

TECHNICAL SHEET



Article:	B0888 BE-STRONG TOP
Norm:	UNI EN ISO 20345:2012
Safety Class:	S3 HRO CI HI SRC
Footwear height:	Mod. B, H 140 mm (≥113 mm; Rif. EN 20345-5.2.2)
Width:	12
Construction:	STROBEL; DUAL DENSITY
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:	Construction, agriculture, miner, extractive, heavy industry, light industry, shipbuilding, big plants, handicraft.

Entire footwear: components				
Component	Description	Value	Norm Requirements	EN 20345
Metal-free	Impact resistance (200 J)			
SLIMCAP toe-cap	<ul style="list-style-type: none"> Free height after impact 	14,5mm	≥ 14 mm	5.3.2.3
	<ul style="list-style-type: none"> Compression resistance (15 kN) Free height after compression 	14,5mm	≥ 14 mm	5.3.2.4
Sole (SRC)	Slip resistance			
	<ul style="list-style-type: none"> SRA – sole (entire sole) 	0,62	≥ 0,32	5.3.5.4
	<ul style="list-style-type: none"> SRA – heel (angle of 7°) 	0,53	≥ 0,28	5.3.5.4
	<ul style="list-style-type: none"> SRB – sole (entire sole) 	0,31	≥ 0,18	5.3.5.4
	<ul style="list-style-type: none"> SRB – heel (angle of 7°) 	0,27	≥ 0,13	5.3.5.4
Fresh'nFlex(P)	Puncture resistance	No perforation	≥ 1100 N	6.2.1
Footbed (A)	Antistatic properties			
	<ul style="list-style-type: none"> Electrical resistance 	Dry 7,28 x 10 ⁸ Ω	≥ 10 ⁵ Ω , ≤ 10 ⁹ Ω	6.2.2.2
		Humid 1,34 x 10 ⁸ Ω	≥ 10 ⁵ Ω , ≤ 10 ⁹ Ω	6.2.2.2
Sole/upper	Thermal insulation			
Heat (HI)	<ul style="list-style-type: none"> Insole temperature increase 	12,5° C	≤ 22°C	6.2.3.1
Cold (CI)	<ul style="list-style-type: none"> Insole temperature decrease 	6,5°C	≤ 10°C	6.2.3.2
Heel (E)	Shock-absorption in the heel region	31 J	≥ 20 J	6.2.4
(WR)	Water resistance (water absorption)	N/A	≤ 3 cm ²	6.2.5
(M)	Metatarsal protection	N/A	≥ 40 mm	6.2.6

Upper				
Component	Description	Value	Norm requirements	EN 20345
	Tear resistance	133 N	≥ 120 N	5.4.3
Full grain leather	Traction resistance	N/A	≥ 15 N/mm ²	5.4.4
	Water steam permeability	4,5 mg/cm ² h	≥ 0,8 mg/cm ² h	5.4.6
	pH value	4	≥ 3,2	5.4.7
	Chromium VI content	N/A	Not detectable	5.4.9
	Water passed	0,0 g	≤ 0.2 g	6.3
	Water absorption	8,4%	≤ 30%	6.3

Lining				
Component	Description	Value	Norm Requirements	EN 20345
3D Fabric	Tear Resistance	45 N	≥ 15 N	5.5.1
	Abrasion resistance	<ul style="list-style-type: none"> Dry: the surface shows no holes 	No hole till 51.200 cycles	5.5.2
		<ul style="list-style-type: none"> Humid: the surface shows no holes 	No hole till 25.600 cycles	5.5.2
	Water steam release	21 mg/cm ² h	≥ 2,0 mg/cm ² h	5.5.3
	pH value	N/A	Not detectable	5.5.4
	Chromium VI content	N/A	Not detectable	5.5.5

Insole				
Component	Description	Value	Norm requirements	EN 20345
Fresh'nFlex	Thickness	3,7 mm	≥ 2,0 mm	5.7.1
	pH value	N/A	Not detectable	5.7.2
	Water absorption	82 mg/cm ²	≥ 70 mg/cm ²	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
Breathable technical 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 through the holes	Permeable or ≥ 70mg/cm ²	5.7.3
	Water release	Permeable through the holes	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; Rubber Outsole	Sole thickness without profiles	7,1mm	≥ 4 mm	5.8.1.1	
	Profile height	3,5mm	≥ 2,5 mm	5.8.1.3	
	Tear resistance	9,5 kN/m	≥ 8 kN/m	5.8.2	
	Abrasion resistance	<ul style="list-style-type: none"> Relative volume loss 	110 mm ³	≤ 250 mm ³	5.8.3
	Flexion resistance	<ul style="list-style-type: none"> Notches increase after 30.000 cycles 	2,2 mm	≤ 4 mm	5.8.4
	Hydrolysis	<ul style="list-style-type: none"> Notches increase after 150.00 cycles 	3,2 mm	≤ 6 mm	5.8.5
	Sole thickness without profile	3,7 *	≤ 4 N/mm; (*) ≤ 3 N/mm with sole ripping	5.8.6	
	(HRO) (Contact heat resistance 300°C)	No damage	No damage (melting, breaking)	6.4.1	
	(FO) Fuel resistance (volume changes)	4,6 %	≤ 12%	6.4.2	

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