



Prod. Ref.	PE290-000
Safety cat.	S3S SC FO SR
Range of sizes	35 - 48 (2 - 13)
Weight (sz. 8)	505 g
Shape	A
Width	11

Description: Black/grey innovative, water repellent and breathable fabric shoe, **SANY-DRY**[®] lining, anti-shock, slipping resistant, with non metallic **APT PLUS** midsole - type **PS** with Ø 3,0 mm nail.

Plus: High electrical conductivity. Stability of the conductive capability for extended period. **LIGHT FOAM ESD** footbed, with **low electrical resistance**, made of extremely soft and comfortable polyurethane foam. Punched, its anatomical shape provides support to the plantar arch; covered with abrasion resistant fabric, it absorbs moisture and keeps always the foot dry; it guarantees excellent comfort and shock absorption.

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 20345:2022	Description	Unit	Cofra result	Requirement
Complete shoe	E.S.D. features	CEI EN				
		61340-5-1	Electric resistance of footwear to floor	MΩ	28,8	< 1000
		61340-5-1	Cross resistance	MΩ	19,4	≤ 100
		61340-5-1	Charge ability	V	20	< 100
		5.3.2.6	Shock resistance (clearance after shock)	mm	16	≥ 14
		5.3.2.7	Compression resistance (clearance after compression)	mm	18	≥ 14
		6.2.1.1.4	Penetration resistance (PS requirement with Ø 3,0 mm nail)	N	1612	≥ 1100
		6.2.4	Shock absorption	J	30	≥ 20
		5.4.6	Water vapour permeability	mg/cmq h	> 33,1	≥ 0,8
			Permeability coefficient	mg/cmq	> 264,9	≥ 15
Upper	Innovative water repellent and breathable fabric, colour black/grey	6.3	Water absorption		5,7%	≤ 30%
			Water penetration		0,0 g	≤ 0,2 g
Vamp	Textile, breathable, abrasion resistant, colour black	5.5.4	Water vapour permeability	mg/cmq h	> 4,1	≥ 2
			Permeability coefficient	mg/cmq	> 47,2	≥ 20
Quarter	SANY-DRY [®] , breathable, abrasion resistant, colour black	5.5.4	Water vapour permeability	mg/cmq h	> 9,4	≥ 2
			Permeability coefficient	mg/cmq	> 76,4	≥ 20
Sole	Dual-density polyurethane, with low electrical resistance, directly injected in the upper:	5.8.4	Abrasion resistance (lost volume)	mm ³	48	≤ 150
		5.8.5	Flexing resistance (cut increase)	mm	0	≤ 4
		5.8.7	Interlayer bond strength	N/mm	3,4	≥ 3
		6.4.2	Hydrocarbons resistance (ΔV = volume increase)	%	1,6	≤ 12
		5.3.5.2	ceramic + detergent solution – forepart (contact angle 7°)		0,41	≥ 0,36
	Adherence coefficient of the sole (Slip resistance)					

	ceramic + detergent solution – heel (contact angle 7°)	0,35	≥ 0,31
6.2.10	SR : ceramic + glycerol – forepart (contact angle 7°)	0,37	≥ 0,22
	SR : ceramic + glycerol – heel (contact angle 7°)	0,42	≥ 0,19