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उत्पाद मैनुअल

जूते — विशिष्टि

भाग 2 सामान्य प्रयोजन के लिए जूते

17043 Part 2: 2024 के अनुसार

**PRODUCT MANUAL
FOR SHOES – SPECIFICATION
PART 2 SHOES FOR GENERAL PURPOSE
ACCORDING TO IS 17043 Part 2: 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 2: 2024
	शीर्षक Title	:	जूते — विशिष्टि, भाग 2 सामान्य प्रयोजन के लिए जूते SHOES – SPECIFICATION, PART 2 SHOES FOR GENERAL PURPOSE
	संशोधनों की संख्या No. of amendments	:	NIL
2.	नमूना दिशानिर्देश Sampling Guidelines		
a)	कच्चा माल Raw material	:	The material of the components of the footwear may be as given below: Upper as per CI 6.1.1 and 6.1.2 Lining as per CI 6.2 Insole as per CI 6.3 In sock as per CI 6.4 Outsole as per CI 6.5 Midsole as per CI 6.6 Toe and counter stiffener as per CI 6.7 Raw material of components used in footwear to be declared by the 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	: कृपया Annex-A देखें Please see Annex – A
c)	नमूने का परिमाण Sample Quantity	: 4 Pairs of footwear. (3 pairs for physical testing and one pair for chemical analysis.). Components to be provided separately if required. One MS to be drawn from complete testing including Chemical. In case of rest of the samples (2 FS and 1 MS) all tests excluding chemical are to be carried out. Note: 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 the required 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	: कृपया Annex-B देखें Please see Annex – B
4.	निरीक्षण और परीक्षण की स्कीम Scheme of Inspection and Testing	: कृपया Annex-C देखें Please see Annex – C 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 ready reference 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 as per IS 17043 Part-2: 2024 with the following scope:	
	Name of the product	सामान्य प्रयोजन के लिए जूते SHOES FOR GENERAL PURPOSE
	Category, Type and sizes	a) Kids (sizes to be declared), 1) Children 2) Infants and/or; b) Adult (sizes to be declared) 1) Type 1 2) Type 2
	Additional Claims	water proof shoes and/or Claims as per table 3, 5, 11 (claims other than water proof is applicable only for type 1)

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

ANNEX A GROUPING GUIDELINES

As per the Indian Standard, following varieties for shoes may be applicable:

- a) Based on use, shoes are divided into the following Category –
 - a. Kids (Children and infants)
 - b. Adult
- b) Adult Category of Footwear are further classified into two types as given below:
 - a. Type 1
 - b. Type 2
- c) **Additional Claims** (water proof shoes and/or Claims as per table 3, 5, 11). Claims other than water proof is applicable only for type 1 shoes

The following Grouping guidelines shall apply for Grant of Licence (GOL)/ Change in Scope of Licence (CSOL):

1. Each category (Adult and kids) and Type (Type 1 and Type 2-adult category) of any size may be tested to include the Category and the Type for all sizes in the scope of licence.
2. For each **Additional Claims** (applicable for Type 1), shoes of any size and combination may be tested for the requirement claimed. However, if Water proofness claim is covered for Type 1, the same may be covered for Type 2 and Kids

If certain materials have already been tested (and footwear made from these materials already covered in the scope of licence on that basis), new varieties of footwear may be added in the scope of licence without chemical testing of those materials which have 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 chemical testing for certain materials, shall declare that there is no change in the type/nature and/or the source of the materials already tested.

All combinations of components of footwear within the scope of Licence may be informed by Licencee to BIS. It shall be responsibility of the manufacturer to ensure compliance of the footwear with different component combination to all the requirements of the Indian Standard.

Scope of licence shall be restricted based on the manufacturing and testing facilities available.

