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उत्पाद मैनुअल

खेल के जूते भाग -3 पेशेवर खेल के लिए जूते

IS 15844 (Part 3): 2024 के अनुसार

**PRODUCT MANUAL FOR
SPORTS FOOTWEAR PART-3 PROFESSIONAL SPORTS FOOTWEAR
ACCORDING TO IS 15844 Part 3: 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.	:	IS 15844 (Part 3): 2024
	शीर्षक Title	:	खेल के जूते भाग -3 पेशेवर खेल के लिए जूते SPORTS FOOTWEAR PART -3 PROFESSIONAL SPORTS FOOTWEAR
	संशोधनों की संख्या No. of amendments	:	NIL
2.	नमूना दिशानिर्देश Sampling Guidelines		
a)	कच्चा माल Raw material	:	Declaration for raw material of components to be submitted 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 shoes for each variety. (3 pairs of shoes for physical testing and one pair for Chemical analysis.). Components may be provided separately if required 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)
d)	परीक्षण अनुरोध में घोषित किए जाने वाले पैरामीटर Parameters to be Declared in Test Request	:	1. Upper 2. lining 3. In sock 4. sole 5. Heel drop 6. Counter stiffener 7. Velcro fastener 8. Elastic tape 9. Fasteners 10. The spike/studs 11. Size and fittings Note: This section indicates declared values to be specified against a parameter (in Test Requests) to enable testing of sample against the requirement and determine its conformity. Any other requirements/parameters may also be declared as per the standard, as applicable.
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. 5.1 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 (except water vapour permeability and coefficient) 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:		
	IS 15844 Part 3: 2024 के अनुसार मानक मुहर का उपयोग करने के लिए लाइसेंस निम्नलिखित कार्यक्षेत्र के लिए प्रदान किया जाता है “Licence is granted to use Standard Mark as per IS 15844 Part-3: 2024 with the following scope:		
	Name of the product	Sports Footwear Professional Sports Footwear	

	Materials of various parts	S. No	Part of Footwear	Materials (as applicable)
		i)	Upper	A. Leather a) Coloured/normal, b) water proof, water repellant/ not water proof, water repellant B. Other than leather a) Type I i. Coated Fabric - with/without PU coating ii. Fully Moulded b) Type II (Textile) i) Knitted/ non knitted fabric c) Combination of Type I & II C. Combination of A and B
		ii)	lining	A. With a) Type I Coated Fabric b) Type II Textile B. without
		iii)	In sock	A. With (Removable/ non removable) a) EVA, b) latex sponge rubber, c) PU foam or d) combination B. without
		iv)	sole	A. Normal/composite B. Cleated/ non cleated C. With/ without carbon plates D. Layer 1. Single layer 2. Multilayer a) Midsole i with/without, ii EVA/ other material b) Insole i with /without ii cellulose board/other c) Outsole i. Cellular/Solid ii. PU/other
		v)	Heel drop	Category to be specified
		vi)	Counter stiffener	With/without
		vii)	Velcro fastener	With/without
		viii)	Elastic tape	With/without
		ix)	Fasteners	A. With a) Decorative/non decorative b) Lace/ Buckle/Eyelet/D-Ring/Ski-Hook/Metal trims c) With/ without Metal part B. without

		x)	The spike/studs	A. With a) Removable/non removable b) Metallic/ non metallic B. without
		xi)	Size and fittings	Sizes to be declared

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ANNEX A
GROUPING GUIDELINES
PROFESSIONAL SPORTS FOOTWEAR TO IS 15844 P-3: 2024

1. Categorization of Professional sports footwear as per the Indian Standard along with the grouping guideline is given below in the table:

