



Prod. Ref.	18551-N01
Safety cat.	S3S FO SR
Range of sizes	40 - 48 (6,5 - 13)
Weight (sz. 8)	580 g
Shape	B
Width	11

Description: Black water repellent full grain leather ankle boot, **SANY-DRY®** lining, anti-shock, slipping resistant, non metallic **APT PLUS** midsole **Zero Perforation**

Plus: High electrical conductivity. Stability of the conductive capability for extended period. **FOOT-PAD ESD** extremely soft and comfortable footbed, **with low electric resistance**. Thanks to the very low density polyurethane, the footbed is self-molding granting a right distribution of the body weight and providing an immediate feeling of comfort. High shock absorption is provided from highly resilient material and a perfect cushion in the central area of the heel. **Boa®** Fit 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**). Perfumed sole. **TPU 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 20345:2022	Description	Unit	Cofra result	Requirement
Complete shoe	E.S.D. features	CEI EN				
		61340-5-1	Electric resistance of footwear to floor	MΩ	64	< 1000
		61340-5-1	Cross resistance	MΩ	59,7	≤ 100
		61340-5-1	Charge ability	V	6.27	< 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	15	≥ 14
		5.3.2.7	Compression resistance (clearance after compression)	mm	16,5	≥ 14
	Anti perforation midsole: in multi-layers highly tensile fabric, penetration resistant, Zero Perforation , with low electric resistance	6.2.1	Penetration resistance (PS requirement with Ø 3,0 mm nail)	N	To 1100 N	≥ 1100
					No perforation	
	Energy absorption system	6.2.4	Shock absorption	J	35	≥ 20
		5.4.6	Water vapour permeability	mg/cmq h	> 6,4	≥ 0,8
Upper	Black water repellent full grain leather thickness 1,8/2,0 mm		Permeability coefficient	mg/cmq	> 56,7	≥ 15
		6.3	Water absorption		13%	≤ 30%
			Water penetration		0,0 g	≤ 0,2 g
		5.5.4	Water vapour permeability	mg/cmq h	> 84,7	≥ 2
	Vamp		Permeability coefficient	mg/cmq	> 677,4	≥ 20
		5.5.4	Water vapour permeability	mg/cmq h	> 64,4	≥ 2
	Quarter		Permeability coefficient	mg/cmq	> 515,4	≥ 20
		5.8.4	Abrasion resistance (lost volume)	mm³	89	≤ 150
	Sole	5.8.5	Flexing resistance (cut increase)	mm	1,6	≤ 4

Midsole:	black polyurethane, low density, comfortable and anti-shock				
Adherence coefficient of the sole (Slip resistance)	5.8.7	Interlayer bond strength	N/mm	3,1	≥ 3
	6.4.2	Hydrocarbons resistance (ΔV = volume increase)	%	6,5	≤ 12
	5.3.5.2	ceramic + detergent solution – forepart (contact angle 7°)		0,40	≥ 0,36
		ceramic + detergent solution – heel (contact angle 7°)		0,33	≥ 0,31
	6.2.10	SR : ceramic + glycerol – forepart (contact angle 7°)		0,26	≥ 0,22
		SR : ceramic + glycerol – heel (contact angle 7°)		0,24	≥ 0,19