During operation of licence, samples of each variety covered in the scope of licence, shall be tested in rotation, to the extent possible

ANNEX – B

LIST OF TEST EQUIPMENTS

(INDICATIVE LIST, FOR GUIDANCE ONLY)

Sl. No.	Tests used in with clause reference	Test Equipment / Chemicals
1.	Bond strength, Upper to outsole SI no i) table 1, CI 5.4, Inter layer bond strength, midsole to outsole, SI no ii) table 1, CI 5.4, Bond Strength between Rubber top-lift and adjacent material SI no iv), table 12, CI 6.5.2.3, Adhesion strength SI v), table 14 CI 6.7	Tensile testing machine with a chart recorder, clamping jaws for tensile tester, razor or sharp knife, steel scale, sample press, humidity chamber
2.	Whole shoe flexing, SI no iii) table 1, CI 5.4	As per IS 8085(Part 16)/ISO 24266 '
3.	Water proofness on complete shoe SI no iv) table 1, CI 5.4	flexing machine, tray, Absorbent paper, deionized water, conditioning chamber
4.	Slip resistance, Cof SI no v) table 1, CI 5.4	A slip resistance test machine incorporates as per E-4 of Annex E, with a secure attachment point, Dry, absorbent paper towel, conditioning chamber and arrangement to maintain room temperature at 27+-2 °C and requirements as per Annex N
5.	Attachment strength of strap and buckle/D-ring, SI no vi) table 1, CI 5.4, Attachment strength of strap and Velcro, SI no vii) table 1, CI 5.4	A tensile testing machine, as per CI D-3 of IS 6721, knife, scale
6.	Strength of eyelet attachment SI no viii) table 1, CI 5.4	tensile testing machine and accessories as per C 3 of Annex C,
7.	Heel pull off strength SI no ix) table 1, CI 5.4	Tensile-testing machine as per CI 4.1 of IS 8085 (Part 10), Devices for attaching the shoe heel, Device for chunky heels, Dividers
8.	Top piece attachment strength, SI no x) table 1, CI 5.4	Tensile Testing machine as per ISO 19958 with drill bolt and rod
9.	Seam strength, SI no xi) table 1, CI 5.4	Tensile testing machine, Small sharp hand knife, scissors, press knife, sewing machine, accessories. (as per IS 8085 (Part 13), Method B)
10.	Whole shoe topline strength, SI no xii) table 1, CI 5.4	Tensile testing machine, sharp hand knife, lacing gap or elastic gusset, narrow tape, conditioning chamber
11.	Abrasion resistance - SI no Xiii), Table 1, CI 5.4	<u>For Cellular and solid sole</u> Abrasion machine as per 5.1 of IS 3400 (Part 3)/ ISO4649, abrasive sheet, Hollow drill, balance, standard reference compounds. Conditioning chamber, arrangement for

