Is the Blue Ocean Static CE approved?

Yes: The rope is CE approved as meeting the essential requirements of the PPE regulation. The Module B cert is issued by SGS Fimco, Notified body number 0598.

Does the rope meet EN 1891?

No: EN 1891 has a drop test requirement that was written around the performance of ropes made from Nylon. It’s not possible to meet this with an LSK rope made from rPET (Polyester).

How can the rope be certified if it does not meet EN 1891?

The PPE regulation allows several routes to CE certification, the simplest is to show compliance to a harmonised standard (such as EN 1891) but it is also possible to certify any product that meets the essential requirements of the regulation as defined in Annex 2. In the case of the Blue Ocean® Static the rope meets the requirements of MR 10-81.

What is MR 10-81?

MR 10-81 is a Marlow Ropes internal ‘standard’. It was originally written in the late 1990s (around the same time as EN 1891) at the recommendation of a UK notified body as a vehicle to achieve certification for the Black Marlow polyester abseiling rope. At this time, the original PPE directive was entering UK Law and the abseil rope would require certification in order to remain on the market. It had many years of safe use but wouldn’t meet the drop test requirements of EN 1891. So, MR 10-81 took all the same test procedures and requirements of EN 1891 but applied different pass values for the drop test:

- Drop mass: 80kg (as per type ‘B’ ropes)
- Impact Force: 12kN (As per EN 892)
- Number of drops: 2

All the other performance requirements are the same as EN 1891.

Is the rope safe?

Yes, for many years ropes made from polyester that do not meet EN 1891 have been used for rope access without any safety issues. Examples include:

- The Black Marlow Abseil rope (MR 10-81).
- Ropes made to comply with NFPA 1983 standard on Life Safety Rope and Equipment for Emergency Services. The Blue Ocean® Static also meets and is certified to this standard.
- Ropes made to comply with CI 1801 as ‘Static’ ropes. This standard actually makes a distinction between ‘Static’ and ‘Low stretch’.

It’s only in EN 1891 that there is a drop test requirement.
Is the Blue Ocean Static compatible with existing hardware?

Yes, apart from the fibre used, the construction of the rope is the same as other 11mm low stretch kernmantle ropes. As such it will work with hardware designed to work on EN 1891 or NFPA certified ropes.

Is the Blue Ocean Static certified to any other standards?

Yes, the rope is certified by UL to NFPA 1983. It also meets the requirements of CI 1801.

Is there a disadvantage to having a lower stretch rope?

In the event of a fall the forces throughout the system will be higher with a lower stretch rope. This can be mitigated through the use of an energy absorber in a situation where the potential length of fall is higher, or the length of rope is shorter.

What are the advantages of a lower elongation rope?

More accurate positioning – less bouncing about.

Less fatiguing – less of the climber’s energy is used in stretching the rope so assent is more efficient.

Less ‘drop’ if a climber’s weight transitions from a working rope to a low stretch backup. In extreme cases the stretch in a backup rope can cause a climber to hit the ground or other obstacle. In this scenario the impact forces are broadly the same regardless of the rope elongation so the forces are not actually higher.

Less wear on the rope due to movement through karabiners, rope protectors, etc.

Are there any other benefits to the Blue Ocean Static?

Yes, using polyester means the rope is unaffected by water and will not shrink and harden as a Nylon rope does over its lifetime. Also, polyester has better UV resistance than Nylon and a slightly higher melting point.

If lower stretch ropes are so good, why are they not allowed by EN 1891?

This is largely due to the history of EN 1891. It was written in the late 1990’s and was based on an older UIAA (International Climbing and Mountaineering Federation or Union Internationale des Associations d’Alpinisme) standard. As the name suggests, this group was writing standards to serve mountaineers and cavers, not industrial rope users, however their work was the best rope standards of the day for the application they covered.

Ropes used for caving are often exactly the same as those used for industrial access so this all made sense. However, caving is normally done on a single rope and in the event of a fall or an anchor failure the additional safety afforded by a rope that has higher elongation was of value so Nylon ropes dominated the market at that time. In contrast, industrial users would normally be working with two independent ropes so the likelihood of applying dynamic load is significantly reduced.