

SERCOVAM= = = = = = = = = = = =

B.P. 10 - Chemin de Marticot
33611 CESTAS CEDEX
Tél: (+33) 05.57.97.02.33 - Fax: (+33) 05.57.83.53.73

Ligament with cross fibers:

Nombre of cycles (millions)	Exit of the bone tunnel	Intra-articular zone
2	Matting of fibers	No degradation
5	Strong matting of fibers	Tendency of fraying
8	Abrasion	Tendency of fraying
10	Strong abrasion	Strong fraying

Ligament with free fibers:

Number of cycles (millions)	EXIT OF THE BONE TUNNEL	Knit limit / free fibers	Intra-articular zone
2	No degradation	No degradation	No degradation
5	Light matting of fibers	No degradation	No degradation
8	Light matting of fibers	No degradation	No degradation
10	Light abrasion	Tendency of fraying	Tendency of fraying

The most drastic mode of degradation is abrasion by fatigue at the exit of bone tunnels

The ability of free-fiber ligaments to accommodate torsion and flexion deformities appears to limit the degradations by abrasion (due to less localized constraints at the exit of the bone tunnels)