		keeping ambient temperature, standard reference compounds <u>For leather sole</u> A rigid table with resin bonded abrasive paper, A carriage fitted with two square specimen holder as per CI B-3, Two steel plates, Thickness gauge with LC of 0.01 mm and the applied pressure of 49 kPa $\pm$ 5 kPa, as per CI B-4, conditioning chamber
12.	Chemical requirement, SI no xiv) table 1, CI 5.4	As per IS 17011
13.	Lead content SI no xv) table 1, CI 5.4	Nessler cylinders, P-Nitrophenol indicator Sol, Dil Hydrochloric acid, hydrogen sulphide solution, Standard lead solution, whatmanfilter paper
14.	Hydrolysis resistance SI no xvi) table 1, CI 5.4	as per IS 16255/ ISO 5423 : 1992
15.	Tear strength SI no i), Table 2, CI 6.1.1	Tensile testing machine as per 4.1 of IS 5914(Part 5:Sec2):2023, thickness gauge, pressknife as per IS 5914(Part 5:Sec2):2023, conditioning chamber
16.	Flexing resistance, SI no ii), Table 2, CI 6.1.1, SI no iii), Table 3, CI 6.1.2; SI no vi) Table 4,CI 6.1.3	Test machine as per CI .1 of IS 5914 (Part 6/Sec1), Press knife, Magnifier, Desiccator, Vacuum pump, Distilled or deionized water, Glass dishes, Mandrel, Metal clip, Stereo microscope
17.	Color Fastness to rubbing (marring/staining) SI no iii), Table 2, CI 6.1.1	Rub fastness test apparatus Rubbing material, Vessel suitable for evacuation, Vacuum pump, Demineralized water, Grey scale for assessing staining, Grey scale for assessing change in colour, Spectrophotometer or colorimeter for assessing change in colour and staining (as per IS 6191 (Part 4)/ISO 11640)
18.	Colour fastness to water (contact method – multi fabrics) SI no iv), Table 2, CI 6.1.1	Test apparatus as per CI 4.1 of IS 6191 (Part 2)/ ISO 11642, Oven, maintained at 37 °C $\pm$ 2 °C. Adjacent fabrics (ISO 105-A01). Demineralized water, Fine-grained adhesive paper, Grey scale for assessing staining, Grey scale for assessing change in colour, Spectrophotometer or colorimeter for assessing change in colour and staining, vacuum-desiccator, Vacuum pump, (as per)
19.	Water vapour permeability, Water vapour coefficient, SI no v), Table 2, CI 6.1.1, SI no v) Table 4,CI 6.1.3, SI no v) Table 6,CI 6.2; Water resistance, (Water absorption percent, Water transmission) SI no ii), Table 3, CI 6.1.2	Permeability Appts as per cl 6.6 & 6.7 of IS 15298 (Part-1), Jars or Bottles, Holder, Fan, Silica Gel, Mesh, Conditioning Chamber, Oven, Balance, Stop Watch, Vernier Caliper, Flexometer as per CI. 6.6.2.8 of IS 15298 (Part 1), Circular Metal Container with impermeable material as per CI 6.7.2.1 of IS 15298 (Part 1), Hygrometer, Thermometer, arrangement for having a conditioning atmosphere of (27 $\pm$ 2) °C, (65 $\pm$ 5) % RH
20.	Stitch tear strength, SI no vi), Table 2, CI 6.1.1	metal wire, punch, testing machine as per 3.3 of LP 8 of IS 5914

21.	Abrasion resistance SI no vii), Table 2, CI 6.1.1; SI no vii) Table 4, CI 6.1.3; SI no ii) Table 6, CI 6.2; SI no ii), Table 8 CI 6.4	Abrasion Machine as per cl. 6.12.2.1 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.
22.	Colour fastness to light, Marring SI no i), Table 3, CI 6.1.2; SI no i), Table 5 CI 6.1.4	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
23.	Flexing resistance flexes at $(-)$ $5 ^\circ\text{C}$ 25000 flexes SI no ii) Table 5 CI 6.1.4 Flexing resistance flexes, SI no iv) Table 4, CI 6.1.3	Test machine as per 5.1 of IS 8085 (Part 20), press knife, optical magnifier, distilled/deionized water, glass dish, filter paper, dessicator, vacuum pump, cabinet as per 5.5 of IS 8085 (Part 20),
24.	Breaking strength, Elongation at break, percent, SI no i) Table 4, CI 6.1.3	Tensile Testing machine as per CI 4.1 of ISO 17706, press knife, Vernier caliper/ Steel rule
25.	Tear Strength SI no ii) Table 4, CI 6.1.3, Tear strength SI no i) Table 5, CI 6.2	Tensile testing machine as per IS 7016 (Part 3/Sec 1)/ISO 4674-1 or IS 8085 (Part 9)/ISO 17696, conditioning chamber, press knife
26.	Strength at needle perforation, SI no iii) Table 4, CI 6.1.3; SI no ii), Table 16, CI 6.9	Tensile testing machine as per CI 4.1.1 of IS 8085 (Part 13), Needle holding , Two rectangular rigid plates , drilled plates, spacing plate, Seventeen needles (as per 4.1.3 of IS 8085 (Part 13)), normal round point, Press knife/cutting device
27.	Colour fastness rubbing, SI no iii) Table 6, CI 6.2	apparatus as per 4.1 of ISO 105-X12, Cotton rubbing cloth, Soft-back waterproof abrasive paper, Grey scale
28.	Colour fastness to perspiration (Contact method –staining), SI no iv) Table 6, CI 6.2	Rub fastness test apparatus, Rubbing material, vacuum- dessicator, Vacuum pump, Demineralized water grade 3, Grey scale for assessing change in colour, Grey scale for assessing staining
29.	Flexing index, SI no i) Table 7, CI 6.3	A flexing machine with attachments as per F-2.1 of Annex F, tongue wrench, conditioning chamber, arrangement to maintain atmosphere surrounding the test machine at a temperature of $(27 \pm 2) ^\circ\text{C}$ and a relative humidity of 65 ± 2 percent,
30.	Abrasion resistance at 400 cycles, SI no ii) Table 7, CI 6.3	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).
31.	Water absorption, Water desorption percent, SI no iii) Table 7, CI 6.3, SI no iii), Table 8 CI 6.4	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
32.	Thickness mm, SI no i), Table 8 CI 6.4	Test machine as per CI 4.1 of ISO 2589, conditioning chamber

