

TECHNICAL SHEET

Article: **B0677 MARATHON ESD**
 Norm: **UNI EN ISO 20345:2012**
 Safety Class: **S3 ESD SRC**
 Footwear height: **Mod. A, H 81 mm (< 113 mm; Rif. EN ISO 20345 - 5.2.2)**
 Width: **11**

Construction: **410g**
STROBEL; INJECTED BIDENSITY SOLE, DRY'N Air with air recycling
 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: **Building, light industry, services, automotive, automated lines, handicraft.**



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)	1,34 x 10 ⁷ Ω	< 1,00 x 10 ⁸ Ω	CEI EN 61340-5-1
	Sole electrical transversal resistance (footwear resistance)	1,97 x 10 ⁷ Ω	≤ 1,00 x 10 ⁸ Ω	CEI EN 61340-5-1
	Chargeability	< 20 V	< 100 V	CEI EN 61340-5-1

Entire footwear: components				
Matériaux	Description	Valeur	Requis minimum	EN 20345
Metal-free SLIMCAP toe-cap	Impact resistance(200 J) • Free height after impact	16,5 mm	≥14 mm	5.3.2.3
	Compression resistance (15 kN) • Free height after compression	20,5 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°)	0,48 0,45 0,22 0,20	≥ 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 (P)	Puncture resistance	No perforation	≥ 1100 N	6.2.1.1.2
Foot bed (A)	Antistatic properties • Electrical resistance	dry 4,07 x 10 ⁸ Ω humid 1,86 x 10 ⁸ Ω	≥ 10 ⁵ Ω , ≤ 10 ⁹ Ω ≥ 10 ⁵ Ω , ≤ 10 ⁹ Ω	6.2.2.2 6.2.2.2
Sole/Upper Heat (HI) Cold (CI)	Thermal insulation • Insole temperature increase • Insole temperature decrease	N/A N/A	≤ 22°C ≤ 10°C	6.2.3.1 6.2.3.2
Heel (E)	Shock-absorption in the heel region	34 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 ISO 20345
High abrasion resistant fabric	Tear resistance	104 N	≥ 120 N	5.4.3
	Traction resistance	N/A	≥ 15 N/mm ²	5.4.4
	Water steam permeability	4,9 mg/cm ² h	≥0.8 mg/cm ² h	5.4.6
	pH value	N/A	≥ 3,2	5.4.7
	Chromium VI	N/A	Not detectable	5.4.9
	Water passed	0,00g	≤ 0.2 g	6.3
	Water absorption	12%	≤ 30%	6.3

Lining				
Component	Description	Value	Norm Requirements	EN ISO 20345
3D hi-tech fabric	Tear resistance	47 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
			No holes till 25.600 cycles	
	Water steam release	21,1 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				
Matériaux	Description	Valeur	Requis minimum	EN 20345
Fresh'n Flex	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 ISO 20345
Dry'n air	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

Semelle				
Component	Description	Value	Norm Requirements	EN ISO 20345
PU Midsole	Sole thickness without profiles	7,5 mm	≥ 4 mm	5.8.1.1
	Profile height	4,5 mm	≥ 2,5 mm	5.8.1.3
	Tear resistance	6,2 kN/m	≥ 5 kN/m	5.8.2
	Abrasion resistance • relative volume loss	97 mm ³	≤ 250 mm ³	5.8.3
Outsole TPU SKIN: (TPU high density)	Flexion resistance			
	Notches increase after 30.000 cycles •	2,0 mm	≤ 4 mm	5.8.4
	Notches increase after 150.00 cycles			
	Tread- Midsole detachment • (HRO) Contact heat resistance (300°C)	3,0 mm	≤ 6 mm	5.8.5
	(FO) Fuel resistance (volume changes)			
	Sole thickness without profiles	N/A	≥ 4 N/mm; (*) ≥ 3 N/mm with sole ripping	5.8.6
Profile height	N/A	No damage (melting, breaking)	6.4.1	
Tear resistance	6 %	≤ 12%	6.4.2	

Date: 02/08/2019

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