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उत्पाद मैनुअल

जूते — विशिष्टि भाग 1 सेवाओं के लिए जूते
17043 Part 1: 2024 के अनुसार

**PRODUCT MANUAL
FOR SHOES, PART 1 SHOES FOR SERVICES
ACCORDING TO IS 17043 Part 1: 2024**

विभिन्न उत्पादों के लिए भारतीय मानक ब्यूरो) अनुरूपता मूल्यांकन (विनियम, 2018 की योजना -I के तहत प्रमाणन के संचालन में एकरूपता और पारदर्शिता के लिए इस उत्पाद मैनुअल का उपयोग सभी क्षेत्रीय / शाखा कार्यालयों और लाइसेंसधारियों द्वारा संदर्भ सामग्री के रूप में किया जाएगा। दस्तावेज़ का उपयोग बीआईएस प्रमाणन प्राप्त करने के इच्छुक संभावित आवेदकों द्वारा भी किया जा सकता है।

This Product Manual shall be used as reference material by all Regional/Branch Offices & licensees to ensure uniformity 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.

1.	मानक संख्या IS No.	:	17043 Part 1: 2024
	शीर्षक Title	:	Shoes, Part 1 Shoes for Services — Specification
	संशोधनों की संख्या No. of amendments	:	0
2.	नमूना दिशानिर्देश Sampling Guidelines		
a)	कच्चा माल Raw material	:	Declaration for raw material of components to be submitted by manufacturer Note: This section indicates the requirements for raw material (if specified in the IS) for which compliance is to be established during Grant of Licence/Change in Scope of Licence /Factory Surveillance
b)	समूहीकरण दिशानिर्देश Grouping Guidelines	:	Not applicable

c)	नमूने का परिमाण Sample Quantity	:	4 Pairs (3 pairs of footwear for physical testing and one pair for chemical analysis). Components, if required, may also be provided. Note 1: During the operative period of one year, one factory sample to be tested for all requirements [including Chemical Requirements as per Cl. 5 (Chemical) and other samples are to be tested for tests other than chemical test. Note 2: This section indicates the quantity of the sample of the product and/or the raw material (if applicable), required to be sent to the laboratory for testing, for the purpose of Grant of Licence/Change in Scope of Licence/ Factory Surveillance (in case of market surveillance, effort may be made to procure therequired quantity of product sample, as far as possible since raw material sample may not be available in market)
3.	परीक्षण उपकरणों की सूची List of Test Equipment	:	Please refer to Annex-A
4.	निरीक्षण और परीक्षण की स्कीम Scheme of Inspection and Testing	:	Please refer to Annex- B Note: Please see Cl. 5 of the SIT for Applicability of SIT for Small and Micro Scale Enterprises
5.	एक दिन में संभावित परीक्षण Possible tests in a day		
	All tests (On pre conditioned samples as applicable) Note: This section is for the guidance of BIS Certification Officers/Technical Auditors of BIS Authorized Outside Surveillance Agencies (OSAs) during factory inspection to provide readyreference regarding the tests which can be witnessed during the inspection in the factory by the officer/auditor.		
6.	लाइसेंस का दायरा /Scope of the Licence:		
	"Licence is granted to use Standard Mark on Shoes for Services as per IS 17043 Part-1: 2024 with the following scope:		
	Name of the product	Shoes for Services	
	Size	As applicable	

BUREAU OF INDIAN STANDARDS
MANAK BHAVAN,9, BAHADUR SHAH ZAFAR MARG,
NEW DELHI-110002

ANNEX – A

LIST OF TEST EQUIPMENTS
(INDICATIVE LIST, FOR GUIDANCE ONLY)

