



Prod. Ref.	78880-000
Safety cat.	S3 ESD SRC
Range of sizes	36 - 48 (3 - 13)
Weight (sz. 8)	596 g
Shape	A
Width	11

Description: Black water repellent leather shoe, **SANY-DRY**[®] lining, anti-shock, slipping resistant, non metallic **APT Plate** midsole **Zero Perforation**, with low electrical resistance (ESD)

Plus: High electrical conductivity. Stability of the conductive capability for extended period. **COFRA SOFT ESD**, footbed made of scented polyurethane, holed, anatomic, with low electric resistance, soft and comfortable; the shape of the bottom part guarantees impact energy absorption; the upper part absorbs moisture and keeps the foot dry. Perfumed sole. **TPU toe cap protection**. **Boa**[®] closure system allows to put on and take off the shoe easily and quickly. Made of aviation INOX steel, **Boa**[®] laces resist to the highest stress. With one single hand it is possible to set the **Boa**[®] closure system easily and adjust it to the millimetre (**Micro-adjustability - 1 click = 1 mm**)

Suggested uses: Footwear for microelectronic industries. Recommendable in **ATEX** environments

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

Recommendation: It is always necessary to wear socks made of natural fibers i.e. wool or cotton, because they provide the best performance with electrical conductivity. Avoid introducing any foreign body between foot and footbed of the footwear (i.e. insoles or similar items not equipped by the manufacturer), as they could make void the electrical properties the footwear have been conceived for. Do not undervalue the effect of ageing and contamination of the footwear: during time their electrical resistance can be subjected to alterations. It is always important to check the electrical properties of footwear through the use of special testing devices in electrostatic protected area (EPA), according to the European standard CEI EN 61340-5-1

MATERIALS / ACCESSORIES

SAFETY TECHNICAL SPECIFICATIONS

		Clause EN ISO 20345:2011	Description	Unit	Cofra result	Requirement
Complete shoe	E.S.D. features	CEI EN				
		61340-5-1	Electric resistance of footwear to the ground	MΩ	7,2	0.75 - 35
		61340-4-3	Crosswise outsole electric resistance	MΩ	45	< 100
		5.3.2.3	Shock resistance (clearance after shock)	mm	16	≥ 14
		5.3.2.4	Compression resistance (clearance after compression)	mm	15,5	≥ 14
		6.2.1	Penetration resistance	N	To 1100 N	≥ 1100
					No perforation	
		6.2.4	Shock absorption	J	28	≥ 20
		5.4.6	Water vapour permeability	mg/cmq h	> 1,2	≥ 0,8
			Permeability coefficient	mg/cmq	> 16,3	> 15
Upper	Black water repellent leather thickness 1,8/2,0 mm	6.3.1	Water absorption		13%	≤ 30%
			Water penetration		0,0 g	≤ 0,2 g
		5.5.3	Water vapour permeability	mg/cmq h	> 6,3	≥ 2
			Permeability coefficient	mg/cmq	> 51,1	≥ 20
Vamp	Textile, breathable, abrasion resistant, colour black Thickness 1,2 mm	5.5.3	Water vapour permeability	mg/cmq h	> 10,3	≥ 2
			Permeability coefficient	mg/cmq	> 82,8	≥ 20
Quarter	SANY-DRY [®] , breathable, abrasion resistant, colour light green and turquoise thickness 1,2 mm	5.8.3	Abrasion resistance (lost volume)	mm ³	35	≤ 150
		5.8.4	Flexing resistance (cut increase)	mm	1	≤ 4
Sole	Polyurethane/TPU with low electrical resistance, directly injected in the upper: Outsole: Lime TPU, slipping resistant, abrasion resistant and hydrocarbons resistant.					

Midsole: Black polyurethane, low density, comfortable and anti-shock.
Adherence coefficient of the sole

5.8.6	Interlayer bond strength	N/mm	> 5	≥ 4
6.4.2	Hydrocarbons resistance (ΔV = volume increase)	%	-0,6	≤ 12
5.3.5	SRA : ceramic + detergent solution – flat		0,60	≥ 0,32
	SRA : ceramic + detergent solution – heel (contact angle 7°)		0,51	≥ 0,28
	SRB : steel + glycerol – flat		0,27	≥ 0,18
	SRB : steel + glycerol – heel (contact angle 7°)		0,19	≥ 0,13