Upper	A. Leather a) Coloured/normal, b) water proof, water repellant/ not water proof, water repellant B. Other than leather a) Type I i. Coated Fabric with/without PU coating ii. Fully Moulded b) Type II (Textile) c) Combination of Type I & II a) Knitted/ non knitted fabric C. Combination of A & B	Each upper material form (A, B and C) may be tested If Coloured leather is tested, normal leather may be covered If footwear with leather not water proof/water repellant is tested, footwear with water proof/water repellant leather may also be included Each Type i.e., Type 1 (Coated Fabric and Fully Moulded), Type 2, combination, may be tested to be covered in the scope If material with PU coating is tested, material without PU coating may be covered If Knitted Fabric is tested, non-knitted may be covered. In case, in any combination, upper comes in direct contact with foot, compliance of upper to the chemical requirement for that variety shall be ensured.
lining	A. With a) Type I Coated Fabric b) Type II Textile B. without	If shoe with lining is tested, shoes without lining may be covered. However, in such case, compliance to chemical requirement of the component coming in contact with foot in absence of lining for that variety shall be ensured. Each Type i.e., Type 1 (Coated Fabric), Type 2 (Textile), may be tested to be covered in the scope
In sock	A. With (Removable/non removable) a) EVA, b) latex sponge rubber, c) PU foam or d) combination B. without	If shoe with insock is tested, shoes without insock may be covered. If shoe with non-removable insock is tested, shoes with removable insock may be covered. However, in both cases, compliance to chemical requirement of the component coming in contact with foot in absence of insock for that variety shall be ensured. If shoes with In sock other than EVA is tested, shoes with in sock of EVA may also be covered. However, compliance to the chemical requirements for all the applicable materials shall be ensured

sole	A. Normal/composite B. Cleated/ non cleated C. With/ without carbon plates D. Layer 1. Single layer 2. Multilayer a) Midsole i with/without, ii EVA/ other material b) Insole i with /without ii cellulose board/other c) Outsole i. Cellular/Solid ii. PU/other	If composite sole is tested, normal sole may be covered If non cleated sole is tested, cleated sole may be covered in the scope Both the type of sole (With/ without carbon plates) may be tested to be covered in the scope If multilayered sole is tested, single layered may be covered If sole with midsole is tested, sole without midsole may be included. Both the type of material, i.e., Midsole of EVA/ other material may be tested to be covered in the scope If sole with insole is tested, sole without insole may be included. If sole with Cellulose board insole is tested, sole with insole of other material may be covered in the scope. Both the type of outsole (Cellular/Solid) may be tested to be covered in the scope If PU sole is tested, outsole of material other than PU may be covered
Heel drop	Category to be specified	Each category of the heel drop to be tested
Counter stiffener	With/without	If shoe with Counter stiffener is tested, shoes without Counter stiffener may be covered
Velcro fastener	With/without	If shoe with Velcro fastener is tested, shoes without Velcro fastener may be covered
Elastic tape	With/without	If shoe with Elastic tape is tested, shoes without Elastic tape may be covered
Fasteners	A. With a) Decorative/non decorative b) Lace/ Buckle/Eyelet/DRing/Ski-Hook/Metal trims c) With/ without Metal part B. without	If shoe with Fasteners is tested, shoes without Fasteners may be covered If shoe with non-decorative Fasteners is tested, shoes with decorative Fasteners may be covered. In case of fasteners for non-decorative purpose, if Lace/ Buckle/Eyelet/D-Ring/Ski-Hook/Metal trims are used, the same may be tested and covered as applicable If Fasteners with Metal part is tested, Fasteners without Metal part may also be covered
The spike/studs	A. With a) Removable/non removable b) Metallic/ non metallic B. without	Both type of shoes, i.e., with and without spike/studs may be tested to be covered in the scope. If removable spikes/studs are tested, non-removable spikes/studs may also be covered.
washability	Washable/non washable	If washable shoe is tested, non-washable shoes without may be covered
Size and fittings	Sizes to be declared	Any size to be tested to cover all the available sizes

2. For considering grant of licence/inclusion of varieties, **one sample of** each combination of materials of different parts of footwear of any size shall be drawn and tested to cover that combination of materials as per the grouping guideline.
3. 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.
4. Any change in combinations of components of footwear not having effect either on the scope of Licence or which does not elicit any testing of the footwear of that combination as per above grouping guideline, shall be informed to BIS by Licencee.
5. However, while considering grant of licence/inclusion of additional sizes/designs, it will be ensured that the applicant/licensee has got the complete manufacturing and testing facilities for all the sizes and designs intended to be covered.
6. During operation of the licence, BO will ensure that all the sizes/designs 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

