



## USER INFORMATION

User Information shall be provided to the user of the product. NFPA Standard 1983 recommends separating the User Information from the equipment and retaining the information in a permanent record. The standard also recommends making a copy of the User Information to keep with the equipment and that the information should be referred to before and after each use.

Additional information regarding life safety equipment can be found in NFPA 1500, *Standard on Fire Department Occupational Safety and Health Programs*, and NFPA 1983, *Standard on Life Safety Rope and Equipment for Emergency Services*.

### ABOUT LIFE SAFETY ROPE

A good life safety rope balances opposing characteristics. It should be soft enough for easy handling and knotting, but stiff enough for high abrasion resistance and ease of untying knots. There should be enough stretch in the rope to minimize peak impact load when used with a belay device, but not so much that the resulting system extension results in any operational hazards. Guided by our experience, we have designed CMC Lifeline to be a block creel kernmantle rope with just the right balance of characteristics. Kernmantle provides a heavy sheath over a parallel fiber core for maximum strength and abrasion resistance. Block creel means that a continuous strand of fiber runs the entire length of the rope's core.

NFPA Standard 1983 stipulates the following minimum specifications for life safety ropes:

	Technical Use Rope	General Use Rope
<b>Minimum Strength</b>	20 kN (4,496 lbf)	40 kN (8,992 lbf)
<b>Minimum Diameter</b>	9.5 mm (3/8 in)	11 mm (7/16 in)
<b>Minimum Melting Point</b>	204°C (400°F)	204°C (400°F)

### CMC Lifeline Performance:

Fiber Type	Nominal Size mm (in)	Minimum Breaking Strength	Elongation @ 1.35kN (300 lbf)	Elongation @ 2.7 kN (600 lbf)	Elongation @ 4.4 kN (1,000 lbf)	NFPA Class
Nylon	9.5 mm (3/8 in)	22 kN (4,946 lbf)	3.3 %	6.9 %	10.2 %	Technical
Nylon	11.0 mm (7/16 in)	28 kN (6,294 lbf)	3.2 %	6.0 %	9.3 %	Technical
Nylon	13.0 mm (1/2 in)	42 kN (9,442 lbf)	2.4 %	4.5 %	7.2 %	General
Nylon	15.5 mm (5/8 in)	50 kN (11,240 lbf)	1.4 %	3.2 %	5.2 %	General

### REQUIREMENTS FOR SAFE USE

Protect the rope from abrasion during storage and while carrying. During use, protect the rope from any sharp or abrasive edges by padding the edges or rigging the rope to avoid the edges. CMC Lifeline should not be exposed to impact loads, or high temperatures, or to open flame which could degrade the rope sufficiently to cause failure.

## INSPECTION

The decision to retire a rope or to keep it in service relies on good judgment that comes only from experience in working with rope. Inspecting a life safety rope involves visually looking for damage, feeling for damage, and checking the rope's history in the rope log.

Inspect a new rope before it is put into service and then after each use. The inspection should be done by an experienced person deemed qualified by the agency/organization. A complete inspection includes a visual and a tactile inspection. Visually inspect the sheath to identify chafed areas, glazed surfaces, discoloration or variations in diameter. These areas should receive additional scrutiny during the tactile inspection. Look for areas of abrasion or cuts in the sheath where the core is exposed or enough of the sheath is worn that its ability to protect the core is compromised. The tactile inspection should be done with tension on the rope. Feel for variations in size and soft or hard spots that could indicate damage to the core or rope that has been overstressed. If any of the above are noted, the rope should be retired from service. If the rope has been subjected to shock loads, fall loads, or abuse other than normal rappel or rescue training, the rope should be retired from service.

Each rope should be inspected before being used even if the rope has never been placed in service. Keep ropes away from acids, alkalis, exhaust emissions, rust or other strong chemicals. Do not allow rope to be shock loaded or used over sharp bends.

It is impossible to state when to retire a rope because of the many variables with each rope; **but if you have any doubts about the integrity of a rope, remove it from service and destroy it!**

For more information on rope inspection, see the ASTM F1740 *Standard Guide for Inspection of Nylon, Polyester, or Nylon/Polyester Blend, or both Kernmantle Rope*.

### WASHING LIFE SAFETY ROPE

The CMC Rescue School uses the following procedure to wash our ropes. Rinse off any excess dirt with a hose. Then soak the rope for about 30 minutes in a plastic tub of water with a mild detergent that is safe to use with nylon and/or polyester. Rinse the rope by pulling it through a rope washer twice. Hang the rope in a cool, shady place to dry. Do NOT dry nylon products in the sun because of the damaging effects on the fibers from prolonged exposure to ultraviolet rays. If necessary, ropes can be stuffed into the bags wet. The ropes may mildew but this does not adversely affect the rope.

### SAMPLE LOG

The sample log contained on the other side of this page suggests records that should be maintained by the purchaser or user of a life safety rope.

### MORE INFORMATION ABOUT LIFE SAFETY ROPES

For additional information about the specifications, use, care and inspection of life safety ropes, consult the current CMC Catalog. Or, phone CMC's Customer Support Department at (805) 562-9120, 8 a.m. to 5 p.m. PST, Monday - Friday, for technical advice.