COFRA®
BORN TO WORK

PRODUCT SHEET

BERING BIS

Prod. Ref.	17130-000
Safety cat.	S3 WR CI SRC
Range of sizes	39 - 48 (6 - 13)
Weight (sz. 8)	890 g
Shape	C
Width	11

Description: Black water repellent full grain leather ranger, 100% polyester fabric, with **WIN THERM®**, aluminised felt textile lining, antistatic, anti-shock, slipping resistant, non metallic **APT Plate** midsole **Zero Perforation**.

Plus: Cold protection thanks to **THINSULATE™ B600**. Footbed **COLD BARRIER**, 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. Arch 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. Outsole TPU 3 colours, resistant to flexions up to -25°C. The special design of the outsole has been studied to provide maximum foot support. The TPU insert in the heel area covers the whole arch of the foot, thus providing optimal comfort, together with the anti-torsion insert. Perfumed sole. TPU toe cap protection, resistant to scratches and abrasion. **Sealed stitchings**

Suggested uses: Footwear for cold environments

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

Whole footwear	**Water resistance**	
Complete shoe	**Toe cap:** non metallic **TOP RETURN** toe cap, impact resistant until 200 J	
	and compression resistant until 1500 kg	
	Anti perforation midsole: in multi-layers highly tensile fabric, penetration resistant, **Zero Perforation**	
	Antistatic shoe: the bottom is fit for the dissipation of electrostatic charges	
	Cold insulation	
	Energy absorption system: polyurethane low density and heel profile	
Upper	Black water repellent full grain leather	
	thickness 1,6/1,8 mm	
Vamp lining	**WIN THERM®,** breathable, colour black	
	thickness 1,2 mm	
Quarter lining	**WIN THERM®,** breathable, antibacterial, abrasion resistant, colour black	
	thickness 1,2 mm	
Sole	Antistatic polyurethane/TPU directly injected in the upper:	
	Outsole: TPU, 3 colours, slipping resistant, abrasion resistant and hydrocarbons resistant	
	Midsole: black polyurethane, low density, comfortable and anti-shock.	

SAFETY TECHNICAL SPECIFICATIONS

Clause EN ISO 20345:2011	Description	Unit	Cofra result	Requirement
5.15.1	Water resistance (area of water penetration after 1000 paces in a surface flooded with water)	cm^2	**≤ 3**	≤ 3
5.3.2.3	Shock resistance (clearance after shock)	mm	**15**	≥ 14
5.3.2.4	Compression resistance (clearance after compression)	mm	**14,5**	≥ 14
6.2.1	Penetration resistance	N	**To 1100 N**	≥ 1100
			No perforation	
6.2.2.2	Electric resistance			
	- wet	MΩ	**77**	≥ 0.1
	- dry	MΩ	**850**	≤ 1000
6.2.3.2	Cold insulation (temp. decrease after 30' C at -17 °C)	°C	**8**	≤ 10
Cimac Test	**Cold insulation (temp. decrease after 30' C at -25 °C)**		**6,5**	≤ 10
6.2.4	Shock absorption	J	**33**	≥ 20
5.4.6	Water vapour permeability	mg/cmq h	**> 0,8**	≥ 0,8
	Permeability coefficient	mg/cmq	**> 15**	> 15
6.3.1	Water absorption		**18%**	≤ 30%
	Water penetration		**0,0 g**	≤ 0,2 g
5.5.3	Water vapour permeability	mg/cmq h	**> 3,7**	≥ 2
	Permeability coefficient	mg/cmq	**> 29,7**	≥ 20
5.5.3	Water vapour permeability	mg/cmq h	**> 7,4**	≥ 2
	Permeability coefficient	mg/cmq	**> 59,5**	≥ 20
5.8.3	Abrasion resistance (lost volume)	mm^3	**68**	≤ 150
5.8.4	Flexing resistance (cut increase)	mm	**2**	≤ 4
5.8.6	Interlayer bond strength	N/mm	**> 5**	≥ 4
6.4.2	Hydrocarbons resistance (ΔV = volume increase)	%	**- 0,5**	≤ 12

Made by Technical Dept.

Adherence coefficient of the sole	5.3.5	SRA : ceramic + detergent solution – flat	**0,44**	≥ 0,32
		SRA : ceramic + detergent solution – heel (contact angle 7°)	**0,39**	≥ 0,28
		SRB : steel + glycerol – flat	**0,21**	≥ 0,18
		SRB : steel + glycerol – heel (contact angle 7°)	**0,18**	≥ 0,13