(INDICATIVE LIST, FOR GUIDANCE ONLY)

Sl no	Test with CI reference	Equipment
1	Size and fittings CI 6	lasts for the different sizes
2	Bond Performance: Upper to Mid Sole/Out Sole, Upper to Composite Sole, Out Sole to Mid Sole (Multilayer) CI 7.1.1, CI 7.8 Table 8, SI no v)	Tensile testing machine with a chart recorder, clamping jaws for tensile tester, razor or sharp knife, steel scale, sample press, humidity chamber,
3	Energy Absorption at seat region CI 7.1.2	Test equipment, capable of measuring compressive force up to 6000 N, Test punch as per CI 5.14.1 of IS 15298 Part 1
4	Complete shoe flexing CI 7.1.3	As per IS 8085(Part 16)/ISO 24266 '
5	Washability CI 7.1.4	As per IS 8085(Part 15)
6	Slip Resistance CI 7.1.5	A slip resistance test machine incorporates as per E-4 of Annex E of IS 15844 (Part 1), 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
7	Heel Drop CI 7.1.6 & Table 1	vernier calliper, Scale
8	Flexing resistance Dry condition Wet condition CI 7.2, Table 2	Test machine as per CI .1 of IS 5914 (Part 6/Sec1)/ IS 8085 (Part 20), Press knife, Magnifier, Desiccator, Vacuum pump, Distilled or deionized water, Glass dishes, Mandrel, Metal clip, Stereo microscope
9	Tear strength CI 7.2, Table 2	Tensile testing machine as per 4.1 of IS 5914(Part 5:Sec2):2023, thickness gauge, press knife as per IS 5914(Part 5:Sec2):2023, conditioning chamber
10	Colour fastness Dry rubbing Wet rubbing CI 7.2, Table 2 SI no. iii); CI 7.3, Table 4 SI no. iii)	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

11	Water vapour permeability, Water vapour coefficient CI 7.2, Table 2 SI no. iv); CI 7.2, Table 3 SI no. vi); 7.3, Table 4 SI no. v)	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 Cl. 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 $(27 \pm 2) ^\circ\text{C}$, $(65 \pm 5) \% \text{RH}$
12	Stitch tear strength double hold CI 7.2, Table 2 SI no. v)	metal wire, punch, testing machine as per 3.3 of LP 8 of IS 5914
13	Colour fastness to light grey	Laboratory exposure devices as per 5.2 of IS/ISO 105- B02:2014.
	scale, CI 7.2, Table 2 SI no. vi); CI 7.2, Table 3 SI no. viii)	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
14	Tensile strength CI 7.2, Table 2 SI no. vii); CI 7.6, Table 7 SI no. v)	Tensile tester as per 5914 (Part 8)/ISO 3376
15	Abrasion test Dry Wet CI 7.2, Table 2 SI no. ix), CI 7.3, Table 4, SI no ii)	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.
16	Breaking strength; Elongation at break, CI 7.2, Table 3 SI no. i); CI 7.2, Table 3 SI no. ii)	Constant rate of extension (CRE) tensile testing machine as per CI 5.1 of IS 7016 (Part 2), Clamping device, Equipment for cutting test pieces and fraying them down to the required width, arrangement for maintaining test temperature of $27 ^\circ\text{C}$
17	Tear strength CI 7.2, Table 3 SI no. iii); CI 7.3, Table 4 SI no. i); CI 7.6, Table 7 SI no. iv)	ISO 3377-2 for leather; ISO 4674-1:2003, method B, for coated fabric and textile.
18	Needle Strength CI 7.2, Table 3 SI no. iv), CI 7.10, Table 11, SI no. ii)	tensile testing machine as per 4 of IS 8085 (Part 13)/ISO 17697, press knife, needles
19	Flexing resistance Dry condition Wet condition CI 7.2, Table 3 SI no. v)	Test machine as per IS 8085 (Part 20)/ ISO 17694
20	Hydrolysis resistance CI 7.2, Table 3 SI no. vii)	as per IS 16255/ ISO 5423 : 1992
21	Bursting Strength CI 7.2, Table 3 SI no. ix)	Bursting tester as per 6.1 of IS 1966 (Part 2)

