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उत्पाद मानुयल
SPORTS FOOTWEAR
IS 15844: 2010 के अनुसार

Product MANUAL FOR
SPORTS FOOTWEAR
ACCORDING TO IS 15844: 2010

भारतीय मानक ब्यूरो (अनुरूपता मूल्यांकन) विनियम की स्कीम -I के तहत यह उत्पाद मानुयल प्रमाणीकरण के प्रचलन में रीती और पारदर्शिता के सुसंगिता सुनिश्चित करने के लिए सभी क्षेत्रीय/शाखा कार्यालयों एवं लाईसेंस धारियों द्वारा सन्दर्भ सामग्री के रूप में उपयोग किया जाएगा बीआईएस लाइसेंस /प्रमाण पत्र प्राप्त करने के इच्छुक भावी आवेदकों द्वारा भी इस दस्तावेज का उपयोग किया जा सकता है।

This Product Manual shall be used as reference material by all Regional/Branch Offices & licensees to ensure coherence of practice and transparency in operation of certification under Scheme-I of Bureau of Indian Standards (Conformity Assessment) Regulations, 2018 for various products. The document may also be used by prospective applicants desirous of obtaining BIS certification licence/certificate.

1.	उत्पाद Product	:	IS 15844: 2010
	शीर्षक Title	:	Sports Footwear-Specification
	संशोधन संख्या No. of Amendments	:	02
2.	नमूनाकरण दिशा निर्देश Sampling Guidelines:		
a)	कच्चा माल Raw material	:	Sports footwear shall be made of materials which conform to the requirements stated in Cl 3.4 to Cl 3.12 of IS 15844: 2010.
b)	समूहीकरण दिशा निर्देश Grouping guidelines	:	Please refer Annex A

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c)	नमूने का आकार Sample Size	:	4 pairs of shoes of each variety [3 pairs of shoes for physical testing and one pair for chemical analysis.(test of Chromium VI content of leather lining)] Components to be provided separately if samples for testing cannot be taken out from the product.			
3.	परीक्षण उपकरणों की सूची List of TestEquipment	:	Please refer Annex – B			
4.	निरीक्षण व परीक्षण स्कीम Scheme of Inspection and Testing	:	Please refer Annex – C Note: Please see Cl. 7 of the SIT for applicability of SIT to Small and Micro Scale Enterprises			
5.	एक दिन में संभावित परिक्षण Possible tests in aday :	:	Clause 3.2 Design, 3.3.1 Construction, 3.3.2 Upper to Mid sole Bond Performance, 3.3.3 Sole to Mid sole Bond Performance, Thickness, Tear strength, Tensile properties, pH value Heat resistance shrinkage linear for Midsole material as per Cl. 3.6 (Table 7), Abrasion resistance of Outsole as per Cl. 3.7, Gripping strength of tag and breaking strength of lace as per Cl. 3.10 – Pre conditioned samples to be tested where applicable			
6.	लाइसेंस का कार्यक्षेत्र Scope of the Licence :					
IS 15844: 2010 के अनुसार मानक मुहर का उपयोग करने के लिए लाईसेंस निम्नलिखित कार्यक्षेत्र के लिए प्रदान किया जाता है Licence is granted to use Standard Mark as per IS 15844: 2010 with the following scope:						
	Name of the product		Sports Footwear			
	Category		Low Performance (Casuals) and/or Medium Performance and/or High Performance			
	Materials of various parts		S.No	Part of Footwear	Materials (as applicable	
			i.	Upper	Split/Nubuck/other Leather (Coloured)/ Split/Nubuck/ other Leather (not coloured)/ Synthetic /Textile	
			ii	Midsole	Ethyl Vinyl Acetate (EVA)/ Polyurethane	
			iii	Outsole	Rubber/ Thermoplastic Urethane (TPU)	
			iv	Vamp Lining	Leather/ Coated fabric and textile	
			v	Quarter Lining (optional)	Leather/ Coated fabric and textile	
			vi	Insole	Cellulose board/ Stoble Non-woven	
			vii	Sock liner	Ethyl Vinyl Acetate (EVA) /Polyurethane	
			viii	Counter	Filmic material/ other than filmic material	
	Sizes			For Men: 4 to 12 (with G/H fitting) For Women: 2 to 10 (with G/H fitting)		

