

Product : Safety Shoe
Ref. No. : SHH 1135



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Protection Class:
EN ISO 20345:2011 S1P, CI
EN ISO 20345:2004/A1:2007 SRA



1	Design	Construction Type of Design Seat Region Height of Upper Thread Laces	Direct Moulded PU construction for enhanced strength Design 'B' Closed 120 mm. Size 42. Nylon Silver Thread Tkt. 40 Nylon Silver /Orange/Grey Tkt.40 Black Thin Grey Round 120cm
2	Toe Protection	General Construction Internal Length of Toe Cap Impact Resistance	Toe-caps are incorporated in such a way that they cannot be removed. Footwear is lined in the Toe section. The lining at the edge of toe caps extends to more than 5mm beneath it, and more than 10mm behind it. Made from Steel and Heat Treated. Above 39 mm. When tested at an impact energy of 200 Joules, the clearance under the toe caps at impact is above 14 mm.

3	Sole Protection (Penetration Resistance)	General	The penetration resistant (steel plate 0.8 mm thick) insert shall be of such that the maximum distance between the line represented by the feather edge of the last and edge of the insert is 6.5 mm. In the heel region the maximum distance between the line represented by the feather edge of the last and the insert shall be 17 mm.
		Construction	Made from High Carbon Steel
		Penetration Resistance	Steel Nail should not penetrate at minimum force - 1100 N.
		Corrosion Resistance	Exhibits no more than five areas of corrosion, none of which exceed 2.5 sqmm in area.
		Flex Resistance of penetration resistance inserts	No Sign of cracking after 10,00,000 flex.
4	Upper Leather	Construction	Made from Buff Barton Print Black Leather.
		Thickness	1.8 mm-2.0 mm
		Tear Strength	Above 120 N.
		Tensile Strength	Above 15 N/mm ² .
		WVP & WVC	Above 0.8 mg/cm ² /h. & Above 15.0 mg/cm sq.
		Water Penetration	Water absorption shall be no higher than 30% after 60 min. Water penetration shall not to occur during this period, not exceed 0.2 g after a further 60 min.
		Chrome VI Content	As per EN20345 norms detectable upto 3.0 mg/Kg limit.

5	Tongue	Tear Strength	NA
6	Vamp Lining	Tear Strength Martindale Abrasion Resistance Water vapor Permeability Water vapor co-efficiency	Above 15 N. The lining does not develop holes when exposed to 25,600 dry cycles, and 12,800 wet cycles. Above 2.0 mg/cm ² /h. Above 30 mg/cm ² /h.
7	Shoe Lining	Construction Tear Strength Martindale Abrasion Resistance Water vapor Permeability Water vapor co-efficiency	Non-woven white vamp lining. Above 15 N for Textile The lining does not develop holes when exposed to 25,600 dry cycles, and 12,800 wet cycles. Above 2.0 mg/cm ² /h. Above 20 mg/cm ² /h.
8	Insole	Construction Thickness Water Absorption Desorption Abrasion	Insole (Nonwoven Antistatic Material) is incorporated in such a way that it can not be removed. 2.0 to 2.5 mm. Above 70 %. Above 80 %. No damage to the insole when exposed to 400 cycles.

9	Insock	Material & Colour	Fabtex Black laminated with EVA cushioning.
		Thickness	2.5 -3. mm
		Abrasion Resistance	The lining does not develop holes when exposed to 25,600 dry cycles, and 12,800 wet cycles.
		Water Absorption	Above 70 %.
		Desorption	Above 80 %.
10	Outsole	Construction	Dual Density Polyurethane
		Colour	Outsole : Orange Midsole : Black
		Thickness	Above 6 mm.
		Tear Strength	More than 5 kN/mm.
		Abrasion Resistance	Volume loss is below 250 mm ³ .
		Flexing Resistance (30,000 cycles)	Cut growth is below 4 mm.
		Hydrolysis (150,000 cycles)	Cut growth is below 6 mm.
		Interlayer Bond Strength	Above 4 N/mm & 3N/mm in case of sole tearing.
		Upper Outsole Bond Strength	Above 4 N/mm & 3N/mm in case of Leather tearing.
		Resistance to Fuel Oil	Below 12%. Volume swelling
		Cleated Outsole	More than 45% of fore-part covered with cleats.
11	Antistatic Property		After conditioning in a dry and wet atmosphere, the electrical resistance is above 100 K ohms and below 1000 M ohms.

12	Energy Absorption of seat Region	Above 20 joules
13	Anti Slip Property	SRA as per EN20345 Norms
14	Heat Insulation of Sole Complex	22 °C.(Max) when tested as per EN20345
15	Cold Insulation of Sole Complex	10 °C.(Max) when tested as per EN20345
16	Hot Contact (PU Sole)	No damage to PU sole when exposed to a temperature of 150°C for 1 minute.