

Prod. Ref.	21514-000
Safety cat.	A E P FO WRU WR CI HI HRO SRC
Range of sizes	39 - 48 (6 - 13)
Weight (sz. 8)	1220 g
Shape	C
Width	12



Description: Black water repellent full grain leather ranger with cut protection, **GORE-TEX**[®] **Performance Comfort Footwear** membrane lining, antistatic, anti-shock, slipping resistant, non metallic **APT Plate** midsole **Zero Perforation**

Plus: Chain-saw cut resistant (class.3 - chain speed = 28 m/s). **METATARSAL SUPPORT** footbed made of soft and scented polyurethane, antistatic, anatomic, holed, covered with cloth; it guarantees maximum comfort and shock absorption. Cold and heat insulation. Sole fully made of Nitrile rubber resistant to +300°C (1 minute contact). Leather collar. Nitrile rubber toe cap protection.

Suggested uses: Joinery, wood industry. Footwear for wet environments. The footwear protecting against chainsaw cuts are provided with a special protection in the forepart to avoid any serious injury to the lower arts in the event that a moving chainsaw (at high kinetic energy) gets out of hand

Care and maintenance: Clean after each use and dry off away from direct heat; treat the leather with a suitable shoe-polish. Avoid contact with aggressive chemicals or extreme temperature. Avoid immersion in sea water, lime water or cement mixed with water.



MATERIALS / ACCESSORIES

SAFETY TECHNICAL SPECIFICATIONS

		Clause EN ISO 20345:2011	Description	Unit	Cofra result	Requirement
Complete shoe	Chain saw cut resistance, class 3 (chain speed = 28 m/s)	EN ISO 17249:2013	Chain saw cut resistance	----	No cut through shall occur	No cut through shall occur
	Water resistance	5.15.1	Water resistance (area of water penetration after 1000 paces in a surface flooded with water)	cm ²	≤ 3	≤ 3
	Toe cap: steel made, varnished with epoxy resin, impact resistant until 200 J and compression resistant until 1500 kg	5.3.2.3	Shock resistance (clearance after shock)	mm	15	≥ 14
		5.3.2.4	Compression resistance (clearance after compression)	mm	15	≥ 14
	Anti perforation midsole: in multi-layers highly tensile fabric, penetration resistant, Zero Perforation	6.2.1	Penetration resistance	N	To 1100 N	≥ 1100
					No Perforation	
	Antistatic shoe: the bottom is fit for the dissipation of electrostatic charges	6.2.2.2	Electric resistance			
			- wet	MΩ	632	≥ 0.1
			- dry	MΩ	890	≤ 1000
	Heat insulation	6.2.3.1	Heat insulation (temp. increase after 30' at 150 °C)	°C	17	≤ 22
	Cold insulation	6.2.3.2	Cold insulation (temp. decrease after 30' C at -17 °C)	°C	6	≤ 10
	Energy absorption system	6.2.4	Shock absorption	J	42	≥ 20
Upper	Black water repellent full grain leather thickness 1,8/2,0 mm	5.4.6	Water vapour permeability	mg/cmq h	> 4,3	≥ 0,8
			Permeability coefficient	mg/cmq	> 41,2	> 15
		6.3.1	Water absorption		16%	≤ 30%
			Water penetration		0,1 g	≤ 0,2 g
Quarter lining	GORE-TEX [®] membrane, breathable and abrasion resistant, colour grey thickness 1.2 mm	5.5.3	Water vapour permeability	mg/cmq h	> 4,4	≥ 2
			Permeability coefficient	mg/cmq	> 38,9	≥ 20
Sole	Antistatic nitrile rubber, resistant to high temperatures, directly applied on the upper: colour black, slipping resistant, abrasion resistant and hydrocarbons resistant,	5.8.3	Abrasion resistance (lost volume)	mm ³	140	≤ 150
		5.8.4	Flexing resistance (cut increase)	mm	2	≤ 4

comfortable and anti-shock

Adherence coefficient of the sole

6.4.4	Hot resistance (300 °C)	----	any melting	any melting
6.4.2	Hydrocarbons resistance (ΔV = volume increase)	%	4,5	≤ 12
5.3.5	SRA : ceramic + detergent solution – flat		0,44	$\geq 0,32$
	SRA : ceramic + detergent solution – heel (contact angle 7°)		0,38	$\geq 0,28$
	SRB : steel + glycerol – flat		0,20	$\geq 0,18$
	SRB : steel + glycerol – heel (contact angle 7°)		0,15	$\geq 0,13$