



Prod. Ref.	13010-001
Safety cat.	S1 P ESD SRC
Range of sizes	36 - 48 (3 - 13)
Weight (Sz. 9)	600 g
Shape	A
Width	11

**Description:** Black full grain leather sandal, **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. Adjustable velcro closure. 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	<b>33,2</b>	0.75 - 35
		61340-4-3	Crosswise outsole electric resistance	MΩ	<b>67</b>	< 100
	Toe cap: non metallic <b>TOP RETURN</b> toe cap, <b>Extra Large</b> , impact resistant until 200 J and compression resistant until 1500 kg	5.3.2.3	Shock resistant (free high after shock)	mm	<b>15</b>	≥ 14
		5.3.2.4	Compression resistance (free high after compression)	mm	<b>15</b>	≥ 14
	Anti perforation midsole: in multi-layers highly tensile fabric, penetration resistant, <b>Zero Perforation</b> , with low electric resistance	6.2.1	Penetration resistance	N	<b>To 1100 N no perforation</b>	≥ 1100
		6.2.4	Shock absorption	J	<b>32</b>	≥ 20
	Energy absorption system	5.4.6	Water vapour permeability	mg/cmq h	<b>&gt; 0,8</b>	≥ 0,8
			Permeability coefficient	mg/cmq	<b>&gt; 15</b>	> 15
	Upper	5.5.3	Water vapour permeability	mg/cmq h	<b>&gt; 6</b>	≥ 2
Upper	Vamp		Permeability coefficient	mg/cmq	<b>&gt; 48</b>	≥ 20
		5.5.3	Water vapour permeability	mg/cmq h	<b>&gt; 9,8</b>	≥ 2
	lining		Permeability coefficient	mg/cmq	<b>&gt; 78,5</b>	≥ 20
		5.5.3	Water vapour permeability	mg/cmq h	<b>&gt; 43</b>	≤ 150
	Quarter	5.8.3	Abrasion resistance (lost volume)	mm³	<b>1,5</b>	≤ 4
		5.8.4	Flexing resistance (cut increase)	mm	<b>&gt; 5</b>	≥ 4
	lining	5.8.6	Interlayer bond strength	N/mm	<b>+ 0,1</b>	≤ 12
		6.4.2	Hydrocarbons resistance (ΔV = volume increase)	%	<b>0,40</b>	≥ 0,32
	Sole	5.3.5	SRA : ceramic + detergent solution – flat			

SRA : ceramic + detergent solution – heel (contact angle 7°)	<b>0,33</b>	≥ 0,28
SRB : steel + glycerol – flat	<b>0,18</b>	≥ 0,18
SRB : steel + glycerol – heel (contact angle 7°)	<b>0,13</b>	≥ 0,13