

Marlow®

STATIC LSK Rope Structure





MARLOW STATIC - Low Stretch Kernmantle and Abseil Ropes

The following information is not exhaustive, Marlow Ropes Limited reserve the right to amend specifications in accordance with them meeting CE regulations. These products should be used only by trained and/or otherwise competent persons or the user should be under the direct supervision of such a person.

PROPERTY	9mm LSK	10.5mm LSK	11mm LSK	12mm LSK	11mm Diablo (heat resistant LSK)	11 mm Polyester Abseiling
Rope Classification Type (A or B)	B	A				Neither
Diameter (mm)	9.1	10.4	11.0	12.0	11	11.0
Sheath Slippage (%)	0.0	0.0	0.4	0.2	0	0.9
50 - 150 kg Elongation (%)	3.3	2.0	2.4	1.9	3.4	0.8
Shrinkage (%)*	4.5	4.6	4.0	4.3	3.5	0.0
Mass Core (g/m)	28.5	34.7	40.6	56.8	38.4	45.1
Mass Cover (g/m)	24.5	32.5	33.1	33.6	44.1	50.2
Mass Rope (g/m)	53.0	67.2	73.8	90.3	82.5	95.4
Minimum Static Strength ex. terminations (kN)	18	22				
Average Static Strength ex. terminations (kN)	25.4	33.4	35.3	42.8	35.5	30.8
Minimum Static Strength with terminations (kN)	12	15				
Average Static Strength with sewn eye (kN)	18.5	25.1	30.9	36.2	29.2	27.0
Average Static Strength with fig. 8 loop (kN)	13.7	19.5	21.1	24.3	18.3	19.0
Average Static Strength with spliced eye (kN)		n/a				22.6
Fall Factor 1 falls. Fig. 8 loop	6	10+	10+	10+	5	4
Fall Factor 1 falls. Spliced eye		N/A				15
Peak Force (kN). Fig 8 loop	4.6	5.6	5.8	5.5	5.6	7.4
Peak Force (kN). Spliced eye		N/A				8.3
Material	Polyamide				Aramid / polyamide	Polyester
Test standard	EN 1891					MR 10-81

*As tested to EN1891, Over an extended period of use in a wet environment any nylon rope may shrink by as much as 15%.

USE

Marlow Low Stretch Kernmantle ropes commonly known as static ropes are designed for rope access, line rescue, controlled descent and for use in speleology. They are to be used in combination with ascending, descending and safety devices for work positioning in rope access; lowering or raising casualties in rescue; as a means of ascent, descent and horizontal motion in speleology.

They are designed for use in normal climatic conditions and in temperatures between -35 and +55 deg C. The inclusion of Aramid fibre in the Diablo cover gives increased resistance to elevated temperatures, if the rope is exposed to high temperatures it must subsequently be retired from use.

All Marlow Low Stretch Kernmantle polyamide ropes are available with a performance enhancing coating that has three main benefits: the reduction of water absorption, improved resistance to abrasion damage and resistance to ingress of foreign matter such as sand and mud. Water absorption increases the mass of a rope and the likelihood of freezing in cold conditions, frozen ropes are difficult to handle and have reduced strength and fall holding capacity,

Before undertaking, and during, a rescue operation, consideration

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should be given as to how the rescue could be safely and efficiently carried out.

The system used should incorporate a reliable anchorage point, above the user, and any slack rope between the user and the reliable anchorage point should be avoided.

Placing ropes over sharp edges is extremely dangerous and is comparable to running the rope over a knife edge. No rope can be expected to perform to its rated strength and fall holding capacity when positioned in this type of situation.

Ropes used for protection during any lead climbing activity in rope access, line rescue or speleology should comply with EN 892.

If the rope to be used has been cut from a longer length then it should be marked with ferrules and include a centre tape as described in section 6 of EN 1891.

Documentation should be kept for each rope. The record card should contain the following particulars:

- identification marks;
- manufacturer's and/or suppliers name and address;

- manufacturer's serial number;
- year of manufacture;
- suitability for use with other components within personal fall arresting systems;
- purchase date;
- date first put into service;
- name of user;
- a space for comments;

Immediately before use, the user shall:

- make a visual inspection of the rope to ensure that it is in a serviceable condition and will operate correctly;
- ensure that the recommendations for use with other components within a system, as advised on the record card for the system or component, are complied with.

Type A Ropes

Type A ropes are suitable for general use in rope access, line rescue and speleology.

Type B Ropes

Type B ropes are of a lower performance than type A ropes, requiring greater care in use.

Ropes Not Specified Type A or Type B

The 11 mm polyester abseiling rope is neither a Type A rope or a Type B rope. It is designed only for abseiling but may be suitable for other static rope applications. Its suitability for these other applications including compatibility with hardware should be known before an activity is undertaken.

CLEANING

If the rope becomes soiled by mud or grit, wash in warm water of domestic supply (maximum 40 degrees centigrade) and pure soap. Then immediately rinse and allow to dry naturally in a warm environment away from direct heat.

DISINFECTION

A suitable disinfectant is one which contains Quaternary Ammonium compounds reinforced with Chlorohexidine, e.g. Savlon in sufficient quantities to be effective. Soak the rope for one hour at dilutions recommended for general use, using domestic supply water not exceeding 20 degrees Centigrade. Then rinse immediately and thoroughly and allow to dry naturally in a warm environment away from direct heat.

STORAGE

Store unpacked after cleaning and drying in a cool well ventilated dark place away from direct sunlight and other sources of ultra-violet light, excessive heat or heat sources, high humidity, sharp edges, corrosives or other sources of damage. Ensure that no part of the rope is subjected to unnecessary stress or pressure.

