

**Technical Specification for Black Leather Boot**

S.N	Parameters	Specification	Remarks	
1	Upper Leather	Material	Full Grain Buffalo Leather	
		Thickness	2 mm ± 0.2 mm	
		Tear Strength	Minimum 45 N/mm	
		Elongation at break	45% to 75 %	
		Tensile Strength	Minimum 20 N/mm <sup>2</sup>	
		Shrinkage Temperature	Minimum 120 degree Celsius	
		Colour Fastness on rubbing	Dry : Minimum 4 Wet : Minimum 4	
		Water Absorbtion Resistant	Maximum 60 % in 2 hours	
2	Toe Cap and Counter	Toe Cap Length	55 mm to 70 mm (Vary according to size of Shoe)	
		Toe Cap Height	2.5 cm ± 2 mm	
		Counter Height	55 mm to 70 mm (Vary according to size of Shoe)	
		Material	Full Grain Plain Leather	
		Tear Strength	Minimum 45 N/mm	
		Elongation at break	45% to 75 %	
		Tensile Strength	Minimum 20 N/mm <sup>2</sup>	
		Shrinkage Temperature	Minimum 120 degree Celsius	
		Colour Fastness on rubbing	Dry : Minimum 4 Wet : Minimum 4	
		Water Absorbtion Resistant	Maximum 60 % in 2 hours	
		Thickness	2 mm ± 0.2 mm	
3	Outer Sole	Material	High Grade Rubber	
		Features	Light Weight, Antiskid, Antisliped, Fuel, Acid, Oil Resistant and Shock Absorber	
			Oil Resistant, Size and Manufacturer name should be engraved/embroided in the sole.	
		Density	1.05 ± 0.1 Gram/cm <sup>3</sup>	
		Slip Resistance	Coefficient of friction :Minimum 0.5 (wet)	
		Oil Resistance	Maximum 12 % increase in Volume	
		Abrasion Resistance	Maximum 150 mm <sup>3</sup>	
		Thickness (outer + Midsole)	Toe : 1.5 cm ± 1 mm	
			Heel: 3 cm ± 1 mm.	
Maximum Height from ground to sole lower part	Toe side : 15 mm ± 2 mm			
	Heel side : 5 mm ± 1 mm			
4	Mid Sole	Material	EVA/ PU	
		Density	0.45 to 0.50 gram/cm <sup>3</sup>	
		Features	Strong bonding between outersole and Midsole	

5	Insole	Material	Plain Soft Leather	
		Thickness	2mm ± 0.1 mm	
		Features	Strong bonding between Insole and Midsole	
6	Insocks	Material	PU laminated with Black polyester	
		Features	Removable, Washable, Antifungal	
		Thickness	3 mm , tolerance ± 10 %	
		Black polyester Fabric	170 ± 5 GSM	
7	Tongue	Leather	Material : Soft Plain Leather	
			Thickness : 2 mm ± 0.1 mm	
			Tear Strength : Minimum 45 N/mm	
			Tensile Strength : Minimum 20 N/mm <sup>2</sup>	
	Features	Stitched to the shaft of shoe upto 4th Eyelet from top The Shape of Tongue must be Curved		
8	Collar	Leather	Structure	PU foam Padded in soft Plain Leather
			Material : Soft Plain Leather	
			Thickness : 1 mm ± 0.1 mm	
			Tear Strength : Minimum 35 N/mm thickness Tensile Strength: Minimum 18 N/mm <sup>2</sup>	
		PU foam	Thickness : 6 mm ± 1 mm Density : 0.35 g/cm <sup>3</sup> to 0.4 g/cm <sup>3</sup>	
Height of Collar	15 mm ± 1 mm			
9	Back Seam	Structure	The upper Leather should be sealed by Soft Plain leather at the back of Shaft	
		Length	From top of Counter to top of collar	
		Width	2 cm ± 1 mm	
		Thickness	1 mm ± 0.1 mm	
		Tear Strength	Minimum 35 N/mm	
Tensile Strength	Minimum 18 N/mm <sup>2</sup>			
10	Lace	Material	Outer Nylon and inside cotton thread	
		Colour	Black	
		Length	160 cm ± 2 cm	
		Shape	Round	
		Diameter	5 mm ± 0.2 mm	
		Tipping	Plastic, 15 mm ± 1mm	
11	Eyelets	Material	Brass	
		Diameter of Eyelets	10 mm ± 0.5	
		Number of Eyelets	9 Pair	
12	Size of Shoe	From 4 to 12 with Medium and Large fitting in each of the Size	As per requirement	
13	Height of Boot	For Size 4	20.5 cm ± 0.5 cm	
		For Size 5	21.5 cm ± 0.5 cm	
		For size 6	22.5 cm ± 0.5 cm	
		For Size 7	23.5 cm ± 0.5 cm	
		For Size 8	24.5 cm ± 0.5 cm	
		For Size 9	25.5 cm ± 0.5 cm	
		For Size 10	26.5 cm ± 0.5 cm	
		For Size 11	27.5 cm ± 0.5 cm	

		For Size 12	28.5 cm ± 0.5 cm	
14	Sewing Thread		Nylon Thread, 3 ply	
15	Colour of Boot		Black	
16	Packing		The Shoe should be delivered in new, Clean and dry condition in pairs suitably tied with laces	
			Each Pair of shoe must be packed in Box with Silica gel inside.	
			Each Box Should have a label printed Name and trade mark of supplier, Date of Manufacture	
			Should provide Extra pair of Lace inside Pack	
17	Features		All the stiches must be seam sealed by an appropriate sealent	
			Toe shape must be Round	
			Looks of Shoe must be attractive	
			Shoe Must be Tackless	
			Brand of Shoe should be labled in	
18	Sample Piece for Testing (Raw Material for above mentioned boot)		Bond Strength between Upper and Sole must be minmum 4 N/mm	
			30 cm × 30 cm x Full Grain Buffalo Leather	
			5 x Eyelets	
			1 pairs x Shoe Lace	
			1 pairs x Insocks	
			1 x Outer and Mid Sole	
			30cm x 30 cm Soft Plain Leather for Back Seam	
			1 x Insole	
19	Test Requirement	Upper Leather and Toe Cap and Counter	30 cm x 30 cm Insole Leather	
			30 x 30 cm Soft Plain Leather for Tongue and Collar	
			Material	
			Thickness	
			Tear Strength	
			Elongation at break	
			Tensile Strength	
			Shrinkage Temperature	
		Colour Fastness on rubbing		
		Water Absorbtion Resistant		
		Outer sole	Slip Resistance	
			Oil Resistance	
			Abrasion Resistance	
			Density	
		Mid Sole	Density	
			Material	
Insole	Material of soft Leather			
Sole	Sole adhesion test minimum 80 kg			
Insocks	Material and density of Insocks			

		Tongue and Collar	Material of soft Leather	
			Thickness of Soft Plain Leather	
			Tear and Tensile Strength of soft Plain Leather	
		Back Seam	Thickness of Leather	
			Tensile Strength	
			Material of Leather	
			Tear Strength	
		PU foam	Density of PU foam for collar and	
20	Standard		ISO or Equivalent	
21	Warranty		Minimum 1 year or provided by OEM whichever is greater	



