COFRA
BORN TO WORK

PRODUCT SHEET

YULE S3 ESD SRC

Prod. Ref.	13041-000
Safety cat.	S3 ESD SRC
Range of sizes	39 - 47 (6 - 12)
Weight (Sz. 9)	660 g
Shape	B
Widht	11

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NorSafe WE PROTECT

Description: Black water repellent full grain leather ankle boot, **SPHERA** lining, anti-shock, slipping resistant, non metallic **APT Plate** midsole **Zero Perforation**.

Plus: High electrical conductibility. Stability of the conductive capability for extended period. Footwear completely free from metal parts. **TOP COMFORT ESD,** footbed made of soft and scented polyurethane, anatomic, holed, with low electric resistance, soft and comfortable. The pattern of the bottom layer guarantees superb impact shock absorption and ease of movement. The upper layer is made of antibacterial textile to prevent from bad odours, to absorb moisture and keep the foot dry. **ANTI TORSION SUPPORT** made of polycarbonate and fibreglass conveniently placed between heel and sole, which provides support and protection of the plantar arch, thus preventing harmful bendings and/or unwilled torsion. Perfumed sole

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

			Clause EN ISO 20345:2011
Complete shoe	**E.S.D. features**		CEI EN
			61340-5-1
			61340-4-3
	Toe cap: non metallic **TOP RETURN** toe cap, **Extra Large,** impact resistant until 200 J		5.3.2.3
	and compression resistant until 1500 kg		5.3.2.4
	Anti perforation midsole: in multi-layers highly tensile fabric, penetration resistant, **Zero Perforation,** with low electric resistance		6.2.1
	Energy absorption system		6.2.4
Upper	Black water repellent full grain leather		5.4.6
	Thickness 1,6/1,8 mm		
			6.3.1
Vamp lining	Textile, breathable, abrasion resistant, colour black		5.5.3
	Thickness 1,2 mm		
Quarter lining	**SPHERA**, antibacterial, breathable, abrasion resistant, colour orange		5.5.3
	thickness 1,2 mm		
Sole	dual density polyurethane, with low electric resistance, directly injected in the upper:		5.8.3
	Outsole:	black, high density, slipping resistant, abrasion	5.8.4
		resistant and hydrocarbons resistant,	5.8.6
	Midsole:	black, low density, comfortable and anti-shock	6.4.2

SAFETY TECHNICAL SPECIFICATIONS

Description	Unit	Cofra result	Requirement
Electric resistance of footwear to the ground	MΩ	**33,2**	0.75 - 35
Crosswise outsole electric resistance	MΩ	**67**	< 100
Shock resistant (free high after shock)	mm	**15**	≥ 14
Compression resistance (free high after compression)	mm	**15**	≥ 14
Penetration resistance	N	**To 1100 N no perforation**	≥ 1100
Shock absorption	J	**32**	≥ 20
Water vapour permeability	mg/cmq h	**> 0,8**	≥ 0,8
Permeability coefficient	mg/cmq	**> 15**	> 15
Water absorption		**18%**	≤ 30%
Water penetration		**0,0 g**	≤ 0,2 g
Water vapour permeability	mg/cmq h	**> 6**	≥ 2
Permeability coefficient	mg/cmq	**> 48**	≥ 20
Water vapour permeability	mg/cmq h	**> 8,6**	≥ 2
Permeability coefficient	mg/cmq	**> 69,2**	≥ 20
Abrasion resistance (lost volume)	mm^3	**43**	≤ 150
Flexing resistance (cut increase)	mm	**1,5**	≤ 4
Interlayer bond strength	N/mm	**> 5**	≥ 4
Hydrocarbons resistance (ΔV = volume increase)	%	**+ 0,1**	≤ 12

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Adherence coefficient of the sole	5.3.5	SRA : ceramic + detergent solution – flat	**0,40**	≥ 0,32
		SRA : ceramic + detergent solution – heel (contact angle 7°)	**0,33**	≥ 0,28
		SRB : steel + glycerol – flat	**0,18**	≥ 0,18
		SRB : steel + glycerol – heel (contact angle 7°)	**0,13**	≥ 0,13

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