



Prod. Ref.	PE350-000
Safety cat.	S3S SC FO SR
Range of sizes	38 - 48 (5 - 13)
Weight (sz. 8)	535 g
Shape	A
Width	11

Description: Black/grey **TECHSHELL**, innovative, very tough, abrasion resistant, 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. **LYCRA**[®] padded fort which hugs the foot, making it stable and enhancing comfort. **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; 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	30,4	< 1000		
		61340-5-1	Cross resistance	MΩ	19,4	≤ 100		
		61340-5-1	Charge ability	V	20	< 100		
		Toe cap: ALUMINIUM made, ultra light, impact resistant until 200 J and compression resistant until 1500 kg	5.3.2.6	Shock resistance (clearance after shock)	mm	16	≥ 14	
			5.3.2.7	Compression resistance (clearance after compression)	mm	18	≥ 14	
		Anti perforation midsole: in multi-layers highly tensile fabric, penetration resistant, Zero Perforation , with low electric resistance	6.2.1.1.4	Penetration resistance (PS requirement with Ø 3,0 mm nail)	N	1612	≥ 1100	
		Energy absorption system	6.2.4	Shock absorption	J	30	≥ 20	
		Upper	TECHSHELL , innovative, very tough, abrasion resistant, water repellent and breathable fabric, colour black/grey	5.4.6	Water vapour permeability	mg/cmq h	> 4,1	≥ 0,8
					Permeability coefficient	mg/cmq	> 33,2	≥ 15
6.3	Water absorption Water penetration				13,9% 0,0 g	≤ 30% ≤ 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: Outsole: ice, high density, slipping resistant, abrasion	5.8.4	Abrasion resistance (lost volume)	mm ³	48	≤ 150		
		5.8.5	Flexing resistance (cut increase)	mm	0	≤ 4		

resistant and hydrocarbons resistant,
Midsole: black, low density, comfortable and anti-shock
Adherence coefficient of the sole (Slip resistance)

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
	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