ANNEX A

GROUPING GUIDELINES

1. As per the Indian Standard, sports footwear can be classified into 3 categories based on design:
 - i) Low Performance (Casuals)
 - ii) Medium Performance
 - iii) High Performance
2. Further, the different materials used in different parts of sports footwear are as follows:

S. No.	Part of footwear	Materials
i.	Upper	Split/ Nubuck/ other Leather (Coloured)/ Split/ Nubuck/ other Leather (not coloured)/ Synthetic /Textile
ii.	Midsole	Ethyl Vinyl Acetate (EVA) /Polyurethane
iii.	Outsole	Rubber/ Thermoplastic Urethane (TPU)
iv.	Vamp Lining	Leather/ Coated fabric and textile
v.	Quarter Lining (optional)	Leather/ Coated fabric and textile
vi.	Insole	Cellulose board/ Stoble Non woven
vii.	Sockliner	Ethyl Vinyl Acetate (EVA)/ Polyurethane
viii.	Counter	Filmic material/ other than filmic material

3. For considering grant of licence/inclusion of varieties, **one sample of each category (Casuals/Medium Performance/High performance)**, each combination of materials of different parts of footwear of any size shall be drawn and tested to cover that category, that combination of materials for all the parts and all the sizes being manufactured. As far as possible, It shall be ensured that where Grant of licence/inclusion of varieties of multiple sizes are sought, sample are alternately tested for Men and women sizes. For consideration of optional requirement of Quarter lining, sample of each combination of material and category with Quarter lining shall be tested.
4. If sample of colored leather upper is drawn, uncolored leather upper material can be covered on that basis.
5. However, if leather lining component is already tested for Chromium VI content (and footwear made from this material is already covered in the scope of licence), new varieties of footwear may be added in the scope of licence without testing of Chromium VI content (for leather lining) which has already been tested before, provided that there is no change in the type/nature of the material and/or the source of material. In such cases, the manufacturer seeking relaxation from testing of Chromium VI content on leather lining component, shall declare that there is no change in the type/nature and/or the source of the materials already tested
6. While considering grant of licence/inclusion of additional sizes/categories based upon design, it shall be ensured that the applicant/licensee has got the complete manufacturing and testing facilities for all the sizes and categories based on design intended to be covered.

7. During operation of the licence, BO shall ensure that all the sizes/categories based upon design covered in the licence are tested in rotation. The above guidelines may be followed for Grant of Licence as well as inclusion of new variety.

