

## TECHNICAL SHEET



Article: **BO670 ATTITUDE**  
Norm: **UNI EN ISO 20345:2012**  
Safety Class: **S1 P SRC**

Footwear height: **Mod. A, H 81 mm (< 113 mm; Ref. EN 20345-5.2.2)**

Width: **10**

Construction: **STROBEL; INJECTED BIDENSITY 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: **Building, light industry, services, automotive, automated lines.**

Entire footwear: components				
Component	Description	Value	Norm Requirements	EN ISO 20345
Metal-free SLIMCAP toe-cap	Impact resistance (200 J) • Free height after impact	14,0mm	≥ 14 mm	5.3.2.3
	Compression resistance (15 kN) • Free height after compression	14,5mm	≥ 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°)	0,38 0,32 0,18 0,13	≥ 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
Footbed (A)	Antistatic properties • Electrical resistance	Dry: 8,10 x 10 <sup>8</sup> Ω Humid: 2,23 x 10 <sup>8</sup> Ω	≥ 10 <sup>5</sup> Ω, ≤ 10 <sup>9</sup> Ω ≥ 10 <sup>5</sup> Ω, ≤ 10 <sup>9</sup> 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	33 J	≥ 20 J	6.2.4
(WR)	Water resistance (Water absorption)	N/A	≤ 3 cm <sup>2</sup>	6.2.5
(M)	Metatarsal protection	N/A	≥ 40 mm	6.2.6

Upper				
Component	Description	Value	Norm Requirements	EN ISO 20345
Suede leather	Tear resistance	198 N	≥ 120 N	5.4.3
	Traction resistance	21 N/mm <sup>2</sup>	≥ 15 N/mm <sup>2</sup>	5.4.4
	Water steam permeability	3,5 mg/cm <sup>2</sup> h	≥ 0.8 mg/cm <sup>2</sup> h	5.4.6
	pH value	4,05	≥ 3,2	5.4.7
	Chromium VI	Not detected	Not detectable	5.4.9
	Water passed	N/A	≤ 0.2 g	6.3
	Water absorption	N/A	≤ 30%	6.3

Lining				
Component	Description	Value	Norm Requirements	EN ISO 20345
Tessuto 3D hi-tech	Tear resistance	45 N	≥ 15 N	5.5.1
	Abrasion resistance	<ul style="list-style-type: none"> <li>Dry : the surface shows no holes</li> <li>humid: the surface shows no holes</li> </ul>	No holes till 51.200 cycles	5.5.2
	Water steam release	21,0 mg/cm <sup>2</sup> h	≥ 2,0 mg/cm <sup>2</sup> 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 ISO 20345
Fresh'nFlex	Thickness	3,7 mm	≥ 2,0 mm	5.7.1
	pH value	N/A	Not detectable	5.7.2
	Water absorption	82 mg/cm <sup>2</sup>	≥ 70 mg/cm <sup>2</sup>	5.7.3
	Water release	90 %	≥ 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 <sup>2</sup>	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

Sole					
Component	Description	Value	Norm Requirements	EN ISO 20345	
PU Midsole Outsole TPU SKIN: (TPU high density)	Sole thickness without profiles	6 mm	≥ 4 mm	5.8.1.1	
	Profile height	2,7 mm	≥ 2,5mm	5.8.1.3	
	Tear resistance	5,7 kN/m	≥ 5 kN/m	5.8.2	
	Abrasion resistance	<ul style="list-style-type: none"> <li>relative volume loss</li> </ul>	38 mm <sup>3</sup>	≤ 250 mm <sup>3</sup>	5.8.3
	Flexion resistance	<ul style="list-style-type: none"> <li>Notches increase after 30.000 cycles</li> </ul>	1,8 mm	≤ 4 mm	5.8.4
	Notches increase after 150.00 cycles	2 mm	≤ 6 mm	5.8.5	
	Tread- Midsole detachment	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)	0,7 %	≤ 12%	6.4.2	

Date: 02/08/2019

Copy in accordance with the Italian sheet