

Prusik Loops

Alan Sheehan B.E., Senior Vertical Rescue Trainer NSW SES



- Minimum cord size for personal loops – **6mm static kernmantel**
- Minimum cord size for rescue (2 person) loads – **8mm static kernmantel**
- Thicker cord sizes are stronger and wear slower
- Thinner cord sizes grip better
- Minimum number of wraps for personal use – 2 (see illustration). Use 3 wraps if the loop slips. Wet or muddy conditions need more grip.
- **Minimum number of wraps for rescue load – 3 wraps.**
- **Prusik loops are not directional** – they grip in both directions. This is useful for traverse line safeties where considerable slack is required or where 1 anchor fails.
- **Prusik loops do less (if any) damage to the rope** when they slip from overloading or shock loading. Mechanical ascenders may strip the sheath. (Some non rescue approved ascenders may even cut the rope!)
- Prusik knot may weld to the rope sheath if it slips due to overloading.
- Like all knots, the prusik knot **must be tied, dressed and tight**. A loose prusik knot may spill, deform or fail to grip consistently. Correctly tied and dressed the knot should be firm to push along the rope.
- On small diameter or heavily loaded loops, it may be necessary to **work the bight at the back of the knot to release the tension** in the loop enough to slide it up the rope after loading the loop.
- **NEVER hold the prusik knot** while moving it along the rope, particularly in a fall prevention situation (e.g. roof safety, or traversing a ledge with a safety line). If a fall occurs, instinct causes the faller to grip the rope – actually the knot in the hand – and the faller will take the knot with them to the bottom! **Always push the knot along the rope** without holding it.