

## TECHNICAL SHEET

**Article:** B1611 T-MASSIVE

**Norm:** EN ISO 20345:2022

**Safety Class:** S3S HRO CI HI LG SC FO SR

<b>Sole</b>	S60 BLACK
<b>Weight, size 42:</b>	840 g
<b>Footwear height:</b>	190 mm
<b>Width:</b>	12
<b>Construction / Sole:</b>	STROBEL; double density PU/Rubber injected outsole
<b>Anti-perforation insert</b>	Fortrex Insert
<b>Insole:</b>	Non-woven fabric
<b>Footbed supplied:</b>	Dry'n Air Omnia
<b>Other usable Footbeds (certified):</b>	Dry'n Air Gel; Dry'n Air Scan&Fit Omnia; Secosol; Secosol Dynamic



## Entire footwear: protections

Component	Description	Value	Minimum Requirement	Norm
SlimCap toe-cap	Impact Resistance (200J)	15,0 mm	≥ 14,0 mm	5.3.2.3
	Compression Resistance (15 kN)	15,5 mm	≥14,0 mm	5.3.2.4
Outsole (SR)	Slip Resistance 20345:2022			
	•Ceramic + Det. - Hill	0,47	≥ 0,31	5.3.5.2
	•Ceramic + Det. + Tip	0,38	≥ 0,36	5.3.5.2
	•Ceramic + Glycerin (SR) - Hill	0,31	≥ 0,19	6.2.10.1
Outsole (SRC)	Slip resistance 20345:2011			
	•SRA – Hill (angle of 7°)	0,45	≥ 0,28	5.3.5.2
	•SRA – sole (full sole)	0,50	≥ 0,32	5.3.5.2
	•SRB – Hill (angle of 7°)	0,20	≥ 0,13	5.3.5.3
Fortrex	•SRB – Sole (Full sole)	0,26	≥ 0,18	5.3.5.3
	Puncture resistance 20345:2011	No Drilling	No drilling a ≥ 1100N	6.2.1.1.1
Fortrex (PS)	Puncture resistance 20345:2022	1418 N	Average value ≥ 1100N; Each value ≥ 950N	6.2.1.1.4
Thermal insulation	• Insole Temp. Increase (HI)	11,0 °C	≤ 22 °C	6.2.3.1
	• Decreased Insole Temp. (CI)	6,0 °C	≤ 10°C	6.2.3.2
Energy absorption (E)	Shock-absorption in the heel region	30 J	≥ 20 J	6.2.4
(SC)	•Abrasion resistance of the toe cover	Conforme	After 8000 cycles, the SC has no holes	6.2.9

## Upper

Materials	Description	Value	Minimum Requirement	Norm
Full grain waxy leather	Tear resistance	216 N	≥ 120 N	5.4.3
	Traction resistance	N/A	≥ 15 N/mm <sup>2</sup>	5.4.4
	Water steam permeability	1,8 mg/cm <sup>2</sup> h	≥ 0,8 mg/cm <sup>2</sup> h	5.4.6
	Water steam coefficient	17,4 mg/cm <sup>2</sup>	≥ 15mg/cm <sup>2</sup>	5.4.6
	Chromium VI content (if leather)	Not detectable	Not detectable	6.11
	Water passed	0,0 g	≤ 0,2 g	6.3
	Water absorption	21 %	≤ 30%	6.3

## Lining

Materials	Description	Value	Minimum Requirement	Norm
Hi-tech 3D fabric	Tear resistance	47 N	≥ 15 N	5.5.1
	Abrasion resistance	• No dry hole	No holes before 51,200 cycles	5.5.2
		• No hole in humid environment	No holes before 25,600 cycles	5.5.2
	Water steam permeability	21,1 mg/cm <sup>2</sup> h	≥ 2,0 mg/cm <sup>2</sup> h	5.5.3
	Chromium VI content (if leather)	N/A	Not detectable	5.5.5

## Sole

Materials	Description	Value	Minimum Requirement	Norm
Double Density Sole	Profile height	5,1 mm	≥ 2,5 mm	5.8.1.3
	Tear resistance	10,8 kN/m	≥ 8 kN/m	5.8.2
	Abrasion resistance	128 mm <sup>3</sup>	≤ 150 mm <sup>3</sup>	5.8.3
	Notches increase after 30.000 cycles	1,9 mm	≤ 4,0 mm	5.8.4
	Notches increase after 150.00 cycles (hydrolysis)	3,2 mm	≤ 6,0 mm	5.8.5
	Tread- Midsole detachment	4,3 * N/mm	≥ 4N/mm; ≥ 3 mm with sole tear*	5.8.6
	HRO Contact heat resistance (300°C)	No damage	No damage (melting, breaking)	6.4.1
	FO Fuel resistance (volume changes)	9 %	≤ 12%	6.4.2
	(LG) Geometrical Prescriptions 20345:2022			6.4.3

Issued by: Innovation Director Ing. Cataldo De Luca

Signature



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