ANNEX B LIST OF TEST EQUIPMENTS

Major test equipment required to test as per the Indian Standard

S. No.	Test Equipment	Test Used in with Clause Reference
1.	Steel Scale/Ruler/Tape Measure, lasts of applicable sizes,	Sizes (cl.3.2.5),
2.	Tensile testing machine with a chart recorder, clamping jaws for tensile tester, razor or sharp knife, steel scale, sample press, humidity chamber, air circulating oven	Annex B Adhesion Test (Clauses 3.3.2 and 3.3.3, Table 1-5, 7-9)
3.	Test equipment, capable of measuring compressive force up to 6 000 N, Test punch	Determination of energy absorption of the seat region Cl 3.3.4
4.	Compression set apparatus as described in IS 3400 (Part 10), Spacers, thickness gauge, air circulating oven, die cutters, arrangement to maintain temp of 27 +/-2, Steel Scale, vernier calliper	Annex C Compression set (Static) Sl no v) of Table 7, 8, iv) of table 13 and 14)
5.	Tensile testing machine with a chart recorder, clamping jaws for tensile tester, die cutters, razor or sharp knife, Steel Scale, vernier caliper, Conditioning chamber, micrometer	Annex D Split tear strength (SL no iii) of Tables 7 and 8)
6.	Desiccator, Oven (70±1°C), Conditioning chamber, razor or sharp knife, Steel Scale, vernier caliper,	Annex E (Hydrolysis)
7.	Air circulating oven, steel scale, Vernier caliper, die cutters, razor or sharp knife, stop watch, arrangement to maintain temp of 27 +/-2	Annex F, Heat Resistance, Shrinkage Linear (Tables sl vii) of Table 7, 8, iv) of Table 12,v) of 13 and 14)
8.	Dies, Tensile testing machine and thickness gauge as described in IS 3400 (Part 1), grips, die cutters, razor or sharp knife, Steel Scale, vernier caliper, micrometer, buffing arrangement, arrangement to maintain temp of 27 +/-2	Annex G, Trouser Tear Strength (i) of Table 9)
9.	Tensile testing machine, slotted plate, die cutters, razor or sharp knife, Steel Scale, vernier caliper, micrometer, conditioning chamber	Annex H, Gripping Strength of Tags (iii) of Table 15)
10.	White cotton strips, glass or Plexiglas slide, distilled water, weight of 500 g, grey scale, die cutters, razor or sharp knife, Steel Scale, vernier caliper, micrometer, stop watch/timer, stapler	Annex J, Colour Migration/Color Fastness (Table 15)
11.	Sodium chloride test solution, dessicator, air circulating oven, bleached cotton fabric, dish, distilled water, cutter/scissor, timer	Annex K, Corrosion Table 17)
12.	PFI/Bennewart Shoe Lace Tester, scissors, 250 g weight	Annex N Lace – Lace abrasion resistance iv) of table 15
13.	Flexing Apparatus (as per P-2.1-2.5), Conditioning chamber, arrangement to maintain temp of 27 +/-2 and 65+/-2 %RH, die cutters, razor or sharp knife, Steel Scale, vernier caliper, micrometer,	Annex P Flexing Index iv) of table 11
14.	Tensile testing Machine as per Q-2.1, die cutters, razor or sharp knife, Steel Scale, vernier caliper, micrometer/dial thickness guage (as per Q 2.3), distilled water, conditioning chamber, arrangement to	Annex Q (Tensile properties of Insole materials) i) of table 11

	maintain temp of 27 +/-2 and 65+/-2 %RH	
15.	Apparatus for measurement of flexing endurance of leather as per Fig. 1 of LP:19 of IS 5914:1970	Flexing endurance i) of table 3, 4 and 5
16.	Tensile tester as 3.1 of LP:6 of IS 5914:1970	Tensile strength and elongation at break sl no iii) and iv) table 3
17.	Tensile testing machine as per 3.2 of LP:7 of IS 5914:1970, press knife as per 3.1 of LP:7 of IS 5914:1970, conditioning chamber	Tear strength vi) of table 3
18.	Lastometer as per 4.1 of IS 14970:2001, conditioning chamber,	Lastometer Test v) of table 3
19.	Crockmeter, White bleached print cloth, starch free, thread count of 80 by 80 or finer, Distilled water, A standard sample of leather, when required in the detail specification	Colour fastness, crocking vii) of table 3 and vi) of table 4
20.	Xenon Arc Lamp Apparatus as per 6.1 of IS : 6191: 1971, Filter, Opaque material, geometric grey scale	Colour fastness to artificial light (Xenon Lamp) viii) of table 3 and vii) of table 4
21.	Constant rate of extension (CRE) tensile testing machine, Clamping device, Equipment for cutting test pieces and fraying them down to the required width, arrangement for maintaining test temperature of 27 degree centigrade	Breaking Strength and elongation at break (iii) and iv) of table 4
22.	Constant rate of extension (CRE) tensile testing machine with autographic recorder as per CI 4.1 of IS 7016 (Part 3/Sec 1),	Tear strength v) of table 4
23.	Laboratory exposure devices as per 5.2 of IS/ISO 105-B02:2014. Black –standard thermometer/black-panel thermometer, Covers, Colour matching lamps, Assessment cabinet, Sample mounting card, Assessment mask, Grey scale for assessing change in colour, blue wool reference material (CI 5.1) water of quality Grade 3 minimum in accordance with ISO 3696	Fastness to artificial light (Xenon lamp) grey scale rating vii) of table 4,vii) of table 5
24.	Constant rate of extension (CRE) tensile testing machine (as per CI 6.1 of IS 1969 (Part 1), conditioning chamber	Breaking Strength and elongation at break (iii) and iv) of table 5 and i) of Table 15
25.	<u>For coated fabric and textile</u> Constant rate of extension (CRE) tensile testing machine with autographic recorder as per CI 4.1 of IS 7016 (Part 3/Sec 1), <u>For leather</u> Tensile testing machine with accuracy of 2 % uniform speed of separation of the jaws of 100 mm/min ± 20 mm/min, Test piece holders, Thickness gauge, Press knife	Tear Strength, tongue tear v) of table 5 and i) of table 6
26.	Device as per 4.1 of IS 766, Grating of Stainless Steel wire, Rubbing cotton cloth, Grey scale,	Colour fastness to rubbing vi) of Table 5
27.	Permeability Appts as per cl 6.6 & 6.8 of IS 15298 (Part-1), Jars or Bottles, Holder, Fan, Silica Gel, Mesh, Conditioning Chamber, Oven, Balance, Stop Watch, Vernier Caliper, Flexometer as per Cl. 6.6.2.8 of IS 15298 (Part 1), Circular Metal Container, Hygrometer, Thermometer, Air conditioner.	Water vapour permeability iii) of Table 6
28.	Permeability Apparatus as per cl 6.6 & 6.8 of IS 15298 (Part-1), Jars or	Water vapour coefficient permeability iv) of Table 6

