



Prod. Ref.	13600-000
Safety cat.	S3 CI HRO SRC
Range of sizes	39 - 47 (6 - 12)
Weight (sz. 9)	860 g
Shape	C
Width	12

Description: Black water repellent printed leather ranger, ecological fur lining, antistatic, anti-shock, slipping resistant, non metallic **APT Plate** midsole **Zero Perforation**

Plus: Cold protection thanks to **THINSULATE™ B200**. **EVANIT** footbed, made of EVA and nitrile special compound, with high bearing capacity and variable thickness. Thermoformed, punched and coated with highly breathable fabric. Antistatic thanks to a specific treatment on the surface and to seams made of conductive yarns. **ANTI TORSION SUPPORT** made of polycarbonate and fibreglass conveniently placed between heel and sole, which provides support and protection of the plantar arch, thus preventing harmful bendings and/or unwilling torsion. Sole **COLD DEFENDER PU/nitrile rubber** resistant up to +300 °C (1 minute contact) and to low temperatures up to -25 °C. **Cold Defender PU** is a special PU compound which guarantees higher performances than the ordinary PU for mechanical resistance to low temperatures and thermal insulation and it resists under extreme temperatures up to -25°C. The rubber outsole design has been devised to improve the slip resistance and enhance the comfort even on frozen and rambling surfaces. Internal side zip.

Suggested uses: Footwear for cold temperature

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	Toe cap: non metallic TOP RETURN toe cap, impact resistant until 200 J and compression resistant until 1500 kg	5.3.2.3	Shock resistance (clearance after shock)	mm	14	≥ 14
		5.3.2.4	Compression resistance (clearance after compression)	mm	16	≥ 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	742	≥ 0.1
			- dry	MΩ	1000	≤ 1000
	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	39	≥ 20
	Upper	Black water repellent printed leather thickness 1,8/2,0 mm	5.4.6	Water vapour permeability	mg/cmq h	> 2
			Permeability coefficient	mg/cmq	> 24,5	> 15
6.3.1			Water absorption		13%	≤ 30%
			Water penetration		0,0 g	≤ 0,2 g
Lining	Ecological fur, breathable, abrasion resistant, colour grey thickness 1,2 mm	5.5.3	Water vapour permeability	mg/cmq h	> 5,9	≥ 2
			Permeability coefficient	mg/cmq	> 47,4	≥ 20
Sole	COLD DEFENDER PU/Nitrile rubber, antistatic, resistant to low temperatures, directly injected in the upper:	5.8.3	Abrasion resistance (lost volume)	mm³	132	≤ 150
		5.8.4	Flexing resistance (cut increase)	mm	1	≤ 4
		5.8.6	Interlayer bond strength	N/m	> 5	≥ 4
	Outsole: black nitrile rubber, slipping resistant, abrasion resistant, hydrocarbons resistant and heat resistant.	6.4.4	Hot resistance (300 °C)	----	any melting	any melting
		6.4.2	Hydrocarbons resistance (ΔV = volume increase)	%	+ 3,6	≤ 12
	Midsole: Cold Defender PU resistant to -25°C, colour black	5.3.5	SRA : ceramic + detergent solution – flat		0,45	≥ 0,32
			SRA : ceramic + detergent solution – heel (contact angle 7°)		0,40	≥ 0,28
			SRB : steel + glycerol – flat		0,20	≥ 0,18
	Adherence coefficient of the sole					

