



KERNMANTLEROPES

Manufacturer's information and instructions for use

Together in Motion

Rev: 05/2016 ref: 81440

TEUFELBERGER FIBER ROPE CORPORATION - 848 Airport Road – Fall River, MA 02720 – 508.678.8200

I GENERAL I **⚠ WARNING** This product may be utilized only by persons trained in its safe use and having relevant knowledge and skills, or under the direct supervision of such persons. Whenever possible, the equipment should be provided personally to the user. It may be used only within the specified limited scope of use and for the defined purpose. Prior to using this product, read this document thoroughly, make sure you understand the User Instructions, and keep them with the product, together with the Inspection Sheet! Keep instructions for future reference. In addition, check national safety regulations regarding personal protective equipment (PPE) use for local requirements. The product accompanied by this set of instructions is type-examined, CE-marked to state conformity with the European directive 89/686/EEC on Personal Protective Equipment (PPE) meets the European standard(s) given on the product Label, and, the product does however not comply with any other standards, in particular the product does

not comply with any American standards (like ANSI) unless explicitly stated. If the system is sold or passed on to another user, the User Instructions must accompany the equipment. If the system is transferred to another country, it is the responsibility of the seller/previous user to ensure that User Instructions are in the correct language for that country. TEUFELBERGER is not responsible for any direct, indirect, or incidental consequences/damage occurring during or after use of the product and resulting from any improper use, especially caused by incorrect assembly of the equipment.

⚠ Meets ANSI Z133-2017: US-American standard for arboricultural operations

Use according to ANSI Z133-2017 requires arborist climbing lines (i.e. lines designated to support the climber while aloft in a tree or attached to a crane_ to have a minimum diameter of ½ inch (12.7mm) with the following exception: In arboricultural operations not subject to regulations that supersede Z133.1, a line of not less than 7/16 inch (11mm) diameter – like the line present in this product – may be used, provided the employer can demonstrate it does not create a safety hazard for the arborist and the arborist has been instructed in its use.

I EXPLANATION OF THE MARKING I

KMIII: Product Name

CE 0120 or CE 0082

CE confirms that the basic requirements of 89/686/EEC (personal protection equipment) are complied with. The number identifies the inspection institute (0120 SGS United Kingdom Ltd, 202B WorleParkway, Weston-supe-Mare, BS22 6WA UK. Or 0082 APAVE SUDEUROPE SAS CS60193 13322 MARSEILLE CEDEX KMIII is the brand name given by the manufacturer. KMIII is the commercial name of the rope

Low stretch kernmantle rope shall have external bands at both ends which shall have the following permanent markings:

A xxx Type, diameter in mm, (example: A 10.5 = Type A rope, 10.5 mm diameter)

EN 1891:1998: Standard for low stretch kernmantle ropes

Teufelberger: Manufacturer

MFG: Year of manufacture

Job#: Unique lot number

Lot#: YYMMDD Associate ID

S/NL Serial Number

Length: only for customized ropes: length of rope in (m)

Information that the User Instructions have to be read.

The European standard symbols for washing and care instructions of textiles are used. Sections of the low stretch kernmantle ropes must be marked at both ends with strips stating: Type (A or B), diameter in mm, number of the standard (EN 1891), year of manufacture (at least the last two digits), manufacturer, batch no.

I USE I Ropes to EN 1891 and the American National Standard for Arboricultural Operations-Safety Requirements Ref. ANSI Z133-2017 are for use in systems to EN 341 (descender devices), EN 358 (positioning systems) or EN 363 (fall arrest systems), i.e. for various types of rope-assisted work. Please bear in mind that new, unused ropes may have a very smooth and even slippery surface. When using them in combination with devices, be sure to observe the respective manufacturer's information for the device. **IMPORTANT!** High friction of the rope on a metal part (e.g. in excessively fast abseiling procedures) or of the rope on a rope or other textile material may cause overheating, damage to, and even rupturing of the rope. End connections for KMIII (5/16", 3/8", 10mm, 10.5mm, 7/16", ½", 5/8") are supplied by us sewn or attached by means of figure eight knots. If you

wish to make end connections yourself, we recommend the use of figure of eight knots. A sufficiently long rope end (10cm min.) must remain after the knot. Form the figure 8 knot correctly as shown below! Mind the course of the load bearing section (arrow). Deviating knot design considerably reduces the breaking load. If any free climbing activity is necessary during the use of this rope in rope access, rescue or speleology, suitable ropes (e.g. dynamic mountaineering ropes to EN892) must be used. While using the rope, anchoring points should always be above the user and the work carried out in such a way as to minimize both the potential for falls and fall distance (especially in a fall arrest system).