33.	Flexing resistance (belt method) Benn wart method, SI no i), Table 9, CI 6.5.1	Belt Method Flexing machine as per 2.1 of IS 8085 (Part 4), Polyurethane adhesive system, sharp knife or scalpel, Smooth-surfaced hand tool, a hot air gun or an oven set at 50 °C, Heat sensitive crayons, Primers, T square, A thin strip of metal with a length scale or stepped thickness. Bennewart Method Flexing machine, (D 3, Figure 1) of Annex D, vernier calipers, chisel thermometer with LC of 1 °C, thickness gauge
34.	Hydrolysis resistance, SI no ii), Table 9, CI 6.5.1	Micrometer, vernier, Oven/air gun, Desiccator, Flexing machine (as per CI 2.1 of IS 8085 (Part 4), PU adhesive system as per CI 2.2 of IS 8085 (Part 4), Cutting device, smooth surfaced hand tool, rated cabinet, thermometer, Primers as per CI 2.7 of IS 8085 (Part 4),
35.	Compression set, percent, SI no iii), Table 9, CI 6.5.1; SI no iii), Table 13, CI 6.6	Method A thickness gauge with means for application of pressure, platen press, rigid spacer plates and rotating circular cutter as per G-1.3 of Annex G, oven for maintaining temp at (23 ± 2) °C or (20 ± 2)°C, a band knife splitter or a surface grinder. Stop watch, thickness gauge Method B compression apparatus as per G-2.1.1 conditioning chamber, thickness gauge
36.	Grain crack index, SI no i), Table 10, CI 6.5.2.1	apparatus as per 4 of ISO 3378, conditioning chamber, thickness gauge
37.	Density, SI no ii), Table 10, CI 6.5.2.1	thickness gauge, balance with LC of 0.0001g, vernier calliper (LC 0.01 mm), arrangement for standard atmospheric conditions of labas per ISO 2420
38.	Abrasion resistance, SI no iii), Table 10, CI 6.5.2.1	A rigid table with resin bonded abrasive paper, A carriage fitted with two square specimen holder as per CI B-3, Two steel plates, Thickness gauge with LC of 0.01 mm and the applied pressure of 49 kPa ± 5 kPa, as per CI B-4, conditioning chamber
39.	Water resistance, SI no i), Table 11, CI 6.5.2.2	Test machine as per CI 5.1 of ISO 5404, Undyed cotton gauze, Press knife, Thickness gauge, Absorbent cellulosic board, Abrasive paper, Balance reading to 0,001 g , Clock, reading to 1 s, Flexible waterproof adhesive, Transparent overlay, filter paper, conditioning chamber
40.	Hardness, SI no i), Table 12, CI 6.5.2.3	Durometer, Type A consisting of the following components: a) Presser foot, with a hole between 2'5 and 3'5 mm in diameter, centred at least 6 mm from any edge of the foot. b) Indenter, formed from a hardened steel rod between 1.10 and 1'40 mm in diameter to the shape and dimensions shown in Fig. 1 for Type A durometers in IS 12240 (Part 2):1988.
41.	Density, SI no ii), Table 12, CI 6.5.2.3	Balance (LC-1 mg), Balance straddle, Beaker (250 ml), Copper wire, oven, sinker, cutting device
42.	Abrasion resistance, SI no iii), Table 12, CI 6.5.2.3	Abrasion machine as per 5.1 of IS 3400 (Part 3)/ ISO4649, abrasive sheet, Hollow drill, balance, standard reference compounds. Conditioning chamber, arrangement for keeping ambient temperature, standard reference compounds

