

Article	BLACKFIRE HIGH ESD
Category	S1 P SRC, ESD
Sizes	36 - 48
Width	11
Weight (half pair, sz 42)	585 gr
Metal free	Yes
Certification	CE



## E.LITE collection

<b>UPPER</b>	suede and abrasion resistant leather with nylon inserts
<b>LINING</b>	extremely breathable polyamide lining. It absorbs moisture quickly and ensures a greater comfort during the whole working day. Optimal resistance to abrasion and anti-bacterial
<b>TOE CAP</b>	non-magnetic toecap, from composite materials. 50% lighter than steel
<b>ANTI-PERFORATION MIDSOLE</b>	non-magnetic, perforation resistance composite fabric plate. It is 40% lighter and more flexible than steel plate and at the same time guarantees an optimal protection covering 100% of the foot surface. Certified EN 12568:2010
<b>FOOTBED</b>	insole PU 10mm expanded, covered with antibacterial fabric
<b>SOLE</b>	PU double density with optimal absorption of strains on the vertebral column thanks to the use of expanded PU midsole. Maximum stability

	Requirements	Test Results
<b>UPPER</b>	<b>EN ISO 20345:2011</b>	
Water Vapour Permeability	mg/cmq* <sup>h</sup> ≥ 0,8	5,1
Water Vapour Coefficient	mg/cmq ≥ 15	47,8
<b>LINING</b>		
Water Vapour Permeability	mg/cmq* <sup>h</sup> ≥ 2	11,1
Water Vapour Coefficient	mg/cmq ≥ 20	97,7
<b>TOECAP</b>		
Impact resistance: clearance under the toecap	mm ≥ 14	14
Compression resistance: clearance under the toecap	mm ≥ 14	14
<b>ANTI-PERFORATION MIDSOLE</b>		
Penetration resistance (EN ISO 12568:2010)	N ≥ 1100	≥ 1100
<b>ELECTRICAL RESISTANCE</b>		
- wet condition (85% relative humidity)	MΩ ≥ 0,1	300
- dry condition (30% relative humidity)	MΩ ≤ 1000	650
<b>ESD features (EN 61340-5-1)</b>		
Ground electrical resistance	Ω ≤ 3,5 x 10 <sup>7</sup>	3,4 x 10 <sup>7</sup>
Transversal sole electrical resistance	Ω ≥ 1x10 <sup>5</sup> R ≤ 1x10 <sup>8</sup>	9 x 10 <sup>7</sup>
<b>SOLE</b>		
Abrasion resistance: relative volume loss	mm <sup>3</sup> ≤ 150	45
Flexing resistance: cut growth	mm ≤ 4	1,5
Resistance to fuel oil: volume increase	% ≤ 12	1,1
Energy absorption of seat region	J ≥ 20	23
Slip resistance on	7° Heel ≥ 0,13	0,15
steel ground with glycerine	Flat ≥ 0,18	0,19
Slip resistance on	7° Heel ≥ 0,28	0,33
ceramics ground with detergent	Flat ≥ 0,32	0,46

**bdry**

**TOP**  
DEFENCE

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TECHNOLOGY