm	ROP078M	£0.98	ROP078	£0.98	ROP078MD	£79.00	ROP078D	£79.00
10 mm	ROP080M	£1.30	ROP080	£1.30	ROP080MD	£89.00	ROP080D	£89.00

Other sizes and colours available to order. Please phone for details.

BUNGEE CLIPS



Bungee Clips Two styles of black clip to terminate your bungee. Type A is held with a knot which hides in the recess and Type B has a collar that clips into place to neatly secure the bungee.

Clips	style	bungee size	code	price
	Knot Type A	5 - 6 mm	ROP085	£0.62
	Knot Type A	7 - 8 mm	ROP086	£0.67
	Collar Type B	5 - 6 mm	ROP081	£0.85
	Collar Type B	7 - 8 mm	ROP083	£0.99

SPLICING

SPLICING SERVICE

Splicing Service

Flints can hand splice 3-strand and braided ropes. Our splices are carried out to a very high standard and are in accordance with the Lifting Equipment Engineers Association's recommendations and the rope manufacturer's advisory notes. Natural fibre ropes are slightly more costly to splice because of the requirement to whip all the tails whereas artificial ropes can be sealed with a hot knife. Try to avoid the need for splices at each end of a rope, especially matched pairs. It is very difficult to splice rope to exact lengths and some settling can occur. If Flints is making up sets of spliced lines we will cut them from the same coil or batch of coils. Flints can also make up wire rope drifts with full certification.

All Splices For every splice you will need to add the cost of the rope plus one metre for each splice and the cost of the Thimble chosen [page 173].



Splices in Natural Fibre Ropes This covers splices in manila, flax and cotton ropes. Splices in ropes up to and including 16 mm Ø will have four full tucks. All tails will be whipped and the thimble secured with two lashings. Splices in ropes over 16 mm Ø will have four full tucks plus an additional tuck with at least 50% of the yarn and all the tails whipped.

Natural Fibre Splicing	strands	code	price
Up to and including 16 mm Ø	three	SPLICENF16	£8.00
16 mm to 24 mm Ø	three	SPLICENFL	£12.00
20 mm Ø	four	SPLICECHR	£15.00
Aerialist splice in cotton	three	SPLICECRA	£20.00



Splices in Artificial Fibre 3-Strand Ropes This covers splices in 3-strand artificial hemp, classic polyester and black polyester. Splices in ropes up to and including 16 mm Ø will have five full tucks. All tails will be fused back with a hot knife and the thimble secured with two lashings. Splices in ropes over 16 mm Ø will have five full tucks plus an additional tuck with at least 50% of the yarn. All the tails will be fused with a hot knife.

Artificial 3-Strand Splicing	strands	code	price
Up to and including 16 mm Ø	three	SPLICEAF16	£6.00
16 mm to 24 mm Ø	three	SPLICEAFL	£8.00



Splices in Braided Ropes This covers splices in braided ropes [matt polyester, classic polyester, Herkules and Dyneema® Pro] but excludes 8-plait ropes. The ropes will be spliced in accordance with the manufacturer's instructions. We can also arrange sewn terminations for climbing ropes – please ask our Rigging Manager.

Braided Rope Splicing	material	code	price
8 mm to 12 mm Ø	polyester	SPLBR812	£10.00
12 mm to 20 mm Ø	polyester	SPLBR1220	£12.00
3 mm to 10 mm Ø	Dyneema® Pro	SPLBRDP	£6.00

SPLICING GEAR

Splicing Equipment Splicing 3-strand ropes is relatively easy. If you can find a knowledgeable person to show how it is done, then that is the best way to learn, but if no one is available then why not purchase one of our splicing books such as "Knots Step by Step" by Des Pawson [MBE]. Books are listed on page 377.



Whipping Twine Black, white or natural waxed twine in two sizes. For the heavier natural tarred twines which are more suitable for decorative work reminiscent of old ships [page 204].