43.	Heat shrinkage, SI no i), Table 13, CI 6.6	Air-circulating oven, capable of maintaining a temperature of $70.0 \pm 1.0^{\circ}\text{C}$, Steel scale, with LC of 0.5 mm, vernier Caliper (LC of min 0.1 mm), arrangement to maintain temperature at $27.0 \pm 2.0^{\circ}\text{C}$, stop watch
44.	Split tear strength SI no ii), Table 13, CI 6.6	Tensile Testing Machine, with chart recorder as per Annex H, Clamping Jaws, preferably rubber-faced, sharp blade
45.	Hardness, SI no i), Table 14, CI 6.7	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
46.	Resilience, SI no ii), Table 14, CI 6.7	
47.	Moisture resistance SI no iii), Table 14, CI 6.7	
48.	Area shape retention, SI no iv), Table 14, CI 6.7	
49.	Peel strength, SI no i), Table 15, CI 6.8	Tensile Testing Machine as per 5.1 of IS 8085 (Part 18)/ISO 22777, roller device, fork, touch and close cycling machine as per 5.2, 5.3 and 5.4
50.	Shear strength SI no ii), Table 15, CI 6.8	Tensile testing machine as per ISO 22667, roller device, fork as per 5.3 of ISO 22776
51.	Limit of useful extension SI no i), Table 16, CI 6.9	Tensile testing machine, Steel ruler. (as per IS 8085 (Part 12)/ISO 10765)
52.	Lace breaking strength, SI no i), Table 17, CI 6.10	A tensile testing machine as per Annex K of IS 15644 (part 1), conditioning chamber,
53.	Lace tag strength, SI no ii), Table 17, CI 6.10	Tensile strength testing machine as per L-1 and Slotted Plate as per L-1.2 of Annex L of IS 15644 (part 1)
54.	Lace to lace abrasion resistance cycles SI no iii), Table 17, CI 6.10	as per IS 8085 (Part 17)/ISO 22774
55.	Colour fastness to water for lace contact method staining SI no iv), Table 17, CI 6.10	Rub fastness test apparatus, Rubbing material, vacuum-desiccator, Vacuum pump, Demineralized water grade 3, Grey scale for assessing change in colour, Grey scale for assessing Staining.
56.	Corrosion resistance SI no v), Table 17, CI 6.10	Method 1 Kipps generator, Means of suspending the test specimen in the glass vessel, Fume cupboard Method 2 Sealable polyethylene (PE) bags, Sodium chloride test solution, Sealable vessel, bleached cotton fabric, dish, distilled water, cutter/scissor, timer
57.	Fatigue resistance, SI no i), Table 18, CI 6.11	test machine, fixed clamp, free clamp, test fastener, tape, slider, puller, teeth, end stop top stop, stringer, harmonic reciprocating motion, abrasive paper
58.	Security of puller attachment strength, SI no ii), Table 18, CI 6.11	Tensile testing machine, tape, slider, puller, teeth, end stop top stop, stringer, fastener slider, Torsion, clamps,
59.	Lateral load, SI no iii), Table 18, CI 6.11	Tensile testing machine, tape, slider, puller, teeth, end stop top stop, stringer, abrasive paper, clamps,