The system must include a reliable anchoring point (in particular the minimum required strength of 12 kN, in accordance with EN 795) above the user. The low stretch kernmantle rope should not be allowed to sag between the user and the reliable anchoring point. It is essential for safety to verify the free space required beneath the user at the workplace before each occasion of use, so that, in case of a fall, there will be no collision with the ground or other obstacles in the fall path. Type A and B ropes: The performance requirements of Type B ropes are lower than those for Type A ropes. Accordingly, when using Type B ropes, greater care is required for protection against the effects of friction, cuts, general wear and tear etc. Consequently, the possibility of a fall must be



I LIMITATIONS I Do not carry out any rope-assisted work if your physical condition means that your safety could be at risk during normal use or in an emergency. Any changes or additions to ropes to EN1891 are forbidden and may only be made by the manufacturer. The breaking load of ropes / ropes with terminations is specified for tension applied in the ropes' longitudinal direction. Therefore, never subject end loops, for example, to transverse loads (2 karabiners in one loop). Check which load in the selected configuration acts on the rope and make sure that you do not overload it. We recommend a safety factor ≥ 7 . **BEFORE USING, PLEASE NOTE** The rope must be inspected visually before use to check completeness, usable condition and proper operation. If the equipment has been affected by a fall, it must be withdrawn from use immediately. Even if you have only the slightest doubt, the product must be withdrawn and may only be used again once an expert has authorized the use in writing following inspection. Knots in the rope reduce the breaking load. Do not use ropes whose previous usage history is unknown to you. The user must ensure that the recommendations for use with other elements are complied with. All other elements of the arrester system must be certified and correspond with the relevant standards, for PSAA such as descender devices EN 341, positioning systems EN 358 or fall arrest systems EN 363. Adjustment devices on descender devices must be adjusted to the diameter of the rope. Metal components must not include any burrs or sharp edges that might cause damage to the rope. You put yourself at risk by combining equipment parts that impair the safe operation of any part of the equipment or of the

assembled equipment. Before use, a plan for rescue measures must be prepared to take account of all possible emergencies. Before and during use, you must consider how the rescue measures can be carried out safely and effectively.

I TRANSPORT, STORAGE, & CLEANING | Low stretch ropes are usually made of polyamide fibers. The sheathing can also contain polyester fibers. Consequently, they should not be exposed to heat exceeding 100 C. If you notice reactions such as discoloring or hardening, the product must be withdrawn for safety reasons. The rope can shrink up to 7% if exposed to humidity. Accordingly, the rope should always be protected against dirt and placed in appropriate packaging (rope bag) during transport. Place the rope in the bag loosely and do not roll it up so as to avoid twisting.

Storage conditions:

- Dry and clean
- At room temperature (15 – 25C)
- Protected against the light (UV radiation, welding equipment,...),
- Away from chemicals (liquids, vapors, gases,...) and other aggressive conditions,
- Protected against sharp-edged object. A light proof rope bag provides good protection.

To clean the rope, rinse it with lukewarm water and wipe with a damp cloth. The damp rope must be dried before storage. The rope should be left to dry naturally and not close to a fire or other sources of heat. For disinfection, only use substances that have no influence on the synthetic materials used. You put yourself at risk by not complying with these conditions.

I REGULAR CHECKS | The equipment must be inspected regularly without fail: your safety depends on the effectiveness and durability of the equipment. After every use, check the rope for possible damage. Inspect the rope visually from all sides. Feel along a seemingly intact rope (tactile check) in order to detect any hidden core damage that might have been caused by frequent bending or local overloading. If there is visible damage to the sheathing, the rope must not be used under any circumstances. If the rope shows swellings, discoloring or other unusual changes, we recommend withdrawing the rope. Check the rope end sewing for worn or torn sewing thread. After every use, the equipment should be checked for abrasion and cuts. Systems that have been damaged or affected by a fall must be withdrawn from use immediately. If there is the slightest doubt, the product must be withdrawn or inspected by an expert. In addition, if the equipment is used in worker safety in accordance with the EN 365, it must be inspected by the manufacturer or an expert complying precisely with the instructions, and replaced if necessary at least every 12 months. Records, must be kept of this inspection (documentation of the equipment, see enclosed inspection sheet) This inspection must comprise:

- Inspection of the general condition: age, completeness, dirt, correct composition.
- Inspection of the labels: Present? Legible? CE marking present? Year of production visible?
- Inspection of the individual parts for mechanical damage such as cuts, cracks, notches, abrasion, deformation, ribbing, curling, squashing.
- Inspection of individual parts for damage caused by heat or chemicals, such as fusion or hardening.
- Inspection of metal parts for corrosion or deformation.