Whipping Twine	Ø	reel	code	price
Whipping twine [medium] white	1 mm	30 m	ROP200M	£4.54
Whipping twine [heavy] white	1.5 mm	20 m	ROP200L	£4.18
Whipping twine [heavy] black	1.5 mm	20 m	ROP200LB	£4.60
Whipping twine [medium] natural	0.8 mm	41 m	ROP200N08	£6.16



Palms and Needles Left- and right-handed leather palms with a needle-proof section for forcing through heavyweight materials or ropes. The needles are proper sailmaker's needles capable of heavy work. Whipping threads are often drawn through a beeswax cake to waterproof and seal the thread. Right-handed people tend to use right-handed palms.



Palm and Needles	code	price
Sailmaker's Palm [left hand]	ROP201	£10.44
Sailmaker's Palm [right hand]	ROP201R	£10.44
Sailmaker's Needles [Pack of 5 assorted]	ROP202	£6.15
Sailmaker's Needles [Pack of 22 assorted]	ROP2025	£19.59
Beeswax Cake [for waterproofing thread]	ROP206	£6.77



Marlin Spikes A solid steel spike for opening up tight ropes.



Currey Spike For stabbing naan bread plus a useful shackle key.



Swedish Fids These fids are hollow so that strands can be passed through the gap while the fid is still inserted.



Selmas are special hollow needles from Norway for splicing braided ropes. Supplied in sets of four to suit ropes up to about 12 mm. Also see "Knots, Splices and Ropework" for detailed splicing instructions [page 377].

Jag kommer från Sverige...

...men vi kommer fra Norge!

Fids and Spikes	size	code	price
Marlin Spike	6"	ROP212	£15.86
Marlin Spike	10"	ROP213	£18.85
Currey Spike	73/4"	ROP211	£12.71
Swedish Fid	63/4"	ROP203	£8.51
Swedish Fid	111/4"	ROP204	£12.70
Selmas [set of 4]	4 - 10 mm	ROP1435000	£52.05

SPLICING KIT



Splicing Kit We have put together this handy kit supplied in a Flints Canvas Zipper Bag. The kit comprises of Knots Step by Step, a right- or left-hand sailmaker's palm, a 6" Swedish fid, beeswax, a pack of 5 sailmaker's needles, a reel of 1 mm whipping twine, a length of braided rope to practice knots, a length natural 3-strand rope, and a length of 3-strand artificial hemp to practise splicing.



Splicing Kit	price	code	price	code	price
if bought separately		right-hand		left-hand	
Kit	£62.38	FHSSPLR	£45.00	FHSSPLL	£45.00



Liros Rigger's Bag

A high spec splicing kit with all the tools and accessories necessary to complete braided and 3-strand splices.

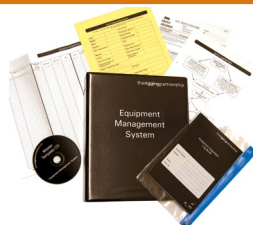
All packed in a handy special zipper bag, includes:

- | | |
|--|-----------------------------|
| 1 x Liros Whipping needle | 1 x Swedish Fid |
| 1 x Liros splicing CD | 1 x Liros wet notes book |
| 3 x Splicing needles [5.5, 7.5, 10 mm] | 1 x Liros brochure |
| 1 x Liros tape | 1 x Dyneema® whipping twine |
| 1 x Pen | 1 x Lighter |

Liros Rigger's Bag	code	Tradeline
	ROPLRB	£99.98

Also see Knot Books [page 377] and Ditty Bags [page 325].

EQUIPMENT MANAGEMENT SYSTEM



Equipment Management System

I know you are all mega organised and could quickly lay your hands on the certificate of conformity for that lanyard you bought last year. I'm sure all your harness inspection records are neatly filed so you won't

be needing to purchase this splendid Equipment Management System which resolves every problem associated with recording and storing the essential data needed to comply with LOLER regulations.

Equipment Management System	code	Tradeline
	BKSEMS	£51.00
Extra booklets for multi-users	BKSEMSB	£3.59

Why not buy a robust and well-designed Ortlieb Bag [page 326] to look after your PPE?