60.	End attachment strength, SI no iv), Table 18, CI 6.11	Tensile testing machine, upper clamp of testing machine, small hook, slider puller, stringer, lower clamp,
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ANNEX C

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 the 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 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 (through tags/stickers or otherwise) with the following additional requirement on the package/Product (in case only bulk packaging is done):

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 (Rejection) shall be followed by all.

TABLE 1
(ONLY FOR GUIDANCE PURPOSE)

-1				-2	-3		
Test Details				Test equipment requirement R: required (or) S: Sub-contracting permitted	Levels of Control		
Clause	Requirement	Test Methods			No. of Sample	Frequency	Remarks
		Clause	Reference IS				
5.1	Shape and Design	5.1	IS 17043 Part 2	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		
5.2	Construction	5.2	IS 17043 Part 2				
5.3	Material	5.3	IS 17043 Part 2				
5.4 Table 1 Complete Product Performance for All Types of Shoes for General Shoes							
i)	Bond strength, N/mm, Min	Annex-C	IS 15844 Part 1	R	one	Each control unit	Not applicable for stitched down construction
ii)	Inter layer bond strength	Annex-C	IS 15844 Part 1				applicable only for multilayer sole
iii)	Whole shoe flexing flexes	Method-A	IS 8085 Part 16	S	one	Once in three months	not applicable for rigid plastic sole and heel height above 50 mm shoe which is not able to flex or bend at forepart
iv)	Water proofness on complete shoe	Annex B	IS 17043 Part 2	S	one	-do-	applicable only if water proof shoes is claimed
v)	Slip resistance Cof	Annex E	IS 15844 Part 1	S	one	-do-	not applicable for leather sole
vi)	Attachment strength of strap	Annex D	IS 6721	R	one	Each control unit	Applicable if present and functional

	and buckle/D-ring						
vii)	Attachment strength of strap and Velcro, N,min	Annex D	IS 6721	R	one	Each control unit	Applicable if present and functional
viii)	Strength of eyelet attachment	Annex C	IS 17043 Part 2	R	one	Each control unit	Applicable if present and functional
ix)	Heel pull off strength	-	8085 Part 10	R	one	Each control unit	applicable for heel height 50 mm and above attached separately to the shoe
x)	Top piece attachment strength	-	ISO 19958	R	one	Each control unit	applicable if top piece is present and attached separately
xi)	Seam strength,	Method B	IS 8085 Part 13	R	one	Each control unit	Applicable for adult (Type 1)
xii)	Whole shoe topline strength,	Annex D	IS 17043 Part 2	R	one	Each control unit	1. applicable to only court shoe with high heel shoes above 50 mm 2. Applicable for adult (Type 1)
xiii)	Abrasion resistance (volume loss)			S	one	Once in three months	
	a) Cellular sole		3400(Part 3) 2021				
	b) Solid sole						
	c) Abrasion resistance, (for leather sole only)		Annex-B of IS 6721:2023				1. for leather sole only 2. Applicable for adult (Type 1)
xiv)	Chemical requirements	5.4	IS 17043 Part 2	S	one	Each consignment of raw material	1. Only on all the components of shoes which are in direct contact of foot. 2. Testing to be done for critical substances Category I and Category

