

PRODUCT : Safety Shoe
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As Per:
EN ISO 20345:2004
EN ISO 20345/A1:2007 & IS 15298:2002

SL. No.	CLAUSE	DESCRIPTION	SPECIFICATION
1	DESIGN	Construction Seat Region Height of Upper Thread Eyelet Laces	Specially Injection Moulded Construction for enhanced strength. Laces in Black & Red Closed More than 113 mm Nylon 8 D Ring Synthetic, 100 cm Flat, with breaking strength 55-60 kg.
2	TOE PROTECTION	General Construction Internal Length of Toe Cap Impact Resistance Compression Resistance Corrosion Resistance of Toe Caps	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 the toe caps extends to more than 5 mm beneath it, and more than 10 mm behind it. Made from high carbon 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 14.0 mm.. When tested at a compression load of 15 kN, the clearance under the toe caps at impact is - Above 14.0 mm Exhibits less than 2.5 mm square area of corrosion under test conditions.

3	LEATHER UPPER	<p>Construction</p> <p>Thickness</p> <p>Tear Strength</p> <p>Tensile Strength</p> <p>Water Vapour Permeability</p> <p>Water Vapour co-efficiency</p> <p>pH Value</p> <p>Chrome VI Content</p>	<p>Made from Buff Black Leather in Apollo Print.</p> <p>1.8 mm-2.20 mm \pm 0.2 mm</p> <p>Above 120 N.</p> <p>Above 15 N/mm².</p> <p>Above 0.8 mg/cm²/h</p> <p>Above 20.0 mg/cm sq.</p> <p>Above 3.5</p> <p>No harmful chrome content detected</p>
4	TONGUE	<p>Tear Strength</p>	<p>Above 18 N.</p>
5	VAMP LINING	<p>Tear Strength</p> <p>Martindale Abrasion Resistance</p> <p>Water Vapour Permeability</p> <p>Water Vapour co-efficiency</p>	<p>Above 15 N.</p> <p>The lining does not develop holes when exposed to 25,600 dry cycles, and 12,800 wet cycles</p> <p>Above 2.0 mg/cm²/h.</p> <p>Above 30 mg/cm²/h.</p>
6	SHOE LINING	<p>Construction</p> <p>Tear Strength</p> <p>Martindale Abrasion Resistance</p> <p>Water Vapour Permeability</p> <p>Water Vapour co-efficiency</p>	<p>Soft Netlon Black inner lining With Foam Backing</p> <p>Above 15 N.</p> <p>The lining does not develop holes when exposed to 25,600 dry cycles, and 12,800 wet cycles</p> <p>Above 2.0 mg/cm²/h.</p> <p>Above 20 mg/cm²/h.</p>

7	INSOLE	Construction	Insole is incorporated in such a way that it can not be removed.
		Thickness	2.0 mm.
		Water Absorption and Desorption	35 %. 40%
		Abrasion Resistance	No damage to the insole when exposed to 400 cycles.
8	INSOCK	Material & Colour	Soft Netlon Black + 5 mm EVA
		Thickness	Above 2 mm
		Abrasion Resistance	The lining does not develop holes when exposed to 25,600 dry cycles, and 12,800 wet cycles
9	OUTSOLE	Construction	Dual Density Polyurethane
		Colour	Grey Colour Outsole And Black Colour Midsole
		Thickness	Above 6 mm.
		Tear Strength	More than 5 kN/m.
		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
		Resistance to Fuel Oil	Below 12%.
		Cleated Outsole	More than 45% of fore-part covered with cleats. More than 25% of heal portion is covered with Cleats.

10	ANTISTATIC PROPERTY		After conditioning in a dry and wet atmosphere, the electrical resistance is above 100 K ohms and below 1000 M ohms
11	ENERGY ABSORPTION OF SEAT REGION		Above 20 joules.
12	ANTI SLIP PROPERTY		Co-efficient of friction is more than 0.28 for heel region & more than 0.32 for flat region
13	HEAT INSULATION OF SOLE COMPLEX		Below 22 ⁰ C. (The insulation cannot be damaged without damaging the footwear)
14	COLD INSULATION OF SOLE COMPLEX		Below 10 ⁰ C. (The insulation cannot be damaged without damaging the footwear)
15	HOT CONTACT (PU SOLE)		No damage to PU sole when exposed to a temperature of 150 ⁰ C for 1 minute.