HOT KNIVES



Hot Knife This industrial quality hot knife heats up quickly to cut and seal the ends of artificial ropes. Fitted with a light to illuminate the cutting area. The blade is also available as a separate item. 240 V AC.

Hot Knife for Rope	code	price
Knife complete with blade	ROPHOTKK	£119.30
Knife blade only [Type R]	TOLHSGB	£23.00



Economy Hot Knife

A economical hot knife supplied complete with a blade ideal for cutting modern synthetic ropes. Packed with a hex key and wire brush. 220 V AC 50 Hz. Power: 60 W. Power lead length: 2.5 m. Weight: 1.5 kg

Hot Knife for Artificial Rope	code	list	price
Knife complete with blade	ROPC857	£124.09	£107.30
Knife blade only [Type R]	ROPC857B		£17.44

ADHESIVE-LINED HEAT SHRINK



Adhesive-Lined Heat Shrink Tubing

We found that conventional heat shrink tubing would eventually slip off the rope, especially

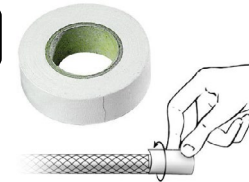
manila, and we got into the habit of applying a squirt of UHU glue to secure it. Now we stock this heat shrink tubing with a hot melt glue inside. As you heat it the glue melts and the tubing shrinks by four times to form a really secure termination. Ideal for sealing the ends of natural ropes without needing to whip them. Also great for preventing water ingress to electrical terminations. Use a hot air gun to shrink it [page 282]. Choose a size plenty big enough, you will struggle to get a 32 mm diameter shrink over a 32 mm rope but it will go nicely onto a 24 mm rope.

✓ Great for securing webbing loops to tools for lanyard attachment points. See also the Ergodyne Squids® system on page 336

Adhesive-Lined Heat Shrink	code	per m	Tradeline
diameter	shrinks to		6 m+
12 mm	3 mm	ROPDWA123	£4.77
24 mm	6 mm	ROPDWA246	£7.90
32 mm	8 mm	ROPDWA328	£10.40
			£4.05
			£6.72
			£8.84

Also see Rescue Tape [page 279] and the Ergodyne Squids® system on page 336.

ROPE LABELLING



Rope Labelling Pack

This useful kit provides a special white tape and clear heat shrink to enable the ends of ropes to be clearly marked, especially when they are cut from a reel. It is designed for use with the dynamic and

semi-static ropes listed above but would be suitable for any ropes around 10 mm diameter. Enough for 50 labels. Also see Rescue Tape [page 279].

Rope Labelling Pack	code	price
	ROPBRE	£13.33

WEBBING

WEBBING



Webbing Black or white polyester webbing for reliable performance and excellent abrasion resistance. Polyester has lower stretch than nylon and maintains its strength when wet.

Webbing	code	per m	code	per 100m
width colour breaking strength				full reel
25 mm Black 1,500 kgf	ROPPW25	£0.90	ROPPW25D	£74.80
White 1,500 kgf	ROPPW25W	£0.80	ROPPW25WD	£66.85
38 mm Black 3,000 kgf	ROPPW38	£1.74	ROPPW38D	£145.50
White 3,000 kgf	ROPPW38W	£1.56	ROPPW38WD	£131.10
50 mm Black 5,000 kgf	ROPPW50	£1.69	ROPPW50D	£110.85
White 5,000 kgf	ROPPW50W	£1.69	ROPPW50WD	£110.85

Also see Webbing Links and Seddon Links [page 164] and Ratchet Straps and Tie Off Webbing [page 359].

WEBBING FITTINGS



Stainless Steel Bridge Neat bridges for holding webbing in place.

Stainless Bridge	code	price
webbing width		
25 mm	ROP0596	£1.44
40 mm	ROP0597	£2.03
50 mm	ROP0598	£2.36

TREEFIX CABLE WRAPS



TreeFix Cable Wrap Durable Rubber Cable wraps that can be used again and again. Great alternative to single use cable ties Available in 80 mm, 160 mm & 230 mm

TreeFix Cable Wrap	code	price
80 mm	GENTFW08	£5.71
160 mm	GENTFW16	£24.50
230 mm	GENTFW23	£10.68

BUCKLES



Quick Release Buckles This type suits 40 and 50 mm webbing. The quick release button is on the top.



