

Prod. Ref.	18530-004
Safety cat.	S3L FO SR
Range of sizes	35 - 48 (2 - 13)
Weight (sz. 8)	490 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, non metallic **APT Plate** 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. 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	80,4	< 1000	
		61340-5-1	Cross resistance	MΩ	93,5	≤ 100	
		61340-5-1	Charge ability	V	3.89	< 100	
		5.3.2.6	Shock resistance (clearance after shock)	mm	15	≥ 14	
		5.3.2.7	Compression resistance (clearance after compression)	mm	18	≥ 14	
	Toe cap: ALUMINIUM made, ultra light, impact resistant until 200 J and compression resistant until 1500 kg		6.2.1	Penetration resistance (PL requirement with Ø 4,5 mm nail)	N	To 1100 N	≥ 1100
	Anti perforation midsole: in multi-layers highly tensile fabric, penetration resistant, Zero Perforation, with low electric resistance					No perforation	
	Energy absorption system		6.2.4	Shock absorption	J	26	≥ 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	> 5	≥ 0,8
			Permeability coefficient	mg/cmq	> 41,5	≥ 15	
		6.3	Water absorption		13,37%	≤ 30%	
			Water penetration		0,0 g	≤ 0,2 g	
		5.4.3	Tear resistance	N	233	≥ 60	
			Abrasion resistance	Cycle	> 600.000		
Vamp		Textile, breathable, abrasion resistant, colour black	5.5.4	Water vapour permeability	mg/cmq h	> 6,3	≥ 2
				Permeability coefficient	mg/cmq	> 51,1	≥ 20
Quarter		SANY-DRY®, breathable, abrasion resistant, colour silver	5.5.4	Water vapour permeability	mg/cmq h	> 10,3	≥ 2
lining		thickness 1,2 mm		Permeability coefficient	mg/cmq	> 82,8	≥ 20
Sole	Polyurethane/TPU with low electrical resistance, directly injected in the upper:	5.8.4	Abrasion resistance (lost volume)	mm³	89	≤ 150	

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Vamp	Textile, breathable, abrasion resistant, colour black
lining	Thickness 1,2 mm
Quarter	SANY-DRY [®] , breathable, abrasion resistant, colour silver
lining	thickness 1,2 mm
Sole	Polyurethane/TPU with low electrical resistance, directly injected in the upper:

Outsole: ice TPU, slipping resistant, abrasion resistant and hydrocarbons resistant.
 Midsole: black polyurethane, low density, comfortable and anti-shock.
 Adherence coefficient of the sole (Slip resistance)

5.8.5	Flexing resistance (cut increase)	mm	1,6	≤ 4
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

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