Sr. No.	Tests used in with Clause Reference	Test equipment
1	Size, 4.3.1	Last of applicable sizes
2	Height of Upper, 4.4	Steel Scale
		Digital Vernier Caliper
3	Weight, 4.3.2	Weighing Scale
4	Ergonomics, 4.5.2	Arrangement as per Cl 5.1 of IS 15298 (Part 1)
5	Upper outsole bond strength /Inter Layer Bond Strength, 4.5.3.1,4.5.3.2	Tensile testing machine as per 5.2.2 of IS 15298 (Part1)
		Steel Scale
		Knife
6	Slip Resistance	Test machine as specified in ISO 13287, Material Slider 96, Means of cutting: Slider 96, rigid, rectangular backing plate, 400 grit silicon carbide abrasive paper, Dry absorbent paper towel, as per Cl 5.11 of IS IS 15298 (Part 1) : 2015, Ceramic tile as specified in ISO 13287
7	Electrical Resistance, 4.5.5	Testing instrument with Internal electrode, External electrode, Conductive lacquer and Device for measuring the conductive resistance of the lacquer as per Cl 5.10.2 of IS 15298 part 1, Steel Balls of diameter 5 mm, Weight 4 kg, Conditioning chamber
8	Heat Insulation of Sole Complex, 4.5.6	Heat Insulation apparatus with accessories as per clause 5.12.1 of IS 15298 Part 1, arrangement for conditioning of sample at $(23 \pm 2) ^\circ\text{C}$
9	Cold Insulation of Sole Complex, 4.5.7	Cold Insulation apparatus with accessories as per Cl 5.13.1 of IS 15298Part 1, arrangement for conditioning of sample at $(23 \pm 2) ^\circ\text{C}$
10	Energy Absorption of seat region, 4.5.8	Punching Compression Testing M/c Speed(10+-3mm /minute) and Punch
11	Tear Strength/Upper, 4.6.2	Press Knife
		Scissors
		Tensile Testing Machine(jaws as per ISO-3377- 2)
		Conditioning Chamber
	Water Vapor Permeability andcoefficient, 4.6.3	Permeability Appts as per cl 6.6 & 6.8 of IS-15298(part-1)
		Jars or Bottles

12		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
		arrangement for having a conditioning atmosphere of $(27 \pm 2) ^\circ\text{C}$, $(65 \pm 5) \% \text{RH}$
13	Water Penetration and Water Absorption, 4.6.4	Water Penetration and Absorption apparatus as per clause 6.13.2 of IS 15298 Part 1
		Two Cylinders
		Absorbent Cloth
		Balance
		stop watch
14	Vamp Lining Tear Strength, 4.7.2	Conditioning Chamber
		Tensile Testing Machine(jaws as per ISO-3377- 2)
		Press Knife
		Steel Scale
15	Abrasion Resistance of Lining Material, 4.7.3	Abrasion Machine as per cl. 6.12.2 of IS-15298 (part 1)
		Reference Abradant Pad
		Backing
		Fabric Punch
		Weight
		Specimen Holder
		Abrading Base
		Balance
		Conditioning Chamber
		Dial Gauge
		Filler Gauge
		Woven felt
		Hygrometer
		Arrangement for maintaining test condition of $(27 \pm 2) ^\circ\text{C}$ and $(65 \pm 5) \% \text{RH}$
		Thermometer

16	Water Vapour Permeability and coefficient, 4.7.4	Permeability Appts as per cl. 6.6 and 6.8 of IS-15298 (part 1)
		Jars or Bottles
		Holder
		Fan
		Silica Gel
		Technometer
		Conditioning Chamber
		Oven
		Balance
		Stop Watch
		Vernier Caliper
		Flexometer as per cl. 6.6.2.8 of IS-15298- part 1
		impermeable material as per Cl 6.7.2.1 of IS 15298 (Part 1)
		arrangement for having a conditioning atmosphere of $(27 \pm 2) ^\circ\text{C}$, $(65 \pm 5) \% \text{RH}$
		Thermometer
		Hygrometer
		Circular Metal Container
17	Insole Thickness	Dial Thickness gauge
18	Water Absorption & Desorption, 4.8.3	Water Absorption & Desorption Tester as per 7.2.2 of IS-15298 part 1
		Brass Roller
		Platform
		Clamp (D) and clamp (E) IS-15298 part-1
		Cotton gauge
		Water Supply through flow meter
		Press Knife
		Balance
		Clock
		Silicone grease
19	Abrasion of Insole, 4.8.2	Finger Abrasion Tester as per cl. 7.3.2 IS-15298 part 1
		Wool pads
		Abradant fabric
		Conditioning Chamber
		Distilled Water
20	Insocks Thickness, 4.9	other details as per cl. 7.3 of IS-15298 (part 1)
		Dial Thickness gauge
		Water Absorption & Desorption Tester as per 7.2.2 of IS-15298 part 1