							II of Table 1 of IS 17011 3. Test Certificate/report may be obtained either from supplier or from any independent Laboratory
xv)	Lead content (as Pb)	-	IS 12240 Part 5	S	one	Each consignment of raw material	1. applicable only for PVC 2. Applicable for kids and adult (Type 1) 3. Test Certificate/report may be obtained either from supplier or from any independent Laboratory
xvi)	Hydrolysis resistance	-	IS 15298 Part 1	S	one	Once in three months	1. applicable for PU sole only 2. not applicable for rigid sole
Optional requirements (Applicable for adult, Type 1)							
6.1.1, Table 2 Upper Material Leather							
i)	Tear strength	-	IS 5914 (Part 5/Sec-2)/ ISO 3377-2	S	one	Each consignment of material or Test Certificate from supplier/ Manufacturer	
ii)	Flexing resistance	-	IS 5914 Part 6/Sec 1	S	one	-do-	
iii)	Colour fastness to rubbing (marring/ staining)	-	ISO 11640 : 2012	S	one	-do-	
iv)	Colour fastness to water	contact method- multi fabrics	ISO 11642	S	one	-do-	
v)	Water vapour permeability, coefficient	-	IS 15298 Part 1	S	one	-do-	

vi)	Stitch tear strength	-	IS 5914- LP 8	S	one	-do-	
vii)	Abrasion resistance	-	IS 15298 Part 1	S	one	-do-	applicable for unlined upper
6.1.2, Table 3 Additional Requirements Based on the Claims of the Manufactures							applicable if present
i)	Colour fastness to light, Marring	-	IS/ISO 105 B02	S	one	-do-	
ii)	Water resistance	-	IS 15298 Part 1	S	one	-do-	
iii)	Flexing resistance,	-	IS 5914 Part 6/Sec 1	S	one	-do-	applicable only cold region
6.1.3, Table 4 Upper Material Non Leather (Coated Fabric and Textiles)							
i)	Breaking strength	-	ISO 17706	S	one	-do-	
	Elongation at break						
ii)	Tear strength	Method B	IS 7016 Part 3/Sec 1	S	one	-do-	
iii)	Strength at needle perforation	Method A	IS 8085 Part 13	S	one	-do-	
iv)	Flexing resistance flexes	-	IS 8085 Part 20	S	one	-do-	applicable only for cold region
v)	Water vapour permeability, Coefficient	-	IS 15298 Part 1	S	one	-do-	Applicable only for non-laminated textile
vi)	Hydrolysis resistance	-	IS 5914 Part 6/Sec 1	S	one	-do-	applicable for PU coated material
vii)	Abrasion resistance	-	IS 15298 Part 1	S	one	-do-	applicable for unlined upper
6.1.4, Table 5 Additional Requirements Based on the Claims of the Manufactures							
i)	Colour fastness to light, Marring	-	IS/ISO 105 B02	S	one	-do-	
ii)	Flexing resistance	-	IS 8085 Part 20	S	one	-do-	
6.2, Table 6 Lining for all Materials							If used
i)	Tear strength	Method B	IS 7016 Part 3/Sec 1	S	one	-do-	
ii)	Abrasion resistance	-	IS 15298 Part 1	S	one	-do-	

iii)	Colour fastness rubbing	-	IS/ISO 105 X12	S	one	-do-	
iv)	Colour fastness to perspiration	contact method-staining	IS 6191 Part 6	S	one	-do-	
v)	Water vapour permeability, Coefficient,	-	IS 15298 Part 1	S	one	-do-	applicable only for textile and leather lining
6.3 Table 7 Requirements for Insole							If used
i)	Flexing index	Annex F	IS 15844 Part 1	S	one	-do-	For Cellulose and leather board
ii)	Abrasion resistance at 400 cycles	-	IS 15298 Part 1	S	one	-do-	
iii)	Water absorption Water desorption	-	IS 15298 Part 1	S	one	-do-	
6.4 Table 8 Requirement for In -Sock							
i)	Thickness	-	ISO 2589	S	one	-do-	
ii)	Abrasion resistance	-	IS 15298 Part 1	S	one	-do-	
iii)	Water absorption Water desorption	-	IS 15298 Part 1	S	one	-do-	
6.5.1 Table 9 Outsole – Other than Leather							If used
i)	Flexing resistance	belt method or Bennewart method	IS 8085 Part 4 IS 15844 (Part 1) Annex D	S	one	-do-	not applicable for rigid plastic sole which is not able to flex or bend at forepart
ii)	Hydrolysis resistance	-	IS 15298 Part 1	S	one	-do-	applicable for PU sole only
iii)	Compression Set	Annex G	IS 15844 Part 1	S	one	-do-	applicable for cellular sole only

