

TECHNICAL SHEET



Article:	B1503 COSMOS
Norm:	UNI EN ISO 20345:2012
Safety Class:	S3 ESD SRC
ESD Protection:	CEI EN 61340-5-1:2016/COR1:2017, CEI EN 61340-4-5:2018 and CEI EN 61340-4-3:2018
Footwear height:	Mod. A, H 88 mm (< 113 mm, Ref. EN 20345- 5.2.2)
Width	11,5
Construction:	STROBEL; MONO PU ESD SOLE
Cleaning and maintenance:	Use only soft brushes and water. Do not use substances like alcohol, thinners, gasoline, oil or any other chemicals. Keep the footwear, dry and clean, in a proper place at room temperature.
Suggested fields:	Professionals, managers, construction site managers, undertaker, artisans, services, light industry, electronics (EPA=Electrostatic protected areas ESD).

ESD Protection (Electrostatic discharges) for electronic devices

Suitable for use in EPA areas (Electrostatic discharges protected area)



Component	Description	Value	Norm Requirements	Norm
Entire footwear	Total resistance footwear/ground (footwear worn on a metal ground)	3,11 x 10 ⁷ Ω	< 1,00 x 10 ⁸ Ω	CEI EN 61340-5-1
	Sole electrical transversal resistance (footwear resistance)	7,33 x 10 ⁷ Ω	≤ 1,00 x 10 ⁸ Ω	CEI EN 61340-5-1
	Chargeability	6,48 V	< 100 V	CEI EN 61340-5-1

Entire footwear: components				
Component	Description	Value	Norm Requirements	EN 20345
Metal-free SpaceCap toe-cap	Impact resistance (200 J) • Free height after impact	15 mm	≥ 14 mm	5.3.2.3
	Compression resistance (15 kN) • Free height after compression	16 mm	≥ 14 mm	5.3.2.4
Sole (SRC)	Slip resistance • SRA – Sole (entire sole) • SRA – Heel (Angle of 7°) • SRB – Sole (entire sole) • SRB – Heel (Angle of 7°)	0,47 0,43 0,21 0,15	≥ 0,32 ≥ 0,28 ≥ 0,18 ≥ 0,13	5.3.5.4 5.3.5.4 5.3.5.4 5.3.5.4
Fresh'n Flex ESD (P)	Puncture resistance	No perforation	≥ 1100 N	6.2.1.1.2
Footbed (A)	Antistatic properties • Electrical resistance	Dry: $8,8 \times 10^7 \Omega$ Humid: $3,2 \times 10^7 \Omega$	≥ $10^5 \Omega$, ≤ $10^9 \Omega$ ≥ $10^5 \Omega$, ≤ $10^9 \Omega$	6.2.2.2 6.2.2.2
Sole/Upper Heat (HI)	Thermal insulation Insole temperature increase	N/A	≤ 22°C	6.2.3.1
Cold (CI)	Insole temperature decrease	N/A	≤ 10°C	6.2.3.2
Heel (E)	Shock-absorption in the heel region	33 J	≥ 20 J	6.2.4
(WR)	Water resistance (Water absorption)	N/A	≤ 3 cm ²	6.2.5
(M)	Metatarsal protection	N/A	≥ 40 mm	6.2.6

Upper				
Component	Description	Value	Norm Requirements	EN 20345
Grain leather	Tear resistance	186 N	≥ 120 N	5.4.3
	Traction resistance	N/A	≥ 15 N/mm ²	5.4.4
	Water steam permeability	1,5 mg/cm ² h	≥ 0.8 mg/cm ² h	5.4.6
	Water vapor coefficient	20,0 mg/cm ²	≥ 15 mg/cm ²	5.4.6
	pH value	5,0	≥ 3,2	5.4.7
	Chromium VI	Not detected	Not detectable	5.4.9
	Water passed	0,0 g	≤ 0.2 g	6.3
	Water absorption	22%	≤ 30%	6.3

Lining				
Component	Description	Value	Norm Requirements	EN 20345
	Tear resistance	107 N	≥ 15 N	5.5.1
	Abrasion resistance	• Dry : the surface shows no holes • humid: the surface shows no holes	No holes till 51.200 cycles	5.5.2
SmellStop Deluxe			No holes till 25.600 cycles	5.5.2
	Water steam release	3,6 mg/cm ² h	≥ 2,0 mg/cm ² h	5.5.3
	pH value	N/A	Not detectable	5.5.4
	Chromium VI	N/A	Not detectable	5.5.5

Insole				
Component	Description	Value	Norm Requirements	EN 20345
Fresh'n flex ESD	Thickness	3,4 mm	≥ 2,0 mm	5.7.1
	pH value	N/A	Not detectable	5.7.2
	Water absorption	102 mg/cm ²	≥ 70 mg/cm ²	5.7.3
	Water release	97 %	≥ 80 %	5.7.3
	Abrasion resistance (after 400 cycles)	No damage	Damage ≤ to norms reference	5.7.4.1
	Chromium VI	N/A	Not detectable	5.7.5

Removable footbed*				
Component	Description	Value	Norm Requirements	EN 20345
Dry'n air Omnia ESD	Thickness	3,5±0,5 mm	N/A	5.7.1
	pH value	N/A	Not detectable	5.7.2
	Water absorption	Permeable	Permeable or ≥ 70mg/cm ²	5.7.3
	Water release	Permeable	Permeable or ≥ 80%	5.7.3
	Abrasion resistance	No damage	Dry No holes till 25600 cycles Humid no holes till 12800 cycles	5.7.4.2
	Chromium VI	N/A	Not detectable	5.7.5

*Footwear also certified with DRY'N AIR SCAN&FIT OMNIA, SECOSOL and SECOSOL COMPLETE.

Sole				
Component	Description	Value	Norm Requirements	EN 20345
PU single density ESD	Sole thickness without profiles	5,5 mm	≥ 4 mm	5.8.1.1
	Profile height	3,5 mm	≥ 2,5 mm	5.8.1.3
	Tear resistance	8,5 kN/m	≥ 5 kN/m	5.8.2
	Abrasion resistance	88 mm ³	≤ 250 mm ³	5.8.3
	• relative volume loss			
	Flexion resistance	1,0 mm	≤ 4 mm	5.8.4
	• Notches increase after 30.000 cycles			
	• Hydrolysis	2,0 mm	≤ 6 mm	5.8.5
	Notches increase after 150.00 cycles	N/A	≥ 4 N/mm; (*) ≥ 3 N/mm with sole ripping	5.8.6
	(HRO) Contact heat resistance (300°C)	N/A	No damage (melting, breaking)	6.4.1
(FO) Fuel resistance (volume changes)	4 %	≤ 12%	6.4.2	

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