

## TECHNICAL SHEET



Article:	<b>B0953B CURSA ESD</b>
Norm:	<b>UNI EN ISO 20345:2012</b>
Safety Class:	<b>S1P SRC ESD</b>
	<b>CEI EN 61340-5-1:2008, CEI EN 61340-4-5 :2006 and CEI EN 61340-4-3:2002,</b>
	<b>Environmental class 1</b>
	<b>(T=23°C, 12% Relative Humidity)</b>
Footwear height:	<b>Mod. A, H 99 mm (&lt; 113 mm; Ref. EN 20345-5.2.2)</b>
Width:	<b>12</b>
Construction:	<b>STROBEL; PU MONODENSITY SOLE ESD</b>
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:	<b>Electronic (EPA=Electrostatic protected areas ESD), automotive, automated lines, light industry, services.</b>

### ESD Protection (Electrostatic discharges) for electronic devices

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

Environment 1 (Temperature = 23±2°C; Relative Humidity = 12±3%)



Component	Description	Value	Norm Requirements	Norm
Entire footwear	Total resistance footwear/ground (footwear worn on a metal ground)	1,95 x 10 <sup>7</sup> Ω	< 3,5 x 10 <sup>7</sup> Ω	<b>CEI EN 61340-5-1</b>
	Sole electrical transversal resistance (footwear resistance)	8,85 x 10 <sup>7</sup> Ω	≥ 10 <sup>5</sup> Ω and ≤ 10 <sup>8</sup> Ω	<b>CEI EN 61340-4-3</b>

Entire footwear: components				
Component	Description	Value	Norm Requirements	EN 20345
Metal-free SLIMCAP toe-cap	Impact resistance(200 J) • Free height after impact	14,0 mm	≥ 14 mm	5.3.2.3
	Compression resistance (15 kN) • Free height after compression	14,5 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
Footbed (A)	Antistatic properties • Electrical resistance	Dry: 4,08 x 10 <sup>8</sup> Ω Humid: 1,8 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)	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	35 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 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 20345
3D hi-tech fabric	Tear resistance	45 N	≥ 15 N	5.5.1
	Abrasion resistance	• Dry :the surface shows no holes	No holes till	5.5.2
			51.200 cycles	
		• humid: the surface shows no holes	No holes till	5.5.2
			25.600 cycles	
	Water steam release	21,0mg/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	

<b>Insole</b>				
<b>Component</b>	<b>Description</b>	<b>Value</b>	<b>Norm Requirements</b>	<b>EN 20345</b>
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 <sup>2</sup>	≥ 70 mg/cm <sup>2</sup>	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

<b>Removable footbed</b>				
<b>Component</b>	<b>Description</b>	<b>Value</b>	<b>Norm Requirements</b>	<b>EN 20345</b>
Dry'n air 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 <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

<b>Sole</b>				
<b>Component</b>	<b>Description</b>	<b>Value</b>	<b>Norm Requirements</b>	<b>EN 20345</b>
PU Outsole Monodensity	Sole thickness without profiles	6,5 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	100 mm <sup>3</sup>	≤ 250 mm <sup>3</sup>	5.8.3
	• relative volume loss			
	Flexion resistance	2,1 mm	≤ 4 mm	5.8.4
	• Notches increase after 30.000 cycles			
	• Hydrolysis	3 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)	6 %	≤ 12%	6.4.2	

Issued by: Resp. technician Eng. C. De Luca

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