PERFORMANCE

This rope has been CE marked and therefore meets the criteria of the awarding body such as performance and labelling in accordance with EN 1891 Personal Protective Equipment for the Prevention of Falls from a Height - Low Stretch Kernmantle Ropes and MR 10-81.

TERMINATION

The recommended termination for polyamide ropes is a loop formed using a figure of eight knot. Or a machine stitched loop the quasi-static breaking strength of a length of rope terminated in this way is shown in the properties table.

ACCESSORIES

This rope may be used with any appropriate item that has a corresponding CE mark. If in doubt about compatibility, particularly diameter suitability, check with an instructor or a competent person before proceeding with the activity.

OBSOLESCENCE

The rope has a maximum recommended shelf life of 10 years if stored correctly. It is impossible to quantify a maximum recommended life in use as the damage a rope is subjected to will depend on the manner and frequency of usage. The whole length of the rope should be checked before and after use by an experienced person to ensure continued serviceability. It is also recommended that a log be kept of periodic inspections.

Use visual and tactile inspection to identify cuts, tears, abrasion damage and powdering due to ageing, contact with heat, acids, alkalis and other corrosives. If any of these are present, discretion should be used.

Factors that should lead to rejection are: severe local abrasion (especially if the core is visible); major glazing or melting of the cover; soft or hard sections in the core; or if the rope has been subjected to overloading or a major fall.

If in doubt about a rope condition, replace it immediately.

TRANSPORTATION

Under normal circumstances, no special packaging is required for transportation, although care should be taken to protect this rope against the risks detailed in the section on Obsolescence.

MARKINGS

CE - The CE accreditation is awarded after meeting specification EN 1891 or MR 10-81 and the manufacturer exhibiting suitable Quality Assurance procedures such as in-house testing and traceability.

EC type examination by notified body No. 0120: SGS United Kingdom Ltd, Weston-Super-Mare, BS22 6WA, UK

Ferrules - The ferrule on the end of each rope shows the following information:

Rope classification; A, B or neither; the diameter of the rope (mm); the specification to which it is accredited; the name of the manufacturer and the manufacturing batch code used for traceability.

Centre Tape - Through the centre of the rope is a tape that provides the following information: The type of rope, either A, B or unclassified; the specification to which it is accredited; the name of the manufacturer; the year of manufacture and the material from which the rope is made.

Static-LSK Marlow Year Marker – Depending on the type of rope, there may be a fine marker situated between the bold black or red marks in the cover. This is to provide a visible recognition of the year of manufacture. A different colour is used each calendar year with the series being repeated every 5 years. The sequence runs as follows:

Colour	Year
Red	2007, 2012, 2017 etc
Yellow	2008, 2013, 2018 etc
Blue	2009, 2014, 2019 etc
Green	2010, 2015, 2020 etc
Black	2011, 2016, 2021 etc

WARNING:

Line rescue, rope access, speleology and abseiling are potentially dangerous. The consequences of incorrect selection and use of equipment can result in damage, serious injury or death. Marlow Low Stretch Kernmantle ropes should be used only by trained and competent persons, or the user should be under the direct supervision of a trained and competent person.

03/16

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It is certified that the manufacturer's technical file and the PPE product detailed on page 2 have been assessed and found to be in accordance with

EC Directive 89/686/EEC EC Type-examination

This certificate is valid from 02 September 2010
Issue 2. Certified since 28 June 1996

Notified Body Number 0120

Authorised by



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Marlow Ropes Ltd

EC Directive 89/686/EEC

EC Type-examination

Issue 2.

PPE Product

Marlow Low Stretch Kernmantel (LSK) Polyamide Ropes, which are available in the following diameters and colours:

- a) 10.5mm Static LSK: White with black fleck (JKC300), White with red fleck (JKC306), Solid Black (JKC307) & Hi-vis Orange with black fleck (JKC308).
- b) 11mm Static LSK: White with black fleck (JKC301), White with red fleck (JKC305), Solid Black (JKC309), Hi-vis Orange with black fleck (JKC310), Red with black fleck (JKC311), Blue with black fleck (JKC312), Green with black fleck (JKC313) & Yellow with black fleck (JKC314).
- c) 11mm Aries (also known as: 11mm HD Static or 11mm Arb Static): Red with black fleck (JKC302), Yellow/Red (JKC303) & Yellow/Blue (JKC304).
- d) 12mm Static LSK: White with black fleck (JKC324), White with red fleck (JKC325), Solid Black (JKC326), Hi-viz Orange with black fleck (JKC327), Red with black fleck (JKC328), Blue with black fleck (JKC329), Green with black fleck (JKC330) & Yellow with black fleck (JKC331).

The 10.5mm, 11mm & 12mm Static LSK ropes are available with sewn eye terminations and the 11mm Aries ropes are available with sewn or spliced eye terminations to order.

It is certified that the manufacturer's technical file and the above mentioned PPE have been assessed and found to be in accordance with the requirements of Council Directive 89/686/EEC. When examined the PPE satisfied the requirements of the relevant harmonized standard: EN 1891:1998 (Low stretch kernmantel ropes) for the performance classification Type A.

The manufacturer's information notices (Section 10 of the technical file), in English, have been inspected and found to have addressed all of the relevant requirements of the standard. However, the detailed content of the information notice is the responsibility of the manufacturer, as are translations into other languages.

This certificate is issued on the strict condition that appropriate checks on manufactured PPE, as detailed in Article 11 of the Directive are implemented and maintained while the model is in production.

Certification is based on technical file reference: TF0100, issue 1 revision 3.

SGS Reference Number GB/PP 211496

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