



Prod. Ref.	13590-000
Safety cat.	S3 WR CI HRO SRC
Range of sizes	39 - 47 (6 - 12)
Weight (sz. 9)	910 g
Shape	C
Width	12

Description: Black water repellent full grain leather resistant to low temperatures rigger, natural lamb fur lining, antistatic, anti-shock, slipping resistant, non metallic **APT Plate** midsole **Zero Perforation**.

Plus: **COLD BARRIER** footbed made of soft and scented polyurethane, antistatic, anatomic, insulating against low temperatures. The thermal comfort inside the footwear is granted thanks to the special polyurethane compound devised to give high insulation. Fleece lined. The leather used for these footwear is subjected to a treatment which makes them flexible and resistant to low temperatures even in the flexing areas to prevent cracks and stiffening. Sole **COLD DEFENDER PU**/Nitrile rubber resistant to low temperatures. **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 resist 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. **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. Internal side zip. **Sealed stitchings**.

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
Whole footwear	Water resistance	5.15.1	Water resistance (area of water penetration after 1000 paces in a surface flooded with water)	cm ²	≤ 3	≤ 3
	Complete shoe					
	Toe cap: non metallic extra large 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	7	≤ 10
	Energy absorption system: polyurethane low density and heel profile	6.2.4	Shock absorption	J	> 39	≥ 20
Upper	Black water repellent full grain leather, resistant to low temperatures thickness 1,8/2,0 mm	5.4.6	Water vapour permeability	mg/cmq h	> 3,8	≥ 0,8
			Permeability coefficient	mg/cmq	> 38,2	> 15
		6.3.1	Water absorption		14%	≤ 30%
			Water penetration		0,0 g	≤ 0,2 g
Lining	Natural lamb fur, highly insulating, breathable, abrasion resistant, colour dark grey thickness 1,2 mm	5.5.3	Water vapour permeability	mg/cmq h	> 4,3	≥ 2
			Permeability coefficient	mg/cmq	> 40,3	≥ 20
Sole	COLD DEFENDER PU /Nitrile rubber, antistatic, resistant to low temperatures, directly injected in the upper: Outsole: black nitrile rubber, slipping resistant, abrasion resistant, hydrocarbons	5.8.3	Abrasion resistance (lost volume)	mm ³	132	≤ 150
		5.8.4	Flexing resistance (cut increase)	mm	1	≤ 4
		5.8.6	Interlayer bond strength	N/m	> 5	≥ 4

resistant and heat resistant.

Midsole: **Cold Defender PU** resistant to -25°C, colour black

Adherence coefficient of the sole

6.4.4	Hot resistance (300 °C)	----	any melting	any melting
6.4.2	Hydrocarbons resistance (ΔV = volume increase)	%	+ 3,6	≤ 12
5.3.5	SRA : ceramic + detergent solution – flat		0,45	$\geq 0,32$
	SRA : ceramic + detergent solution – heel (contact angle 7°)		0,40	$\geq 0,28$
	SRB : steel + glycerol – flat		0,20	$\geq 0,18$
	SRB : steel + glycerol – heel (contact angle 7°)		0,14	$\geq 0,13$