	Bottles, Holder, Fan, Silica Gel, Mesh, Conditioning Chamber, Oven, Balance, Stop Watch, Vernier Caliper, Flexometer as per Cl. 6.6.2.8 of IS 15298 (Part 1), Circular Metal Container, Hygrometer, Thermometer, Air conditioner.	
29.	pH meter, buffer, shaker, analytical balance, measuring cylinder, wide mouthed flasks, volumetric flask, pipette, acetone, arrangement for maintaining temperature at $(20 \pm 2) ^\circ\text{C}$	Determination of pH value v) of Table 6
30.	Following apparatus and reagents as per IS 16259 Reagents: dipotassiumhydrogenphosphate, 1,5-diphenylcarbazide, glacial acetic acid, o-phosphoric acid, potassium dichromate, Argon or nitrogen, oxygen-free, methanol. Apparatus: Suitable mechanical shaker , Conical flask, of capacity 250 ml , Aeration tube and flow meter , H meter, with glass electrode , Membrane filter, 0,45 μm pore size (polytetrafluoroethylene or nylon), Spectrophotometer or filterphotometer, Photometric cell, Glass or polypropylene cartridgesfilled with suitable reversed phase material, Solid Phase Extraction (SPE) system Standard Laboratory apparatus and glassware: analytical balance, titration setup, pipette	Determination of chromium (VI) content vi) of Table 6
31.	Tensile testing Machine as per 7.4 of IS 3400 Part 1, die cutters as per 7.1 of IS 3400 Part 1, Steel Scale, vernier caliper, micrometer/dial thickness guage (as per 7.1 of IS 3400 Part 1), cone guage, Test rig for ring test pieces r, conditioning chamber, arrangement to maintain temp of 27 ± 2 and 65 ± 2 %RH	Tensile Strength and elongation i) and ii) of Table 7, 8, 13, i) of table 10, 11 and iii) of Table 14
32.	Tensile testing machine as per Cl 2.1 of IS 3400 Part 17, Die for test specimens, arrangement to maintaining temp of 27 ± 2	Tear Strength iv) of table 7, 8, ii) of Table 9, 10, 14 iii) of table 13
33.	Ross flexing machine as per IS 3400 (Part 16), piercing tool and holder, rule, thickness guage, soap, conditioning chamber, cold chamber, arrangement to maintaining temp of 27 ± 2	Ross Flexing v) of Table 9, 10 and iii) of Table 12
34.	Abrasion Testing M/c as per Cl 6.12.2.1 of IS 15298 Part 1, Conditioning Chamber, Analytical Balance, Cutting Die, hollow drill, Weight, Abrasion Sheet, Reference abradant, backing of test pieces, fabric punch or press cutter, balance pan straddle/density bottle, beaker, arrangement to maintain temp of 27 ± 2 , distilled/deionized water	Abrasion resistance iii) of table 9, and 10
35.	Test equipment as per Cl 7.3.2.1 of IS 15298 Part 1, Wool pads, Abradant fabric, conditioning chamber	ii) of Table 12
36.	Tensile Testing Machine with jaws with multiple speed complying to 5.2.2 of IS 15298 part 1 :2015, Testing Machine, Autographic recorder as Cl 5 of IS 3400 Part 5:2022 and Steel Scale, Knife, conditioning chamber.	Adhesion to midsole iv) of table 10

