

## TECHNICAL SHEET



Article:  
Norm:  
Safety Class:  
Footwear height:  
Width:  
Construction:  
Cleaning and maintenance:

**B0473 METATARSAL**  
**UNI EN ISO 20345:2011**  
**S3 M SRC**  
**Mod. B, H 113 mm (<113 mm; Rif. EN 20345-5.2.2)**  
**11**

**STROBEL; PU/GUM SOLE**

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:

**Mechanic, Construction, light industry, services, buildings, big plants, handicraft.**

Entirefootwear: components				
Component	Description	Value	Norm Requirements	EN 20345
Steel	Impact resistance (200 J)			
Toe-cap	<ul style="list-style-type: none"> <li>Free height after impact</li> </ul>	15 mm	≥ 14 mm	5.3.2.3
	<ul style="list-style-type: none"> <li>Compression resistance (15 kN)</li> <li>Free height after compression</li> </ul>	15,5 mm	≥ 14 mm	5.3.2.4
Sole (SRC)	Slip resistance			
	<ul style="list-style-type: none"> <li>SRA – sole (entire sole)</li> </ul>	0,40	≥ 0,32	5.3.5.4
	<ul style="list-style-type: none"> <li>SRA – heel (angle of 7°)</li> </ul>	0,38	≥ 0,28	5.3.5.4
	<ul style="list-style-type: none"> <li>SRB – sole (entire sole)</li> </ul>	0,18	≥ 0,18	5.3.5.4
	<ul style="list-style-type: none"> <li>SRB – heel (angle of 7°)</li> </ul>	0,15	≥ 0,13	5.3.5.4
Steel sheet (P)	Puncture resistance	1200 N	≥ 1100 N	6.2.1.1.2
Footbed (A)	Antistatic properties			
	<ul style="list-style-type: none"> <li>Electrical resistance</li> </ul>	Dry: 5,84 x 10 <sup>8</sup> Ω Humid: 1,28 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	Thermal insulation			
Heat (HI)	<ul style="list-style-type: none"> <li>Insole temperature increase</li> </ul>	N/A	≤ 22°C	6.2.3.1
Cold (CI)	<ul style="list-style-type: none"> <li>Insole temperature decrease</li> </ul>	N/A	≤ 10°C	6.2.3.2
Heel (E)	Shock-absorption in the heel region	36 J	≥ 20 J	6.2.4
(WR)	Water resistance (water absorption)	N/A	≤ 3 cm <sup>2</sup>	6.2.5
(M)	Metatarsal protection	40,50 mm	≥ 40 mm	6.2.6

Upper				
Component	Description	Value	Norm requirements	EN 20345
Full grain	Tear resistance	195 N	≥ 120 N	5.4.3
	Traction resistance	N/A	≥ 15 N/mm <sup>2</sup>	5.4.4
	Water steam permeability	2,2 mg/cm <sup>2</sup> h	≥ 0,8 mg/cm <sup>2</sup> h	5.4.6
	pH value	4,1	≥ 3,2	5.4.7
	Chromium VI	Not detected	Not detectable	5.4.9
	Water passed	0,2 g	≤ 0.2 g	6.3
	Water absorption	8%	≤ 30%	6.3

Lining				
Component	Description	Value	Norm Requirements	EN 20345
3D Hi tech Fabric	Tear Resistance	30 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	7,2 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 mm	≥ 2,0 mm	5.7.1
	pH value	N/A	Not detectable	5.7.2
	Water absorption	121 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

Removable footbed				
Component	Description	Value	Norm requirements	EN 20345
Anatomical, breathable textile and expanded polymer 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	10 mm	≥ 4 mm	5.8.1.1
	Profile height	4 mm	≥ 2,5 mm	5.8.1.3
	Tear resistance	5,5 kN/m	≥ 5 kN/m	5.8.2
TPU SKIN	Abrasion resistance	<ul style="list-style-type: none"> <li>Relative volume loss</li> </ul>	≤ 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>	≤ 4 mm	5.8.4
Outsole (High density TPU)	Hydrolysis	<ul style="list-style-type: none"> <li>Notches increase after 150.00 cycles</li> </ul>	≤ 6mm	5.8.5
	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)	0,5 %	≤ 12%	6.4.2

Date: 02/04/2013

Issued by: Resp. technician Eng. A. TERLIZZI

Signature: 