COFRA®
BORN TO WORK

PRODUCT SHEET

OPERATE S3S

Prod. Ref.	37170-N00
Safety cat.	S3S HRO LG SC FO SR
Range of sizes	40 - 48 (6,5 - 13)
Weight (sz. 8)	624 g
Shape	B
Widht	11

Description: Black/grey breathable fabric and water repellent Nubuck ankle boot, **SANY-DRY®** lining, antistatic, anti-shock, slipping resistant, non metallic **APT PLUS** midsole **Zero Perforation**

Plus: **METAL FREE. FOOT-PAD** footbed, extremely soft and comfortable footbed. 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. **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. Outsole resistant to +300°C (1 minute contact). Footwear equipped with a particularly abrasion-resistant material on the toe area (**SC**). Sole design especially conceived for safer standing on ladder rungs (**LG**).

Suggested uses: Construction, maintenance, industries

Care and maintenance: Clean after each use and dry off away from direct heat. Avoid contact with aggressive chemicals or extreme temperature. Avoid immersion in sea water, lime water or cement mixed with water

MATERIALS / ACCESSORIES

		Clause EN ISO 20345:2022
Complete shoe	**Toe cap:** non metallic **FIBERGLASS** toe cap, impact resistant until 200 J	5.3.2.6
	and compression resistant until 1500 kg	5.3.2.7
	Anti perforation midsole: in multi-layers highly tensile fabric, penetration resistant, **Zero Perforation**	6.2.1
	Antistatic shoe: the bottom is fit for the dissipation of electrostatic charges	6.2.2.2
	Energy absorption system	6.2.4
Upper	Water repellent and breathable fabric, colour black/grey	5.4.6
		6.3
Upper	Water repellent nubuck, colour black	5.4.6
	thickness 1,8/2,0 mm	
		6.3
Vamp lining	Felt, breathable, colour dark grey	5.5.4
	thickness 1,2 mm	
Quarter lining	**SANY-DRY®**, breathable, abrasion resistant, colour fluo yellow	5.5.4
	thickness 1,2 mm	
Sole	Polyurethane/Nitrile rubber, antistatic, directly injected in the upper:	5.8.4
	Outsole: black nitrile rubber, slipping resistant, abrasion resistant, hydrocarbons resistant and heat resistant.	5.8.5

SAFETY TECHNICAL SPECIFICATIONS

Description	Unit	Cofra result	Requirement
Shock resistance (clearance after shock)	mm	**15**	≥ 14
Compression resistance (clearance after compression)	mm	**16**	≥ 14
Penetration resistance	N	**To 1100 N**	≥ 1100
(**PS** requirement with Ø 3,0 mm nail)		**No perforation**	
Electric resistance			
- wet	MΩ	**93,41**	≥ 0.1
- dry	MΩ	**298**	≤ 1000
Shock absorption	J	**30**	≥ 20
Water vapour permeability	mg/cmq h	**> 10,5**	≥ 0,8
Permeability coefficient	mg/cmq	**> 84,9**	≥ 15
Water absorption		**16%**	≤ 30%
Water penetration		**0,01 g**	≤ 0,2 g
Water vapour permeability	mg/cmq h	**> 2,5**	≥ 0,8
Permeability coefficient	mg/cmq	**> 26,1**	≥ 15
Water absorption		**20%**	≤ 30%
Water penetration		**0,0 g**	≤ 0,2 g
Water vapour permeability	mg/cmq h	**> 5**	≥ 2
Permeability coefficient	mg/cmq	**> 41,9**	≥ 20
Water vapour permeability	mg/cmq h	**> 64,4**	≥ 2
Permeability coefficient	mg/cmq	**> 515,4**	≥ 20
Abrasion resistance (lost volume)	mm^3	**112**	≤ 150
Flexing resistance (cut increase)	mm	**2**	≤ 4

Midsole:	dark grey polyurethane low density, comfortable and anti-shock	5.8.7	Interlayer bond strength	N/m	**4,2**	≥ 3
		6.4.4	Hot resistance (300 °C)	-----		any melting
		6.4.2	Hydrocarbons resistance (ΔV = volume increase)	%	**10**	≤ 12
Adherence coefficient of the sole (Slip resistance)		5.3.5.2	ceramic + detergent solution – forepart (contact angle 7°)		**0,40**	≥ 0,36
			ceramic + detergent solution – heel (contact angle 7°)		**0,35**	≥ 0,31
		6.2.10	SR : ceramic + glycerol – forepart (contact angle 7°)		**0,27**	≥ 0,22
			SR : ceramic + glycerol – heel (contact angle 7°)		**0,32**	≥ 0,19