This buckle is a side squeeze type and takes 25 mm webbing. Both the buckles are black.

Quick Release Buckles	code	list	price
webbing width approx. breaking strain			
25 mm [side squeeze] 97 kg	ROP5131K		£0.80
40 mm [top release] 300 kg	ROP1958	£8.63	£8.63
50 mm [top release] 300 kg	ROP1960	£10.41	£9.64



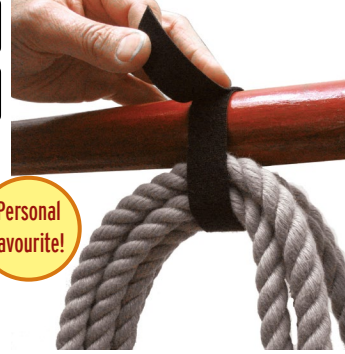
For 40 mm webbing. For 50 mm webbing.

Stainless Steel Flat Buckles 3 bars and 2 slots.

Stainless Steel Flat Buckles	code	price
webbing width thickness		
40 mm 3.2 mm thick	ROP0810	£5.19

ROPE TIDIES

ONE WRAP



Personal favourite!

One Wrap This is one of the most useful products in the catalogue. It is a hook and loop fastener that is double sided so it will stick to itself. Cut it to any length to make reusable cable ties. Use it around folded cloths, sorting extension leads etc. Available on rolls or by the metre. Amazingly useful. Black.

One Wrap	code	per m	reel code	per 25 m
16 mm wide	GEN244	£1.65	GEN244D	£33.04
20 mm wide	GEN245	£1.90	GEN245D	£38.91
25 mm wide	GEN246	£2.11	GEN246D	£46.74
50 mm wide	GEN248	£3.52	GEN248D	£85.65

CABLE TIES



Cable Ties Self-extinguishing nylon 6.6. Working temperature from -40° to +85°. Available in black and natural. Remarkable value.

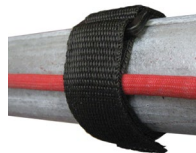
Cable Ties	code	price	code	price	10+
	black	pack of 100	natural	pack of 100	
100 x 2.5 mm	GEN233	£0.64	GEN233N	£0.64	£0.45
200 x 4.8 mm	GEN232	£1.95	GEN232N	£1.95	£1.55
300 x 4.8 mm	GEN231	£3.80	GEN231N	£3.80	£2.85
370 x 7.6 mm	GEN234	£8.76	GEN234N	£8.76	£6.30
780 x 9 mm	GEN235	£19.60	GEN235N	£19.60	£17.85



Releasable Cable Ties Finger latch to release for re-use. Black.

Releasable Cable Ties	code	price	10+
	black	pack of 100	
200 x 4.8 mm	GEN232R	£3.85	£3.50
370 x 7.6 mm	GEN234R	£8.35	£7.45

WRAP BACK TIES



Wrap Back Ties Fed up with nylon cable ties blocking stage tracks? Fed up with cutting your hands on the sharp edges left from nylon ties or with peeling sticky tape from your shoes? Why not try our wrap back ties. They

have a hook-and-loop fastener which is reposition-able, reusable, and more environmentally sound. They are kinder on the cables [especially data and fibre optic cables] and hands. Also useful for tidying air hoses, extension leads and hemp lines. Flints has these made in two useful sizes: Small – ideal for fixing cables to flying bars. Large – ideal for tidying hoses etc. Black.

Wrap Back Ties	code	price
Small size [300 mm long x 25 mm wide]	GEN241	£3.95
Large size [400 mm long x 25 mm wide]	GEN242	£3.95

To protect your rope from chafe why not purchase a short length of Plastic Tubing for use on fairleads or when the rope leads over rough edges [page 362].