21	Water Absorption & Desorption of Insocks, 4.9.2	Brass Roller
		Platform
		Clamp (D) and clamp (E) IS-15298 part-1
		Cotton gauge
		Water Supply through flow meter
		Press Knife
		Balance
		Clock
		Silicone grease
22	Abrasion resistance of insocks, 4.9.3	Finger Abrasion Tester as per cl. 7.3.2.1 IS 15298 part 1, Woolpads, Abradant fabric, Conditioning Chamber, Distilled Water, other details as per cl. 7.3 of IS 15298 (part 1).
23	Thickness of Toe Puff and Counter Stiffner, 4.10	Dial Thickness Gauge
24	Tongue/Tear Strength, 4.11.2	Press Knife
		Scissors
		Tensile Testing Machine(jaws as per ISO-3377- 2)
		Conditioning Chamber
25	Breaking strength of Closing Thread, 4.12	Tensile Testing M/c
26	Outsole / Thickness, 4.13.2	Dial Thickness Gauge
27	Sole Density, 4.13.3	Balance (LC-1 mg), Balance straddle, Beaker (250 ml), Copper wire, oven, sinker, cutting device
28	Outsole / Tear Strength, 4.13.6	Tensile testing machine as per Cl 5.3 of IS 3400 Part 12, Die for test specimens, Nick cutter, arrangement to maintaining temp of 27 +/-2
29 30	Abrasion Resistance/outsole, 4.13.7	Abrasion Testing M/c as per ISO-4649
		Conditioning Chamber
		Analytical Balance
		Cutting Die
		Weight
		Abrasion Sheet
31	Sole Hardness, 4.13.4	type A or type D Shore durometer as per Cl 4 of IS 13360 (Part 5/Sec 11) : 2013. Shore A and IRHD Hardness Tester
32	Sole Ageing Test, 4.13.5	Oven
33	Flexing Resistance/Outsole, 4.13.8	flexing Testing M/c with Clamping Device & Hinged Plate per IS-15298 fig-45
		Cutting Tool(as per ISO-5423)
		Mandrel

34	Pull out requirement of Eyelet	Tensile testing machine, compression jig, sharp knife
35	Change in colour of eyelet	Test machine as per C 3 of Annex C of IS 17043, arrangement for having a conditioning atmosphere of $(27 \pm 2) ^\circ\text{C}$, $(65 \pm 5) \% \text{RH}$
36	Breaking load	Constant rate of extension (CRE) tensile testing machine (as per Cl 6.1 of IS 1969 (Part 1), conditioning chamber
37	Tag retention	Tensile testing machine, slotted plate, die cutters, razor or sharp knife, Steel Scale, vernier caliper, micrometer, conditioning chamber
38	Chemical Requirements	As per IS 17011

ANNEX B

SCHEME OF INSPECTION AND TESTING

1. QUALITY ASSURANCE PLAN

1.1 It is expected that manufacturers (licensees/applicants) will implement a Quality Assurance Plan i.e. a plan of regular testing and in-process controls, designed to ensure that the product bearing the Standard Mark conforms to all requirements of the Indian Standard.

1.2 The manufacturers shall define a Quality Assurance Plan defining the control unit (i.e. lot/batch etc.) and the levels of control (i.e. the frequency and number of samples for conducting the different tests as per the Indian Standard) and submit the same to BIS Branch Office for information. The manufacturer shall comply with the same and maintain test records in accordance with para 2.4.

1.3 RECOMMENDED LEVELS OF CONTROL/CONTROL UNIT:

1.3.1 For the guidance of manufacturers, the recommended definition of control unit is : 50,000 pairs or Fortnight production (whichever is earlier), of same variety, manufactured from the same raw material

1.3.2 For the guidance of manufacturers in preparing the Quality Assurance Plan, recommended levels of control are given in **Table 1**.

1.3.3 The manufacturer shall ensure inspection and testing as per the Quality Assurance Plan submitted by them on the whole production of the factory which is covered by this plan. Alternatively, the manufacturer has the option of adherence to the quality plan as per levels of control recommended in column 3 of Table 1.

1.4 However, all manufacturers shall ensure compliance of their products to all the requirements of the Indian Standard.

2. ENSURING COMPLIANCE THROUGH TESTING- It is expected that manufacturers (licensees/applicants) will establish a suitably equipped and staffed in house laboratory (In house testing facility) for testing at least those parameters of the Indian Standard which require routine testing for ensuring quality of the product. This includes in-process controls as may be defined and put in place by the manufacturer and testing parameters/requirements which can only be performed in the factory.