6.5.2.1 Table 10 Sole-Leather Used in Shoes							
i)	Grain crack index,	-	ISO 3378	S	one	-do-	
ii)	Density,	-	IS 5914 Part 4	S	one	-do-	
iii)	Abrasion resistance	Annex B	IS 6721	S	one	-do-	
6.5.2.2 Table 11 Additional Requirements based on the claims of the Manufacturer for Water Resistance							
i)	Water resistance	-	ISO 5404	S	one	-do-	
a)	No water penetration	-	ISO 5404	S	one	-do-	
b)	Water absorption	-	ISO 5404	S	one	-do-	
6.5.2.3 Table 12 Applicable for Rubber or Polymeric Top-Lifts							
i)	Hardness, (Shore A)	-	IS 5676	S	one	-do-	
ii)	Density	Annex C	IS 10702	S	one	-do-	
iii)	Abrasion resistance (volume loss)	-	IS 3400 Part 3	S	one	-do-	
iv)	Bond Strength	Annex C	IS 15844 Part 1	S	one	-do-	
6.6 Table 13 Requirements for Midsole							If used
i)	Heat shrinkage	Annex J	IS 15844 Part 1	S	one	-do-	
ii)	Split tear strength	Annex H	IS 15844 Part 1	S	one	-do-	
iii)	Compression set	Annex G	IS 15844 Part 1	S	one	-do-	applicable for cellular sole only
6.7 Table 14 Toe and Counter Stiffener							If used
i)	Hardness	Annex A - 3.2	IS 7554	S	one	-do-	

ii)	Resilience, percent	Annex A-3.4	IS 7554	S	one	-do-	
iii)	Moisture resistance	Annex A-3.5	IS 7554	S	one	-do-	
iv)	Area shape retention a) Initial, b) After 10 collapsing load	Annex A-3.1/ Annex A-3.3	IS 7554	S	one	-do-	
v)	Adhesion strength	Annex C	IS 15844 Part 1	S	one	-do-	
6.8 Table 15 Requirements for Velcro Fastener							If used
i)	Peel strength a) Initial, b) After 5 000 wear cycles,	-	IS 8085 Part 18	S	one	-do-	
ii)	Shear strength a) Initial, b) After 5 000 wear cycles	-	IS 8085 Part 19	S	one	-do-	
6.9 Table 16 Requirements for Elastic Tape							If used
i)	Limit of useful extension	-	IS 8085 Part 12	S	one	-do-	
ii)	Needle strength	Method A	IS 8085 Part 13	S	one	-do-	
6.10 Table 17 Fasteners (Lace/Buckle/Eyelet/D-Ring/Ski-Hook/Metal trims)							If used and not for decorative purpose
i)	Lace breaking strength	Annex K	IS 15844 Part 1	S	one	-do-	
ii)	Lace tag strength	Annex L	IS 15844 Part 1	S	one	-do-	
iii)	Lace to lace abrasion resistance	6.10	IS 8085 Part 17	S	one	-do-	
iv)	Colour fastness to water	for lace contact method-staining	IS 6191 Part 2	S	one	-do-	

v)	Corrosion resistance	6.10	IS 17098	S	one	-do-	applicable for all including decorative metal part
6.11 Table 18 Requirements for Zipper							If used
i)	Fatigue resistance	-	ISO 10751	S	one	-do-	
ii)	Security of puller attachment	-	ISO 10734	S	one	-do-	
iii)	Lateral load	-	ISO 10764	S	one	-do-	
iv)	End attachment strength	-	ISO 10750	S	one	-do-	