37.	Water Absorption & Desorption Tester as per 7.2.2 of IS 15298 part 1, Brass Roller, Platform, Clamp (D) and clamp € IS 15298 part 1, Cotton gauge, Water Supply through flow meter, Press Knife, Balance, Clock, Silicone grease, conditioning chamber	Water absorption and loss ii) of table 11
38.	Finger Abrasion Tester as per cl. 7.3.2.1 IS 15298 part 1, Wool pads, Abradant fabric, Conditioning Chamber, Distilled Water, other details as per cl. 7.3 of IS 15298 (part 1).	Abrasion resistance iii) of table 11
39.	Test apparatus for counter stiffener as per Annex A of IS 7554:2009: Dome forming tool, press, cutting device, electric fan, PE sheet, fan assisted oven, heat resistant gloves, acetone, silicone based release agent, two part metal mould, hydraulic press, steam source, tongs, height gauge, thickness gauge, tensile testing machine, compression cage, manual compression device, distilled water, conditioning chamber	First dry collapsing load, Resilience, shape retention for counter material i), ii) iii) and iv) of table 16
40.	Tensile Testing Machine, Laboratory Press, and solvent like acetone etc as per Annex B of IS7554:2009	Peel Strength v) of Table 16

The list above is indicative and may not be taken as exhaustive

ANNEX - C

SCHEME OF INSPECTION AND TESTING

1. **LABORATORY** - A laboratory shall be maintained, which shall be suitably equipped (as per the requirement given in column 2 of Table 1) and staffed, where different tests given in the specification shall be carried out in accordance with the methods given in the specification.

The manufacturer shall prepare and implement a calibration plan for the test equipments.

2. **TEST RECORDS** –

- a) The manufacturer shall maintain test records for the tests carried out to establish conformity.
- b) For material of different parts, records of testing shall be maintained consignment wise (if applicable) to establish traceability

3. **PACKING AND MARKING** -The Standard Mark as given in Schedule of the license shall be marked legibly and indelibly on each shoe and the outer packaging for each pair of shoe, provided always that the Footwear to which this mark is thus applied conforms to every requirement of the specification.

3.1 Packing and Marking shall be done as per the provisions of the IS 15844:2010. In addition, the following details shall be mentioned (through tags/stickers or otherwise) on the package/Product (in case only bulk packaging is done):

- a) Licence no (CM/L.....)
- b) Month and year of manufacture
- c) Name and address of Manufacturer
- d) BIS Website details: 'For BIS Certification details please visit www.bis.gov.in'

4. **CONTROL UNIT**- 50,000 pairs or Fortnight production (whichever is earlier), or any other quantity as defined by the manufacturer, of the footwear of same category and same combination of materials, manufactured from the same consignment of the raw material constitute a control unit.

5. **LEVELS OF CONTROL** - The tests as indicated in column 1 of Table 1 and the levels of control in column 3 of Table 1, shall be carried out on the whole production of the factory which is covered by this plan and appropriate records maintained in accordance with paragraph 2 above.

