COFRA® BORN TO WORK

PRODUCT SHEET

RUMBLE ESD S3S FO SR

Prod. Ref.	NG160-000
Safety cat.	S3S FO SR
Range of sizes	36 - 48 (3 - 13)
Weight (sz. 8)	535 g
Shape	A
Widht (3 - 6)	10,5
Widht (6,5 - 13)	11

Description: Black water repellent microfiber shoe, **SANY-DRY®** lining, anti-shock, slipping resistant, with non-woven fabric puncture resistant **FTP Plate** insole - non metallic type **PS** with Ø 3,0 mm nail.

Plus: NON METAL DETECTABLE. High electrical conductibility. 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. Dynamic sole design with crosswise grooves along the shape, actively responding to impact by enhancing compression and elastic energy return during each step. **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+ A1:2024	Description	Unit	Cofra result	Requirement
Complete shoe	E.S.D. features **(provisional tests)**	CEI EN				
		61340-5-1	Electric resistance of footwear to floor	MΩ	**39,9**	< 1000
		61340-5-1	Cross resistance	MΩ	**21,20**	≤ 100
		61340-5-1	Charge ability	V	**23,20**	< 100
	Toe cap: non metallic **FIBERGLASS** toe cap, impact resistant until 200 J	5.3.2.6	Shock resistance (clearance after shock)	mm	**14,5**	≥ 14
	and compression resistant until 1500 kg	5.3.2.7	Compression resistance (clearance after compression)	mm	**15,5**	≥ 14
	Anti perforation midsole: conductive, made with special non-woven fabric fibres, puncture resistant, with low electric resistance	6.2.1.1.4	Penetration resistance (**PS** requirement with Ø 3,0 mm nail)	N	**1227**	≥ 1100
	Energy absorption system	6.2.4	Shock absorption	J	**26**	≥ 20
Upper	Black water repellent microfiber	5.4.6	Water vapour permeability	mg/cmq h	**> 9,3**	≥ 0,8
	Thickness 1,6 mm		Permeability coefficient	mg/cmq	**> 75,8**	≥ 15
		6.3	Water absorption		**27,9%**	≤ 30%
			Water penetration		**0,16 g**	≤ 0,2 g
Vamp	Textile, breathable, abrasion resistant, colour black	5.5.4	Water vapour permeability	mg/cmq h	**> 84,7**	≥ 2
lining	Thickness 1,2 mm		Permeability coefficient	mg/cmq	**> 677,4**	≥ 20
Quarter	**SANY-DRY®**, breathable, abrasion resistant, colour green	5.5.4	Water vapour permeability	mg/cmq h	**> 22**	≥ 2
lining	thickness 1,2 mm		Permeability coefficient	mg/cmq	**> 177,9**	≥ 20

Made by Technical Dept.

Sole	Double-density polyurethane, with low electrical resistance, directly injected in the upper:	5.8.4	Abrasion resistance (lost volume)	mm^3	**111**	≤ 150
	Outsole: green, high density, slipping resistant, abrasion	5.8.5	Flexing resistance (cut increase)	mm	**1,5**	≤ 4
	Midsole: black, low density, comfortable and anti-shock	5.8.7	Interlayer bond strength	N/mm	**4,5**	≥ 3
		6.4.2	Hydrocarbons resistance (ΔV = volume increase)	%	**6**	≤ 12
	Adherence coefficient of the sole (Slip resistance)	5.3.5.2	ceramic + detergent solution – forepart (contact angle 7°)		**0,38**	≥ 0,36
			ceramic + detergent solution – heel (contact angle 7°)		**0,35**	≥ 0,31
		6.2.10	SR : ceramic + glycerol – forepart (contact angle 7°)		**0,29**	≥ 0,22
			SR : ceramic + glycerol – heel (contact angle 7°)		**0,28**	≥ 0,19