



# shaoLINE

Wurfleine für Baumpfleger / Throwline for Arborists

Herstellerinformation und Gebrauchsanleitung/  
Manufacturer's information and instructions for use

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## 1. GENERAL

We appreciate that you have chosen a TEUFELBERGER product. Please read these instructions for use carefully.

shaoLINE, our new, highly visible throwline, is able to support high loads while also helping you achieve more accurate and higher throws. The PE monofilaments in the cover make this throwline more abrasion resistant and keep its surface from getting rough. Thanks to the polyethylene in its core, this line is not susceptible to forming knots or kinks.

The core of this rope can be removed. This makes the line lighter, and higher and more accurate throws become possible. You will save almost 20% in weight, while giving up only 12% in breaking force. If necessary, you can also tear this line free. All this makes shaoLINE the perfect throwline for arborists, offering high levels of efficiency and safety.

### WARNING

**This product may be utilized only by persons trained in its safe use and having the relevant knowledge and skills, or under the direct supervision of such persons.** 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 Instructions for Use and keep them with the product (e.g. for future reference).

This product does not meet any specific standard. Make sure to check the national safety regulations for arborist equipment for any applicable local requirements.

### 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 and for personal protective equipment as specified in EU directive 89/686/EEC. 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 brands of the TEUFELBERGER group.

TEUFELBERGER is not responsible for any direct, indirect, or incidental consequences/damage occurring during or after the use of the product and resulting from any improper use of the equipment.

## 2. USE AND LIMITATIONS OF USE / INTENDED USE

The shaoLINE throwline was developed for rope assisted tree climbing. This throwline is used in combination with a throwbag in order to get treecare equipment (access rope, cambium saver, and the like) high up into trees.

### UNDER NO CIRCUMSTANCES MAY IT BE USED TO BELAY PERSONS.

### WARNING!

Users shall be responsible for checking a selected branch for its suitability for the intended work. In this process, it will be necessary, in particular, to take the expected loads including dynamic peak loads into account.

At first, check the condition of the throwline (see chapter "REGULAR INSPECTION") and the throwbag. The throwbag must be in good condition. The connection features, for example, must not be about to be torn out.

**Fasten** the throwline to a throwbag of your choice using a bowline or a similar knot. To be able to tear the throwline free when necessary, the core (at least 20 cm of the core) must be removed at the end where the throwbag is to be attached. Allow a sufficient length of the line to protrude beyond the knot in order to avoid the knot from being pulled apart.

Before the throw, check the intended **line of the throw** for any obstacles. In particular, watch out for any live power lines! Keep in mind that the throwbag is able to break off smaller twigs. They could also pose a danger to persons or objects.

Before a throw, also check the possible line of the throw so as to take the consequences of a potential unsuccessful throwing attempt (e.g. bag is torn free, unsuccessful throw) into account: Again, watch out for any live power lines! Also watch out for persons and endangered objects!

### **WARNING!**

**It is strictly prohibited to stay under suspended or falling/flying loads** (throwbag, pulled up equipment) **(Mortal danger!)**. Keep in mind that wind may cause loads to be moved away significantly from their axial direction. Therefore, the clearance space must be dimensioned as generously as necessary.

Lower the throwbag, and properly attach the equipment that you would like to heave up into the tree. In this process, be sure to follow the installation instructions for the tool that is to be brought up into

the tree as well as the instructions for its removal. In many cases, arrangements for its subsequent removal need to be made already in the course of its installation.

Furthermore, be sure to take the breaking load of the throwline into consideration. Choose a sufficiently high **safety factor**. Pertinent literature recommends a safety factor of 5 to 7.

Should the throwline and/or the throwbag get entangled in a tree, it is possible to **tear the throwline** free, provided that the core at the end of the rope has been removed. Its breaking load in the knot is about 90 daN; about 80 daN if you have removed the cores. If you want to tear the line free intentionally, be sure to watch out for the falling line and the throwbag. Use work aids to avoid injury to your hands. In particular, be sure to protect your eyes! A line that whips back can cause serious **injuries**.

### **WARNING!**

**Users are responsible for assessing the overall situation** and for selecting suitable equipment and methods.

## 3. TECHNICAL DATA / MATERIAL PROPERTIES

	shaoLINE	shaoLINE if ALL CORES are removed	DM [mm]
<b>Diameter [mm]</b>	2.2	2.0	
<b>Weight [g/m]</b>	2.4	2.0	17% reduction in weight
<b>MBL in free length [daN]</b>	200	180	entails a reduction in breaking
<b>MBL knotted - bowline knot [daN]</b>	89	78	force of only 10 - 12%!

