

## TECHNICAL SHEET



Article:	<b>B0537 LITIO</b>
Norm:	<b>UNI EN ISO 20345:2012</b>
Safety class:	<b>S2 SRC</b>
Footwear height:	<b>Mod. A, H 77 mm (&lt;113 mm, Rif. EN ISO 20345-5.2.2)</b>
Width:	<b>11</b>
Construction:	<b>STROBEL; DOUBLE DENSITY INJECTED SOLE - LIFE PLUS PU/TPU SKIN</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>Food industry, chemical-pharmaceutical industry.</b>

Entire footwear: components				
Component	Description	Value	Norm requirements	EN 20345
Steel toe-cap	Impact resistance (200 J)	14 mm	≥ 14 mm	5.3.2.3
	• Free height after impact			
	Compression resistance (15 kN)	15 mm	≥ 14 mm	5.3.2.4
	• Free height after compression			
Sole (SRC)	Slip resistance			
	• SRA – sole (entire sole)	0,42	≥ 0,32	5.3.5.4
	• SRA – heel (angle of 7°)	0,40	≥ 0,28	5.3.5.4
	• SRB – sole (entire sole)	0,19	≥ 0,18	5.3.5.4
	• SRB – heel (angle of 7°)	0,14	≥ 0,13	5.3.5.4
(P)	Puncture resistance	N/A	≥ 1100 N	6.2.1.1.2
Footbed (A)	Antistatic properties			
	• Electrical resistance	Dry: 6,25 x 10 <sup>8</sup> Ω Humid: 2,43 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	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 20345
Water-resistant	Tear resistance	110 N	≥ 60 N	5.4.3
	Traction resistance	N/A	≥ 15 N/mm <sup>2</sup>	5.4.4
Microfibre	Water steam permeability	1,9 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	Not detectable	5.4.9
	Water passed	0,0 g	≤ 0,2 g	6.3
	Water absorption	23 %	≤ 30%	6.3

Lining				
Component	Description	Value	Norm requirements	EN 20345
3D hi-tech fabrics	Tear resistance	45 N	≥ 15 N	5.5.1
	Abrasion resistance	• Dry: the surface shows no holes	No holes till 51.200 cycles	5.5.2

	• Humid: the surface shows no holes	No holes till 25,600 cycles	5.5.2
Water-steam permeability	21 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 20345
TNT	Thickness	2,5 mm	≥ 2,0 mm	5.7.1
	pH value	N/A	Not detectable	5.7.2
	Water absorption	95 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	Damages ≤ to normsreference	5.7.4.1
	Chromium VI	N/A	Not detectable	5.7.5

Removablefootbed				
Component	Description	Value	Norm requirements	EN 20345
Anatomical, breathable, textile and expanded polymeric material	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	5.7.4.2
	Chromium VI	N/A	Not detectable	5.7.5

Sole				
Component	Description	Value	Norm requirements	EN 20345
PU Midsole;	Sole thickness without profiles	8 mm	≥ 4 mm	5.8.1.1
	Profile height	4,5 mm	≥ 2,5mm	5.8.1.3
	Tear resistance	5,6 kN/m	≥ 5 kN/m	5.8.2
TPU SKIN	Abrasion resistance	105 mm <sup>3</sup>	≤ 250 mm <sup>3</sup>	5.8.3
	• Relative volume loss			
Outsole (high density TPU sole)	Flexion resistance	2,0 mm	≤ 4 mm	5.8.4
	Hydrolysis	1,0 mm	≤ 6 mm	5.8.5
	• Notches increase after 30.000 cycles			
	• Notches increase after 150.00 cycles			
	Outsole-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 variations)	0,8 %	≤ 12%	6.4.2

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