

11MM RESCUE LINE KERNMANTLE ROPE

PART CODE: **RMKR11-50 / RMKR11-200**



PRODUCT FEATURES >

- Kernmantle rope is rope constructed with its interior core protected by a woven exterior sheath designed to optimise strength, durability, and flexibility. The core fibers provide the tensile strength of the rope, while the sheath protects the core from abrasion during use.
- Pull tested to and minimum requirement: Min requirement is 29.4kN, actual 40kN+ (Have understated the test cert for prudency purposes, the test was stopped at 36kN).
- Knot test to and minimum requirement: Min requirement is 14.7kN, actual is 20kN+ (Have understated the test cert for prudency purposes, the test was stopped at 17kN).
- Rope has clear I.D trace built in.
- Normal 4142.3 rope contains 80g, where as LINQ rope contains 110g. The outer casing is very tight for abrasion resistance.

PRODUCT DETAILS >

- AUS/NZ designed and engineered
- 11mm kernmantle rope
- Available in 50M and 200M lengths

TECHNICAL INFORMATION >

- **Knot Test:** <14.7kN
- **Minimum Breaking Load:** >35kN
- **Outer Casing:** Polyester
- **Inner/Core:** Polyester
- **Weight:** 110g
- **Elongation Requirement:** Greater than 1%, less than 10% when a load equal to 10% of MBL is applied. Actual elongation when 10% of MBL is applied is 6%

STANDARDS >

Conforms to AS 4142.3



Reading of LINQ instruction manual prior to use is mandatory. Description and specification subject to change without notice.

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The elongation of a life safety rope relates directly to the impact forces encountered when the rope stops a fall, as well as to the efficiency of a lowering/raising system. The important question is how much elongation is right for any particular application. For sport-climbing, dynamic ropes are used to protect against lead falls, while static ropes are used in caving to minimise stretch and maximise efficiency in ascending/descending. Because rope rescue techniques call for both lowering/raising and belay capabilities, a thoughtful consideration of elongation is required.

Elongation describes how much a rope will stretch when it is loaded, either by being pulled slowly or when suddenly loaded with an impact force. Elongation of the rope reduces the effects of an impact force on a rope system. The greater the elongation, the less force felt by the system. A good example would be a bungee jumper taking a tremendous fall (the jump) and stopping very comfortably. The critical factor, of course, is having plenty of distance in which to stop.

It might seem that rope with high elongation would be appropriate as a belay line. After all, a belay line catching a fall is a dynamic event, and the impact forces throughout the system are greater than its static load. A high-elongation rope would absorb energy and minimise the impact. But, as described above, this requires a safe distance in which to stop. Unfortunately, in rescue there are too many ledges, edges and other hard things that could be more damaging to the rescuer and patient than the rope stopping them quickly. Because of this, a low-stretch rope that provides some energy absorption without significant elongation is considered best suited for belay.

In a rappel or a lowering system, rope with high elongation presents a different problem. When a person on rappel or tending a litter starts down, the rope stretches as the load is applied. This means there is effectively a longer rope between the anchor and the rescuer. This inherent rope stretch may introduce a risk of the rescuer losing control, particularly during an edge transition, where maintaining footing is most difficult. This risk is increased when, for example, the rescuer has descended some distance and has stopped to perform a pick-off from a ledge, taking the load off the rope. When transitioning the load back onto the rope, there will be significantly more stretch than there was close to the anchor. This will increase the difficulty in maintaining control.

With high-elongation rope in a raising system, the haul team has to pull the stretch out of the rope before moving the load, thus reducing the team's efficiency. A mechanical advantage system uses even more rope, increasing the amount of rope elongation and further decreasing efficiency. For these operations, the ideal rope would have very low elongation.