



Prod. Ref.	20610-001
Safety cat.	SB E P FO SRC
Range of sizes	36 - 48 (3 - 13)
Weight (sz. 8)	553 g
Shape	A
Width	11

Description: Black high tenacity, extremely breathable AIRFREEDOM FABRIC nylon and **MICROTECH** shoe, 100% polyamide fabric lining, anti-shock, slipping resistant, non metallic **APT Plate** midsole **Zero Perforation**

Plus: Insole and sole are highly electric resistant. The whole boot has been designed in order not to have any metal parts; **Upper made of nylon and mesh, highly breathable and resistant to abrasion (exclusive to Cofra).** **EVANIT** footbed, made of EVA and nitrile special compound, with high bearing capacity and variable thickness. Thermoformed, punched and coated with highly breathable fabric. **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. Perfumed sole. Leather toe cap protection

Suggested use: Given the high electrical resistance, it is possible to use this shoe as a secondary protective equipment in addition to the primary ones (obligatory) for installation of electric plants and all activities where it is important to reduce the risk of lesions for accidental contacts with hot electric wires. **Footwear for electricians**

Instructions: This shoe is not a primary protective equipment. It does not prevent the risk of electrical shock when working with dangerous tensions and does not insulate from high voltage. Apart from these footwear the worker must use other electrical shock protective equipment (i.e. gloves and insulating rubber carpets or alternative systems in the work place). The resistance against electric shocks fails in wet environments and when the outer surface of the sole is contaminated by chemical agents (i.e. road salt) or entrapped conductive materials (i.e. nails or metal swarf). Therefore it is necessary to check the footwear carefully. They must be replaced if damaged or too worn. The use of this shoe is absolutely not advisable in explosive stores or any place with risk of fire

Care and maintenance: Clean after each use and dry off away from direct heat. 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	Value of electric resistance higher than that of antistatic footwear		Resistance against electric shocks of the whole footwear	MΩ	> 2000	≥ 1000
	Toe cap: non metallic TOP RETURN toe cap, impact resistant until 200 J	5.3.2.3	Shock resistance (clearance after shock)	mm	15,5	≥ 14
	and compression resistant until 1500 kg	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 , with high electric resistance	6.2.1	Penetration resistance	N	To 1100 N	≥ 1100
	Energy absorption system	6.2.4	Shock absorption	J	36	≥ 20
Upper	Nylon and mesh, highly breathable and resistant to abrasion, colour black	5.4.6	Water vapour permeability	mg/cmq h	> 6,8	≥ 0,8
			Permeability coefficient	mg/cmq	> 55,1	> 20
		5.4.3	Tear resistance	N	125,2	≥ 60
			Abrasion resistance	Cycle	> 300.000	
Upper	Black breathable MICROTECH	5.4.6	Water vapour permeability	mg/cmq h	> 2	≥ 0,8
	thickness 1,6 mm		Permeability coefficient	mg/cmq	> 17,5	> 15
Vamp	Textile, breathable, abrasion resistant, colour black	5.5.3	Water vapour permeability	mg/cmq h	> 6,2	≥ 2
lining	Thickness 1,2 mm		Permeability coefficient	mg/cmq	> 51,1	≥ 20
Quarter	100% polyamide fabric, breathable, abrasion resistant, colour black	5.5.3	Water vapour permeability	mg/cmq h	> 9,8	≥ 2
lining	thickness 1,2 mm		Permeability coefficient	mg/cmq	> 79,7	≥ 20
Sole	Polyurethane/TPU, with low electrical resistance, directly injected in the upper:	5.8.3	Abrasion resistance (lost volume)	mm ³	112	≤ 150
	Outsole: Ice TPU, slipping resistant, abrasion resistant and hydrocarbons resistant.	5.8.4	Flexing resistance (cut increase)	mm	1	≤ 4

Midssole: Black polyurethane, low density, comfortable and anti-shock.
 Electric insulation of the footwear bottom in dry condition
 Adherence coefficient of the sole

5.8.6	Interlayer bond strength	N/mm	4,2	≥ 4
6.4.2	Hydrocarbons resistance (ΔV = volume increase)	%	0,9	≤ 12
CAN/CSA Z195-14	Test voltage	18.000 Volts		
	Test time	1 minute	0,25	≤ 1
5.3.5	SRA : ceramic + detergent solution – flat		0,62	≥ 0,32
	SRA : ceramic + detergent solution – heel (contact angle 7°)		0,58	≥ 0,28
	SRB : steel + glycerol – flat		0,26	≥ 0,18
	SRB : steel + glycerol – heel (contact angle 7°)		0,19	≥ 0,13