TECHNICAL DATA SHEET

PRODUCT : Safety Shoe
REF. NO. : FS 01

DOC. NO.	03.05
ISSUE	01
REVISION	02
DATE	03/09/2010

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

SL. No.	CLAUSE	DESCRIPTION	SPECIFICATION
1	DESIGN	Construction	Specially Injection Moulded Construction for enhanced strength. Laces in Black & Red
		Seat Region	Closed
		Height of Upper	Less than 113 mm
		Thread	Nylon
		Eyelet	6 Nos. Aluminum Passivative
		Laces	Synthetic, 90 cm round, with breaking strength 55-60 kg
2	TOE PROTECTION	General	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.
		Construction	Made from Fibre/ Composite toe
		Internal Length of Toe Cap	Above 39 mm.
		Impact Resistance	When tested at an impact energy of 200 Joules, the clearance under the toe caps at impact is - Above 14.0 mm.

		Compression Resistance	When tested at a compression load of 15 kN, the clearance under the toe caps at impact is - Above 14.0 mm
		Corrosion Resistance of Toe Caps	Exhibits less than 2.5 mm square area of corrosion under test conditions.
3	LEATHER UPPER	Construction	Made from Buff Black Leather in Tango Print.
		Thickness	1.8 mm-2.20 mm ± 0.2 mm
		Tear Strength	Above 120 N.
		Tensile Strength	Above 15 $N/mm^{2.}$
		Water Vapour Permeability	Above 0.8 $mg/cm^2/h$
		Water Vapour co-efficiency	Above 20.0 mg/cm sq.
		pH Value	Above 3.5
		Chrome VI Content	No harmful chrome content detected
4	TONGUE	Tear Strength	Above 36 N.
5	VAMP LINING	Tear Strength	Above 15 N.
		Martindale Abrasion Resistance	The lining does not develop holes when exposed to 25,600 dry cycles, and 12,800 wet cycles
		Water Vapour Permeability	Above 2.0 $mg/cm^2/h$.
		Water Vapour co-efficiency	Above 30 $mg/cm^2/h$.
6	SHOE LINING	Construction	Soft Netlon Black inner lining With Foam Backing
		Tear Strength	Above 15 N.
		Martindale Abrasion Resistance	The lining does not develop holes when exposed to 25,600 dry cycles, and 12,800 wet cycles

		Water Vapour Permeability Water Vapour co-efficiency	Above 2.0 mg/cm^2/h. Above 20 mg/cm^2/h.
7	INSOLE	Construction Thickness Water Absorption and Desorption Abrasion Resistance	Insole is incorporated in such a way that it can not be removed. 2.0 mm. Above 35 %. Above 40% No damage to the insole when exposed to 400 cycles.
8	INSOCK	Material & Colour Thickness Abrasion Resistance	Soft Netlon Black + 5 mm EVA Above 2 mm The lining does not develop holes when exposed to 25,600 dry cycles, and 12,800 wet cycles
9	OUTSOLE	Construction Colour Thickness Tear Strength Abrasion Resistance Flexing Resistance (30,000 cycles) Hydrolysis (150,000 cycles) Interlayer Bond Strength Resistance to Fuel Oil	Dual Density Polyurethane Grey Colour Outsole And Black Colour Midsole Above 6 mm. More than 5 kN/m. Volume loss is below 250 mm^3. Cut growth is below 4 mm. Cut growth is below 6 mm. Above 4 N/mm & 3N/mm in case of sole tearing 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 0.40 for heel region and forepart 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.