

## TECHNICAL SHEET



Article:	<b>B0952 PULSAR</b>
Norm:	<b>UNI EN ISO 20345:2012</b>
Safety Class:	<b>S1 P SRC</b>
Footwear height:	<b>Mod. A, H 99 mm (&lt; 113 mm, Rif. EN 20345-5.2.2)</b>
Width:	<b>12</b>
Construction:	<b>STROBEL; PU SOLE monodensity</b>
Cleaning and maintenance:	<i>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.</i>
Suggested fields:	<b>Mechanics, buildings, leight industry, craftsman, automotive, assembly lienes.</b>

Entire footwear: components				
Component	Description	Value	Norm Requirements	EN 20345
Composit toe-cap Slimcap	Impact resistance (200 J)	14,0 mm	≥ 14 mm	5.3.2.3
	• Free height after impact			
Sole (SRC)	Compression resistance (15 kN)	14,5 mm	≥ 14 mm	5.3.2.4
	• Free height after compression			
Sole (SRC)	Slip resistance			
	• SRA – sole (entire sole)	0,48	≥ 0,32	5.3.5.4
	• SRA – heel (angle 7°)	0,45	≥ 0,28	5.3.5.4
	• SRB – sole (entire sole)	0,22	≥ 0,18	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 4,0 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
Sole/Upper Heat (HI) Cold (CI)	Thermal insulation			
		• Insole temperature increase	N/A	≤ 22°C
Heel (E)	Shock-absorption in the heel region			
		• Insole temperature release	6,5	≤ 10°C
(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
Tissu high tech	Tear resistance	245 N	≥ 120 N	5.4.3
	Traction resistance	N/A	≥ 15 N/mm <sup>2</sup>	5.4.4
	Water steam permeability	2,0 mg/cm <sup>2</sup> h	≥ 0.8 mg/cm <sup>2</sup> h	5.4.6
	pH value	N/A	≥ 3,2	5.4.7
	Chromium VI	N/A	Non 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	<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	Non detectable	5.5.4
	Chromium VI	N/A	Non detectable	5.5.5

Insole				
Component	Description	Value	Norm Requirements	EN 20345
Fresh'n Flex	Thickness	3,7 mm	≥ 2,0 mm	5.7.1
	pH value	N/A	Non 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 20345
Anatomical, breathable, textile and expanded polymeric material	Thickness	3,0±0,5 mm	N/A	5.7.1
	pH value	N/A	Non 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	Non detectable	5.7.5

Suola					
Component	Description	Value	Norm Requirements	EN 20345	
PU monodensity sole	Sole thickness without profile	6,5 mm	≥ 4 mm	5.8.1.1	
	Profile height	4,5 mm	≥ 2,5mm	5.8.1.3	
	Tear resistance	6,2 kN/m	≥ 5 kN/m	5.8.2	
	Abrasion resistance	<ul style="list-style-type: none"> <li>relative volume loss</li> </ul>	100 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>	2,1 mm	≤ 4 mm	5.8.4
		<ul style="list-style-type: none"> <li>Hydrolysis</li> </ul>	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

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