2.1 For the guidance of manufacturers, Table 1 giving the recommended levels of control is given below. Column 2 of Table 1 indicates routine tests where test equipment is required in house as "R" or other tests which can be subcontracted as "S". Subcontracting is permitted to BIS recognized/empanelled laboratory or any other laboratory having valid NABL accreditation as per IS/ISO/IEC 17025.

2.2 For MSME manufacturers, the requirement of maintaining a laboratory/in-house testing facility for routine tests (indicated as "R" in Column 2 of Table 1) is also optional.

2.2.1 MSME manufacturers may utilize common cluster based facilities as per guidelines for the utilization of cluster based test facilities by MSMEs or the provisions of Sharing of testing facilities or get testing done from BIS recognized/empaneled laboratory or any other laboratory having valid NABL accreditation as per IS/ISO/IEC 17025.

2.3 Large Scale manufacturers shall maintain an in-house laboratory equipped at least with test facilities for routine tests (indicated as “R” in Column 2 of Table 1), where different tests given in the specification shall be carried out in accordance with the method given in the specification. They shall also implement a calibration plan for the in-house test equipment.

2.3.1 Alternatively, in lieu of an in-house laboratory, large scale manufacturers can also utilize the provisions of Sharing of testing facilities as per the Guidelines for Grant of Licence available on BIS website www.bis.gov.in. (Under Conformity Assessment>Product Certification Process). Even for subcontracted tests, provisions for sharing of testing facilities can be utilized.

2.4 TEST RECORDS- The manufacturers maintaining an in-house laboratory or utilizing common cluster based facilities or shared test facilities shall maintain test records for the tests carried out to establish conformity. For the tests being subcontracted to BIS recognized/empanelled laboratory or any other laboratory having valid NABL accreditation as per IS/ISO/IEC 17025, test reports issued by the laboratories shall be available for inspection by BIS.

3. PACKING AND MARKING - The Standard Mark as given in the Schedule of the licence shall be incorporated legibly and indelibly on each shoe for each pair of shoe provided always that the material so marked conforms to each requirement of the specification.

3.1 Packing and Marking shall be done as per the Indian Standard.

3.2 Additional Marking requirements: The material shall also be marked with the following additional requirement on (through tags/stickers or otherwise) on the package.

a) “For BIS certification details please visit www.bis.gov.in”

4. REJECTION - All the production which conforms to the Indian Standard and covered under the scope of this licence shall be marked with the Standard Mark. 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.

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

5.1 Compliance to the Scheme of Inspection and Testing is OPTIONAL for Micro, and Small Scale Units with respect to the requirements for Clause 1(Quality Assurance Plan), Clause 2 (Ensuring Compliance through Testing). However, ALL units shall ensure compliance of their products to the requirements of the Indian Standard.

5.2 The requirements of SIT with respect to Clause 3 (Packing and Marking) and Clause 4 (Rejection) shall be followed by all.

TABLE 1
(ONLY FOR GUIDANCE PURPOSE)

(1)				(2)	(3)		
Test Details				Test equipment requirementR: required(or)S: Sub- contracting permitted	Levels ofControl		
Clause	Requirement	Test Method			No. of Sample	Frequency	Remarks
		Clause	Reference				
4.2	Design	Fig. 1	IS 15298 (Part 4)	R	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	-	
4.3.1	Size	4.3.1	IS 17043			-	
4.3.2	Weight	4.3.2	IS 17043			-	
4.4	Height of upper	6.2	IS 15298(Part 1)			-	
4.5	Properties of Whole Footwear						
4.5.1	Construction	4.5.1	IS 17043	R	-do-		-
4.5.2	Ergonomic feature	5.1	IS 15298 (Part 1)	R			
4.5.3	Bond strength	4.5.3	IS 17043				-
4.5.3.1	Upper outsole Bond strength	5.2	IS 15298 (Part 1)	R	One	Each control unit	-
4.5.3.2	Inter layer bond strength	5.2	IS 15298 (Part 1)	R	One	Each control unit	-
4.5.4	Slip Resistance	5.11	IS 15298 (Part 1)	S	One	Once in three months	-
4.5.5	Electrical properties						
4.5.5.1	Antistatic footwear	5.10	IS 15298 (Part 1)	S	One	Once in three months	-
4.5.6	Heat Insulation of sole complex	5.12	IS 15298 (Part 1)	S	One	Once in three months	-
4.5.7	Cold Insulation of sole complex	5.13	IS 15298 (Part 1)	S	One	Once in three months	-
4.5.8	Energy absorption of seat region	5.14	IS 15298 (Part 1)	S	One	Once in three months	-
4.6	Upper						
4.6.1	Material and thickness	4.6.1	IS 17043	S	One	Each consignment	