Only the MBL of shaoLINE is subjected to our regular quality inspections. The other values are reference values that are defined only once.

In the event of connections with a bowline knot and a safety factor of 5 to 7, the equipment to be lifted may weigh about 10 to 15 kg.

**Core:** PE monofilament

**Cover:** PE monofilament and Dyneema®, mixed

The material determines the thermal and chemical behavior of the throwline. PE and Dyneema® are affected by UV light (sunlight) and lose in strength.

Furthermore, Dyneema® must never be exposed to temperatures above 60°C. Low temperatures will not reduce the product's strength. However, snow, ice, and moisture can have an impact on product handling.

The following information was taken from literature and is related to the yarns, i.e., the raw materials the ropes are made of.

Material		polyethylene	HMPE (highly modular polyethylene)
Moisture absorption in normal climate	%	0	0
<b>Electrical properties</b>			
Specific electrical resistivity	Ωcm	10 <sup>13</sup> -10 <sup>17</sup>	
Electrical resistivity	Ω		>10 <sup>14</sup>
<b>Chemical resistance</b>			
Resistance against acids		very good resistance to diluted acids	excellent resistance
Resistance against alkalis		very good resistance to diluted alkalis	excellent exercise caution with media that have a strong oxidizing effect
<b>Thermal behavior</b>			
Thermal conductivity	W/mK		20 axial 0.2 transversal
Melting range	°C	124-138 softens from approx. 85°C	144-152
Continuous heat resistance	°C	70	70
Low temperature behavior			at -60 °C, 100% of strength and 90% of elongation as compared to +23 °C
Weathering		moderately resistant	in real world testing (9 months outdoors), residual strength 47%
Burning behavior		does not continue to burn when ignited	does not continue to burn when ignited
<b>Disposal</b>		domestic waste	domestic waste

#### 4. RETRIEVAL / DEMOUNTING

This line is not UV-stable. Therefore, do not leave it behind in the tree, but always remove it after work.

#### 5. TRANSPORT, STORAGE & CLEANING

Conditions of storage:

- protected from UV radiation (sun, welding machines)
- dry and clean
- at room temperature (15 - 25°C)
- not in the proximity of chemicals (acids, lyes, liquids, vapors, gases ...) and other aggressive environments

- protected against sharp-edged objects

Therefore, store the product dry and ventilated in a moisture-repellent bag that is impervious to light.

For **cleaning**, use lukewarm water and special rope detergent. Then, rinse the equipment with clear water and dry it prior to putting it into storage. Dry the product in a natural way, not near fires or other heat sources.

For **disinfection**, use only such substances that do not have an impact on the synthetic materials used. Do not disinfect the product more often than is absolutely necessary! We recommend the use of isopropyl alcohol 70%. Apply the disinfectant to the surface for about 3 minutes and allow the product to dry naturally. Be sure to observe the safety instructions for the use of the disinfectant.

## 6. REGULAR CHECKS

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Before and after any use, be sure to visually check the throwline for visible signs of damage:

- Inspection of the general conditions: age, completeness, dirt
- Inspection of the labels: Present? Legible? Year of production visible?
- Inspection for mechanical damage such as cuts, cracks, notches, abrasion, deformation, ribbing, curling, squashing and unintentional knots
- Inspection of all individual parts for damage caused by heat or chemicals, such as fusion, hardening or discoloring

Damaged segments must be retired from use. Remove any damaged segments of the throwline and use only the undamaged rest, provided that its length is sufficient.

## 7. SERVICE LIFE

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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.

It is clearly not possible to offer a general statement about the product's service life, as such life span depends on various factors, e.g. UV light, type and frequency of use, handling, climatic influences such as ice or snow, environments such as salt, sand, battery acid etc., heat contamination (above normal climatic conditions), mechanical deformation and/or distortion,... (incomplete list!),

In general, the following rule applies: If the user, for whatever reason – however insignificant it may seem – is uncertain whether or not the product meets all the necessary criteria, either reject it from service and render unusable, or place in quarantine and label in an obvious manner so that it cannot be used by mistake.

## 8. DISPOSAL

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Domestic waste





**Download**  
Treecare Catalogue



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