All the production which conforms to the Indian Standard and covered by the licence shall be marked with the BIS certification Mark.

6. **REJECTION** - Disposal of non-conforming product shall be done in such a way so as to ensure that there is no violation of provisions of BIS Act, 2016.

7. Applicability of SIT for Small and Micro Enterprises (SMEs):

7.1 Compliance to the Scheme of Inspection and Testing is OPTIONAL for Micro, and Small Scale Units with respect to the requirements for Clause 1(Laboratory), Clause 2 (Test records), Clause 4 (Control Unit) and Clause 5 (Levels of Control) of the SIT. However, ALL units shall ensure compliance of their products to the requirements of the Indian Standard.

7.2 The requirements of SIT with respect to Clause 3 (Packing and Marking) and Clause 6 (Rejection) shall be followed by all.

Table 1 Levels of Control

(1)				(2)	(3)		
Test Details				Test equipment requirement R: required(or) S: Sub-contracting permitted	Levels of Control		
Cl.	Requirement	Test Method			No. of Sample	Frequency	Remarks
		Clause	Reference				
3.2	Design	3.2.1 to 3.2.3	IS 15844	Firm to have adequate in-process controls to check compliance of this parameter given in the Indian Standard. However, appropriate records shall be maintained by the manufacturer for evidence of conformity			
3.2.4	Size	3.2.4	IS 15844 IS 1638				
3.3	Whole footwear						
3.3.1	Construction	3.3.1	IS 15844	-do-			
3.3.2	Upper to midsole bondperformance	AnnexB	IS 15844	R	One	Each control unit	
3.3.3	Sole to midsole bondperformance	AnnexB	IS 15844	R	One	Each control unit	
3.3.4	Energy Absorption on seatregion		IS 15298 (Part 1)	S	One	Once in three months	For each variety
3.4	Upper						
Table3	Upper Material -Leather						
i.	Flexing endurance	LP:19	IS 5914	S	One	Once in three months or each consignment (in case components are bought) – whichever is earlier	Pl see Cl 2 b) of SIT
ii.	Adhesive Strength	Annex B	IS 15844	S	One	-do-	-do-
iii.	Tensile strength	LP:6	IS 5914	S	One	-do-	-do-
iv.	Elongation at break	LP:6	IS 5914	S	One	-do-	-do-
v.	Lastometer test		IS 14970	S	One	-do-	-do-
							Not applicable for split leather or

							nubuck leathers, only distension at burst to be determined for these leathers
vi.	Tear strength	LP:7	IS 5914	S	One	-do-	PI see Cl 2 b) of SIT
vii.	Colour fastness, crocking	LF:10	IS 6191	S	One	-do-	-do-
viii.	Fastness to artificial light (Grey Scale)	LF:4	IS 6191	S	One	-do-	-do- Applicable for coloredleathers only
Table4	Upper material – synthetic						
i.	Flexing endurance	LP:19	IS 5914	S	One	Once in three months or each consignment (in case components are bought) – whichever is earlier	PI see Cl 2 b) of SIT
ii.	Adhesive Strength	AnnexB	IS 15844	S	One	-do-	-do-
iii.	Breaking strength		IS 7016 (Part 2)	S	One	-do-	-do-
iv.	Elongation at break		IS 7016 (Part 2)	S	One	-do-	-do-
v.	Tear Strength		IS 7016 (Part 3)	S	One	-do-	-do-
vi.	Colour Fastness, crocking	LF:10	IS 6191	S	One	-do-	-do-
vii.	Fastness to artificial light (Xenon Lamp)		IS/ISO105-B-02	S	One	-do-	-do-
Table5	Upper Material – Textile Fabrics						
i.	Flexing endurance	LP:19	IS 5914	S	One	Once in three months or each consignment (in case components are bought) – whichever is earlier	-do-