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						of material or test certificate from supplier/ Manufacturer	
4.6.1	Additional test for upper leather	-	IS 5677	S	One	-do-	
4.6.2	Tear strength	6.3	IS 15298 (Part 1)	S	One	-do-	-
4.6.3	Water vapour permeability and coefficient	6.6 and 6.8	IS 15298 (Part 1)	S	One	-do-	-
4.6.4	Water penetration and water absorption	6.13	IS 15298 (Part 1)	S	One	-do-	-
4.7	Lining material						
4.7.1	Thickness of lining material	4.7.1	IS 17043	S	One	-do-	-
4.7.1	Additional requirement for lining material	-	IS 3840	S	One	-do-	
4.7.2	Tear strength	6.3	IS 15298(Part 1)	S	One	-do-	-
4.7.3	Abrasion resistance	6.12	IS 15298(Part 1)	S	One	-do-	-
4.7.4	Water vapour permeability and coefficient	6.6 & 6.8	IS 15298(Part 1)	S	One	-do-	-
4.8	Insole						
4.8.1	Material	4.8.1	IS 17043	S	One	-do-	-
4.8.2	Abrasion resistance	7.3	IS 15298(Part 1)	S	One	-do-	-
4.8.3	Insole water absorption and desorption	7.2	IS 15298(Part 1)	S	One	-do-	-
	Insocks						
4.9	Dimension	4.9	IS 17043	S	One	-do-	-
4.9.1	Material	4.9.1	IS 17043	S	One		-
4.9.2	Water absorption and desorption	7.2	IS 15298(Part 1)	S	One	-do-	-
4.9.3	Abrasion resistance	6.12	IS 15298(Part 1)	S	One	-do-	-
4.10	Toe puff and Counter stiffener	4.10	IS 17043	S	One	-do-	-
4.11	Tongue						
4.11.1	Material	4.11.1	IS 17043	S	One	-do-	-
4.11.2	Tear Strength	6.3	IS 15298(Part 1)	S	One	-do-	-
4.12	Closing thread	-	IS 4910 (Part 3)	S	One	-do-	-
4.13	Outsole						
4.13.1	Material	4.13.1	IS 17043	S	One	-do-	-

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4.13.2	Thickness	8.1	IS 15298(Part 1)	S	One		-
4.13.2	Energy absorption	4.5.8	IS 17043	S	One	-do-	-
4.13.3	Moulded density					-do-	
	PU midsole	Annex A	6664	S	One	-do-	
	Rubber outsole	Method A	IS 3400 (Part 9)	S	One	-do-	
4.13.4	Sole hardness-midsole	-	IS 13360(Part 5/Sec 11)	S	One	-do-	--
4.13.4	Sole hardness-outsole	-	IS 3400 (Part 2)	S	One	-do-	-
4.13.5	Ageing test	-	IS 3400 (Part 2) and (Part 4)	S	One	-do-	--
4.13.6	Tear Strength	8.2	IS 15298(Part 1)	S	One	-do-	-
4.13.7	Abrasion resistance	8.3	IS 15298(Part 1)	S	One	-do-	-
4.13.8	Flexing Resistance	8.4	IS 15298(Part 1)	S		-do-	
4.14	Eyelet						
4.14	Number and type	-	IS 17043	S	One	-do-	
	Material	-	IS 5401	S	One	-do-	Recommendatory in nature
	Pull out requirement of Eyelet	Annex B	IS 17043	S	One	-do-	-
4.14	Change in colour of eyelet	Annex C	IS 17043	S	One	-do-	-
4.15	Laces						
4.15.1	Material and Length	4.15.1	IS 17043	S	One	-do-	-
4.15.2	Breaking load		IS 1969(Part1) or IS 1969(Part2)	S	One	-do-	
4.15.2	Tag retention	Annex H	IS 15844	S	One	-do-	
5	Chemical Requirements	-	IS 17011	S	One	-do-	