- Inspection of the completeness of the end connections, seams, knots.

Here too, if there is the slightest doubt, the product must be withdrawn or inspected by an expert.

I MAINTENANCE | Only the manufacturer is permitted to carry out repairs. **I SERVICE LIFE** | Only if the rope is rarely used (one week a year) can its useful life (for products made in 2006 and after) be up to 10 years from the date of manufacture. Actual useful life depends solely on the condition of the product which is influenced by various factors (see below). The lifespan could be as short as first use under extreme conditions, or even less if damaged (e.g. in transit) prior to first use. Mechanical wear or other influences such as the effects of sunlight seriously reduce useful life. Bleached or rubbed fibers / belt straps, discoloring and hardening are a sure sign that the product should be withdrawn from use. We expressly refrain from making any general statements about the useful life of the product, since it depends on a variety of factors such as UV light, the type and frequency of use, treatment, the effects of weathering such as snow, the environment such as salt, sand, battery acid, and many more factors. In general, if for whatever reason, no matter how insignificant, the user is not certain that the product satisfies the requirements, it must be withdrawn from use and inspected by an expert. Any product that shows signs of wear should be withdrawn. The product must be replaced without fail after a fall!

I PERFORMANCE | Product Name, NFPA Test Results, Diameter, Approved Class, Min. tensile (kN), CE Test Results per EN1891, Average Diameter (mm), Sheath Slippage (mm), Elongation, Sheath % of Mass, Core % of Mass, Mass/length (g/m), Static Strength w/o termination, Static Strength w/ termination, Type/ Sheath Material/ Core Material

KMIII Low Stretch Kernmantle Rope					
Product Name	5/16"	3/8"	7/16"	1/2"	5/8"
NFPA Test Results					
Diameter	8.5 mm	9.5 mm	11 mm	13 mm	14.5mm
Approved Class	Escape Rope	Technical Use	Technical Use	General Use	General Use
Min. Tensile (kN)	24.1	30.7	35.4	46.1	58.0
Elongation % @ 1.35kN (300lbf)	3.7	3.1	3.0	3.0	2.1
Elongation % @ 2.7kN (600 lbf)	7.4	5.8	5.6	4.9	3.7
Elongation % @ 4.4kN (1000lbf)	11.0	9.0	8.4	7.2	5.6
CE Test Results per EN1891					
Average Diameter (mm)	8.7	9.5	11.0	12.9	14.9
Sheath Slippage (mm)	-4	-2	-5	-5	-8
Elongation	3.5%	3.4%	2.2%	1.8%	1.3%
Sheath % of Mass	52.0%	47.0%	46.0%	47.0%	46.2%
Core % of Mass	48.0%	53.0%	54.0%	53.0%	53.8%
Mass/length(g/m)	59.0	65.0	88.0	119.0	154.0
Static Strength w/o termination	>18kN Pass	>18kN Pass	>22kN Pass	>22kN Pass	>22kN Pass
Static Strength w/ termination	>12kN Pass	>12kN Pass	>15kN Pass	>15kN Pass	>15kN Pass
Approved Type	B	B	A	A	A
Sheath Material	Polyester				
Core Material	Nylon				
Shrinkage	< 5%				



NFPA Test Results per Testing (4M55)
 CE Test Results per APAVE Certification Test

Additional information regarding life safety rope can be found in NFPA 1500 and NFPA 1983.

MEETS THE LIFE SAFETY ROPE REQUIREMENTS OF NFPA 1983, STANDARD ON LIFE SAFETY ROPE AND EQUIPMENTS FOR EMERGENCY SERVICES, 2017 EDITION.

EMERGENCY SERVICES LIFE SAFETY ROPE IN ACCORDANCE WITH NFPA 1983 - 2017

For your records:

Product:		
Model & Type/Identification	Trade Name	Identification Number
Manufacturer	Address	Tel, fax, e-mail and website
Year of Mfg./Life expiry date	Purchase Date	Date first put into use

Date	Reason for entry (Examination or Repair)	Defects	Name & Signature of competent person	Periodic Examination Due Date

⚠ WARNING The use of our products can be dangerous. Our products may only be used for their intended purpose. They must particularly not be used for lifting as specified in EU directive 2006/42/EC. The customer is responsible that the user has been trained in the safe use of the product and in accompanying safety precautions. Be aware of the fact that the product can cause damage if wrongly used, stored, cleaned or overloaded. Check national safety regulations, industry recommendations and standards for local requirements. **TEUFELBERGER** and **拖飞宝** are internationally registered trademarks of **TEUFELBERGER Ges.m.b.H. Austria.**