ii.	Adhesive Strength	AnnexB	IS 15844	S	One	-do-	-do-
iii.	Breaking strength		IS 1969 (Part 1)	S	One	-do-	-do-
iv.	Elongation at break		IS 1969 (Part 1)	S	One	-do-	-do-
v.	Tear Strength, tongue tear	6.3	IS 15298 (Part 1)	S	One	-do-	-do-
vi.	Colour Fastness to rubbing		IS 766	S	One	-do-	-do-
vii.	Fastness to artificial light (Xenon Lamp)		IS/ISO 105-B-02	S	One	-do-	-do-
3.5, Table 6	Lining						
i.	Tear strength,: a) Leather b) Coated fabric and textile	6.3	IS 15298 (Part 1)	S	One	Once in three months or each consignment (in case components are bought) – whichever is earlier	-do-
ii.	Abrasion resistance, No. of cycles, Min: a) Dry – 25 600 b) Wet – 12 800	6.12	-do-	S	One	-do-	-do-
iii.	Water vapor permeability	6.6	-do-	S	One	-do-	-do-
iv.	Water vapor coefficient,	6.8	-do-	S	One	-do-	-do-
v.	pH value (for leather lining),	6.9	-do-	S	One	-do-	-do-
vi.	Chromium VI content (for leather lining),		IS 16259	S	One	-do-	-do-
3.6, Table 7	Midsole						
	Midsole Material – Ethyl Vinyl Acetate (EVA)						
i.	Tensile Strength		IS 3400 (Part 1)	S	One	Once in three months or each consignment (in case components are bought) – whichever is earlier	-do-
ii.	Elongation at break		-do-	S	One	-do-	-do-
iii.	Split tear strength	Annex D	IS 15844	S	One	-do-	-do-

iv.	Tear Strength		IS 3400 (Part 17)	S	One	-do-	-do-
v.	Compression set	Annex C	IS 15844	S	One	-do-	-do-
vi.	Adhesion to Sole	Annex B	-do-	S	One	-do-	-do-
vii.	Heat resistance, shrinkage linear	Annex F	-do-	S	One	-do-	-do-
Table 8	Midsole materials- Polyurethane						
i.	Tensile Strength		IS 3400 (Part 1)	S	One	Once in three months or each consignment (in case components are bought) – whichever is earlier	-do-
ii.	Elongation at break		-do-	S	One	-do-	-do-
iii.	Split tear strength	Annex D	IS 15844	S	One	-do-	-do-
iv.	Die C Tear Strength		IS 3400 (Part 17)	S	One	-do-	-do-
v.	Compression set	Annex C	IS 15844	S	One	-do-	-do-
vi.	Adhesion to Sole	Annex B	-do-	S	One	-do-	-do-
vii.	Heat resistance, shrinkage linear	Annex F	-do-	S	One	-do-	-do-
3.7	Outsole						
Table9	Outsole Material – Rubber						
i.	Trouser Tear Strength	Annex G	IS 15844	S	One	Once in three months or each consignment (in case components are bought) – whichever is earlier	-do-
ii.	Die-C Tear Strength		IS 3400 (Part 17)	S	One	-do-	-do-
iii.	Abrasion Resistance	8.3	IS 15298 (Part 1)	S	One	-do-	-do-
iv.	Adhesion to Midsole	Annex B	IS 15844	S	One	-do-	-do-
v.	Ross Flexing		IS 3400	S	One	-do-	-do-

