



Prod. Ref.	13070-000
Safety cat.	S3 ESD SRC
Range of sizes	39 - 47 (6 - 12)
Weight (Sz. 9)	660 g
Shape	B
Width	11

Description: Black/grey water repellent full grain leather and breathable textile ankle boot, **SANY-DRY**[®] lining, anti-shock, slipping resistant, non metallic **APT Plate** midsole **Zero Perforation**

Plus: High electrical conductivity. Stability of the conductive capability for extended period. Footwear completely free from metal parts. **TOP COMFORT ESD**, footbed made of soft and scented polyurethane, anatomic, holed, with low electric resistance, soft and comfortable. The pattern of the bottom layer guarantees superb impact shock absorption and ease of movement. The upper layer is made of antibacterial textile to prevent from bad odours, to absorb moisture and keep the foot dry. **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 uses: Footwear for microelectronic industries. Recommendable in **ATEX** 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

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	33,5	0.75 - 35	
		61340-4-3	Crosswise outsole electric resistance	MΩ	68,6	< 100	
	Toe cap: non metallic TOP RETURN toe cap, Extra Large , impact resistant until 200 J and compression resistant until 1500 kg	5.3.2.3	Shock resistant (free high after shock)	mm	15	≥ 14	
		5.3.2.4	Compression resistance (free high after compression)	mm	15	≥ 14	
	Upper	Anti perforation midsole: in multi-layers highly tensile fabric, penetration resistant, Zero Perforation , with low electric resistance	6.2.1	Penetration resistance	N	To 1100 N no perforation	≥ 1100
6.2.4			Shock absorption	J	32	≥ 20	
Black water repellent full grain leather Thickness 1,6/1,8 mm		5.4.6	Water vapour permeability	mg/cmq h	> 0,8	≥ 0,8	
			Permeability coefficient	mg/cmq	> 15	> 15	
Grey/black breathable and water repellent textile		6.3.1	Water absorption		18%	≤ 30%	
			Water penetration		0,0 g	≤ 0,2 g	
		5.4.6	Water vapour permeability	mg/cmq h	> 2,6	≥ 0,8	
			Permeability coefficient	mg/cmq	> 23,8	> 15	
Vamp		Textile, breathable, abrasion resistant, colour black	6.3.1	Water absorption		30%	≤ 30%
				Water penetration		0,0 g	≤ 0,2 g
lining	Thickness 1,2 mm	5.5.3	Water vapour permeability	mg/cmq h	> 6	≥ 2	
			Permeability coefficient	mg/cmq	> 48	≥ 20	
Quarter	SANY-DRY [®] , antibacterial, breathable, abrasion resistant, colour red	5.5.3	Water vapour permeability	mg/cmq h	> 9,8	≥ 2	

lining	thickness 1,2 mm		Permeability coefficient	mg/cmq	> 78,5	≥ 20
Sole	dual density polyurethane, with low electric resistance, directly injected in the upper:	5.8.3	Abrasion resistance (lost volume)	mm ³	43	≤ 150
	Outsole: black, high density, slipping resistant, abrasion resistant and hydrocarbons resistant,	5.8.4	Flexing resistance (cut increase)	mm	1,5	≤ 4
	Midsole: black, low density, comfortable and anti-shock	5.8.6	Interlayer bond strength	N/mm	> 5	≥ 4
	Adherence coefficient of the sole	6.4.2	Hydrocarbons resistance (ΔV = volume increase)	%	+ 0,1	≤ 12
		5.3.5	SRA : ceramic + detergent solution – flat		0,40	≥ 0,32
			SRA : ceramic + detergent solution – heel (contact angle 7°)		0,33	≥ 0,28
			SRB : steel + glycerol – flat		0,18	≥ 0,18
			SRB : steel + glycerol – heel (contact angle 7°)		0,13	≥ 0,13