

**Technical Specification for Desert Boot**

S.N	Parameters	Specification	Remarks	
1	Upper Leather	Material	Suede Leather	
		Thickness	2 mm $\pm$ 0.2 mm	
		Tear Strength	Minimum 20 N/mm	
		Tensile Strength	Minimum 22 N/mm <sup>2</sup>	
		PH Value	Minimum 3.2	
		Colour Fastness on rubbing	Minimum 4 (Dry and Wet)	
2	Upper Fabric	Material	100 % Nylon laminated with non wicking felt	
		Colour	Beige	
		Property	High abrasion resistance	
		Breathable GSM	230 $\pm$ 10	
		With Felt GSM	430 $\pm$ 10	
		Tearing Strength	Minimum 40 N/mm	
		Abrasion Resistance	Minimum 90000 dry Cycles and 40000 wet cycles	
		Water Repellency	Minimum 4	
		Colour Fastness to Rubbing	Minimum 4	
3	Toe Cap and Counter	Toe Cap Length	55 mm to 70 mm (Vary according to size of Shoe)	
		Toe Cap Height	2.5 cm $\pm$ 2 mm	
		Toe Cap and Counter Puff Material	Composite / Thermoplastic fibre board	
		Counter Height	55 mm to 70 mm (Vary according to size of Shoe)	
		Material	Suede Leather	
		Tear Strength	Minimum 20 N/mm	
		Tensile Strength	Minimum 22 N/mm <sup>2</sup>	
		PH Value	Minimum 3.2	
		Colour Fastness on rubbing	Minimum 4 (Dry and Wet)	
		Thickness (Leather)	2 mm $\pm$ 0.2 mm	
		Material	Double Density Polyurethane (Midsole and Out sole)	
		Technology	Direct Injection and Molded	
		Shock Absorbing heel (Energy Absorption)	Minimum 20 J	

4	Outer Sole	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.	
		Slip Resistance	Coefficient of friction :Minimum 0.35 (wet)	
		Oil Resistance	Maximum 12 % increase in Volume	
		Abrasion Resistance	Maximum 250 mm <sup>3</sup>	
		Thickness (outer + Midsole)	Toe : 1.5 cm ± 1 mm	
			Heel: 3 cm ± 1 mm.	
		Flexing Resistance	Maximum 4 mm	
		Heat Resistance	Minimum 110 degree celsius	
		Tearing Strength	Minimum 8 N/mm	
Bonding between Upper and Sole	Minimum 4 N/mm			
5	Insole	Material	Bonded Synthetic Fibre board Texon	
		Properties	Anti Static, Anti bacterial, Sweat Absorber	
		Thickness	2.5 mm ± 1 mm	
		Features	Strong bonding between Insole and Midsole	
6	Insocks	Material	PU laminated with Beige Colour polyester Fabric	
		Features	Removable, Washable, Antifungal,Sweat absorber, anti bacterial	
		Thickness	3 mm , tolerance ± 10 %	
		Fabric GSM	170 ± 5 GSM	
7	Tongue	Structure	PU foam and Beige Nylon Fabric on both sandwiched together	
		PU foam	Density : 0.3 g/cm <sup>3</sup> to 0.35 g/cm <sup>3</sup>	
		Fabric GSM	230 ± 5 GSM	
		Water Repellent	Minimum 4	
		Tensile Strength	Minimum 25 N/mm <sup>2</sup>	
		Tear Strength	Minimum 35 N/mm	
		Water Repellancy	Minimum 4	
		Colour Fastness to Rubbing	Minimum 4	
		Thickness	7 mm to 8 mm	
		Features	Stitched to the shaft of shoe upto 4th Eyelet from top	
		The Shape of Tongue must be Curved		

8	Collar	Structure	PU foam Padded in Nylon Fabric	
		Colour	Beige	
		Water Repellent :	Minimum 4	
		Tensile Strength	Minimum 25 N/mm <sup>2</sup>	
		Tear Strength	Minimum 35 N/mm	
		Thickness	7 to 8 mm	
		Water Repellancy	Minimum 4	
		Colour Fastness to Rubbing	Minimum 4	
		Height of Collar	15 mm ± 1 mm	
9	Lace	Material	Outer Nylon and inside cotton thread	
		Colour	Beige	
		Length	160 cm ± 2 cm	
		Shape	Round	
		Diameter	5 mm ± 0.2 mm	
		Tipping	Plastic, 15 mm ± 1mm	
10	Eyelets	Material	Brass	
		Diameter of Eyelets	10 mm ± 0.5	
		Number of Eyelets	9 Pair	
11	Size of Shoe	From 4 to 12 with Medium and Large fitting in each of the Size		
12	Height of Boot	For Size 4	8 3/5" ± 2 mm	
		For Size 5	8 4/5" ± 2mm	
		For size 6	9" ± 2 mm	
		For Size 7	9 1/5" ± 2 mm	
		For Size 8	9 2/5" ± 2 mm	
		For Size 9	9 3/5" ± 2 mm	
		For Size 10	9 4/5" ± 2 mm	
		For Size 11	10 " ± 2 mm	
For Size 12	10 1/5" ± 2 mm			
13	Sewing Thread	Nylon Thread, 3 ply		
14	Colour of Boot	Beige		
15	Packing	The Shoe should be delivered in new, Clean and dry condition in pairs suitably tied with laces		
		Each Pair of shoe must in packed in Box with Silica gel inside.		
		Each Box Should have a label printed Name and trade mark of Manufacturer, Date of Manufacture		
		Should provide Extra pair of Lace inside Pack		

16	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 tongue	
			Toe,Counter and Welt must be heat activated (Not solvent, dissolve) Moulded.	
17	Test Requirement	Upper Leather and Toe Cap and Counter	Material	
			Thickness	
			Tear Strength	
			Tensile Strength	
			PH Value	
			Colour Fastness on rubbing	
		Upper Fabric	Material	
			Breathable GSM	
			With Felt GSM	
			Tearing Strength	
			Colour Fastness to Rubbing	
			Abrasion Resistance	
		Outer sole	Water Repellency	
			Slip Resistance	
			Oil Resistance	
			Abrasion Resistance	
			Bonding between Upper and Sole	
			Flexing Resistance	
		Tongue and collar Fabric	Heat Resistance	
			Tearing Strength	
			Water Repellent	
Tensile Strength				
Tear Strength				
18	Standard		ISO or Equivalent	
19	Warranty		Minimum 1 year or provided by OEM whichever is greater	