			(Part 16)				
Table10	Outsole Material - Thermoplastic Urethane (TPU)						
i.	Tensile Strength		IS 3400 (Part 1)	S	One	Once in three months or each consignment (in case components are bought) – whichever is earlier	-do-
ii.	Die-C Tear Strength		IS 3400 (Part 17)	S	One	-do-	-do-
iii.	Abrasion Resistance	4.8.4	IS 15298 (Part 1)	S	One	-do-	-do-
iv.	Adhesion to Midsole	4.8.7	IS 15298 (Part 1)	S	One	-do-	-do-
v.	Ross Flexing		IS 3400 (Part 16)	S	One	-do-	-do-
3.8	Insole						
Table11	Insole Material – Cellulose Board						
i.	Tensile strength		IS 3400 (Part 1)	S	One	Once in three months or each consignment (in case components are bought) – whichever is earlier	-do-
ii.	Water absorption and loss	5.15	IS 15298 (Part 1)	S	One	-do-	-do-
iii.	Abrasion Resistance	5.16	-do-	S	One	-do-	-do-
iv.	Flexing Index	Annex P	IS 15844	S	One	-do-	-do-
Table12	Insole Material – Stroble Non Woven						
i.	Trouser Tear strength	Annex G	IS 1076 (Part 3)	S	One	Once in three months or each consignment (in case components are bought) – whichever is earlier	-do-
ii.	Abrasion Resistance	5.14	-do-	S	One	-do-	-do-

iii.	Ross Flexing		IS 3400 (Part 16)	S	One	-do-	-do-
iv.	Heat Resistance, shrinkage	Annex F	IS 15844	S	One	-do-	-do-
3.9	Sockliner						
Table13	Sockliner Material – Ethyl Vinyl Acetate (EVA)						
i.	Tensile strength		IS 3400 (Part 1)	S	One	Once in three months or each consignment (in case components are bought) – whichever is earlier	-do-
ii.	Elongation Percent		IS 3400 (Part 1)	S	One	-do-	-do-
iii.	Die-C tear strength		IS 3400 (Part 17)	S	One	-do-	-do-
iv.	Compression set	Annex C	IS 15844	S	One	-do-	-do-
v.	Heat resistance shrinkage - linear	Annex F	IS 15844	S	One	-do-	-do-
Table14	Sockliner Material – Polyurethane						
i.	Tensile strength		IS 3400(Part 1)	S	One	Once in three months or each consignment (in case components are bought) – whichever is earlier	-do-
ii.	Die-C tear strength		IS 3400 (Part 17)	S	One	-do-	-do-
iii.	Elongation Percent		IS 3400 (Part 1)	S	One	-do-	-do-
iv.	Compression set	Annex C	IS 15844	S	One	-do-	-do-
3.10, Table15	Lace Material						
i.	Breaking Strength		IS 1969	S	One	Once in three months or each consignment (in case components are bought) –	-do-

						whichever is earlier	
ii.	Colour migration/ colour fastness	Annex J	IS 15844	S	One	-do-	-do-
iii.	Gripping strength of tags	Annex H	-do-	S	One	-do-	-do-
iv.	Abrasion resistance, lace-lace abrasion	Annex N	-do-	S	One	-do-	-do-
v.	Heat resistance shrinkage - linear	Annex F	IS 15844	S	One	-do-	-do-
3.11, Table16	Counter Material: Thermoplastic, Solvent Activated and Heat Activated Sheets						
i.	First dry collapsing load, hardness	A-3.2.6	IS 7554	S	One	Once in three months or each consignment (in case components are bought) – whichever is earlier	-do-
ii.	Resilience, percent, Min: a) All types other than filmic material b) For filmic materials	A-3.4	-do-	S	One	-do-	-do-
iii.	Moisture resistance	A-3.5	-do-	S	One	-do-	-do-
iv.	a) Initial dry area shape retention, percent, Min b) Area shape retention after 10th collapse, dry	A-3.1	-do-	S	One	-do-	-do-
				S	One	-do-	-do-
v.	Peel strength	Annex B	-do-	S	One	-do-	-do-
3.12,	Metallic Trims and components						
Table17	Corrosion resistance	Annex K	IS 15844	S	One	Once in three months or each consignment (in case components are bought) – whichever is earlier	-do-

Note 1: Whether test equipment is required or sub-contracting is permitted in column 2 shall be decided by the Bureau and shall be mandatory. Sub-contracting is permitted to a laboratory recognized by the Bureau or Government laboratories empaneled by the

Bureau.

Note 2: Levels of control given in column 3 are only recommendatory in nature. The manufacturer may define the control unit/batch/lot and submit his own levels of control in column 3 with proper justification for approval by BO Head