

PSLKL-187

TECHNICAL PARAMETERS SHEET



INTRODUCTION

The PSLKL-187 Wildland Fire Boots are designed for long shifts on steep, high-heat terrain, meeting NFPA 1977 standards for wildland firefighting. Built with full-grain leather and aramid fabric, they resist embers and radiant heat while remaining breathable. A steel toe cap and puncture-resistant midsole ( $\geq 900$  N) protect against debris, while the vulcanized rubber outsole with Vibram S587 option ensures traction on soil, rock, and wet ground. Waterproofing withstands  $\geq 9,000$  flex cycles with minimal ingress, keeping feet dry in rain or stream crossings. Durability is proven through 40,000 flex cycles and abrasion resistance exceeding 50,000 cycles. With thermal insulation limiting insole rise to  $\leq 22$  °C at 150 °C, the PSLKL-187 delivers dependable protection, comfort, and endurance for frontline wildland crews.

Specification	Requirement / Result
Model	PSLKL-187 Wildland Fire Boots
Color	Black
Design	Lace-up with U-shaped throat; top hook-and-loop cuff (optional lace + side-zip variant)
Upper	2.0–2.2 mm chrome-tanned full-grain leather + black aramid FR fabric
Lining	Polyester warp-knit spacer mesh (breathable, quick-dry)
Outsole	Vulcanized rubber, heat- and slip-resistant, deep lug; optional Vibram S587
Construction	Cemented + stitched (double bonding)
Upper Tear Strength	$\geq 70$ N/mm
Leather Shrinkage Temp	$\geq 95$ °C
Flex Resistance (Whole Shoe)	40,000 cycles, pre-cut 5 mm; outsole crack $\leq 10.0$ mm; no upper cracking; no bond failure
Outsole Abrasion	Wear length $\leq 7$ mm
Upper Abrasion (Martindale)	$\geq 50,000$ cycles @ 9 kPa
Bond Strength (Upper–Sole)	$\geq 4.0$ N/cm or material failure
Puncture Resistance (Plate)	$\geq 900$ N
Flame Behavior	Self-extinguishing within 2 s after flame removal
Heat Insulation	Insole temp rise $\leq 22$ °C after 150 °C $\times$ 30 min hot-plate exposure; no outsole deformation/brittleness
Water Resistance (Dynamic)	$\geq 9,000$ flex cycles; $\leq 0.1$ g water ingress (1 h)
Colorfastness to Washing	$\geq$ Grade 3–4
Outsole Tensile Strength	$\geq 13.5$ MPa
Outsole Hardness	Shore A 68 $\pm$ 4