22	Colour fastness to rubbing (crocking), CI 7.3, Table 4 SI no. iii)	apparatus as per 4.1 of ISO 105-X12, Cotton rubbing cloth, Soft- back waterproof abrasive paper, Grey scale
23	Colour fastness to perspiration CI 7.3, Table 4 SI no. iv)	stainless-steel frame as per CI 4.1 of IS 6191 (Part 6) : 2023 ISO 11641 : 2012, Oven, Adjacent fabrics, Alkaline artificial perspiration solution, Acid artificial perspiration solution, Finegrained adhesive paper, Grey scale for assessing staining, Rub fastness test apparatus, Spectrophotometer or colorimeter, vacuum- desiccator, Vacuum pump, ph meter, Volumetric flask, Hydrochloric acid solution, Demineralized water grade 3, Grey scale for assessing change in colour
24	Flexing index CI 7.4, Table 5 SI no. i)	A flexing machine with attachments as per F-2.1 of Annex F of IS 15844 (Part 1), 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,
25	Abrasion resistance CI 7.4, Table 5 SI no. ii), CI 7.5, Table 6, SI no i)	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).
26	Water Absorption, Water Desorption CI 7.4, Table 5 SI no. iii); CI 7.5, Table 6 SI no. ii)	Water Absorption & Desorption Tester as per 7.2.2 of IS 15298 part 1, Brass Roller, Platform, Cotton gauge, Water Supply through flow meter, Press, Knife, Balance, Clock, Silicone grease
27	Heat resistance shrinkage linear CI 7.5, Table 6 SI no. iii), CI 7.7, Table 8 SI no. iii)	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
28	Abrasion resistance CI 7.6, Table 7 SI no. i)	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
29	Flexing resistance (Bennewart method, Ross flexing method) CI 7.6, Table 7 SI no. ii)	as per ISO 17707, Annex C and Annex E of IS 16645 /ISO 5423
30	Hydrolysis resistance CI 7.6, Table 7 SI no. iii)	Micrometer, Oven, Dessicator, Flexing machine (as per Annex C of ISO 5423) in a refrigerated cabinet Piercing chisel Cutting/buffing machine to reduce the thickness of the test piece, Condition chamber
31	Tear Strength CI 7.6, Table 7 SI no. iv)	method A of ISO 34-1. Micrometer, dial guage, optical projection apparatus, nick cutter, tensile testing machine as per 5.3 of IS 3400 Part 12, dies, arrangement for maintaining room temp at 27 ± 2

32	Tensile Strength; Elongation at break, CI 7.6, Table 7 SI no. v) CI 7.6, Table 7 SI no. vi); CI 7.7, Table 8 SI no. iv)	Dies and cutters, thickness guage, cone guage, tensile testing machine as per 7.4 of IS 3400 Part 1
33	Compression set CI 7.6 Table 7 SI no. vii), CI 7.7, Table 8 SI no. i)	Method A thickness guage 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 $(23 \pm 2) ^\circ\text{C}$ or $(20 \pm 2) ^\circ\text{C}$, a band knife splitter or a surface grinder. Stop watch, thickness guage Method B compression apparatus as per G-2.1.1 conditioning chamber, thickness guage
34	Split tear strength CI 7.7, Table 8 SI no. ii);	Tensile Testing Machine, with chart recorder as per Annex H, Clamping Jaws, preferably rubber-faced, sharp blade
35	First dry collapsing load, hardness; Resilience; Moisture resistance; a) Initial dry area shape retention, b) Area shape retention after 10th collapse CI 7.8, Table 9 SI no. i), ii), iii) & iv)	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
36	Peel strength CI 7.9, Table 10 SI no. i)	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
37	Shear strength CI 7.9, Table 10 SI no. ii)	Tensile testing machine as per ISO 22667, roller device, fork as per 5.3 of ISO 22776
38	Limit of useful extension CI 7.10, Table 11 SI no. i)	as per IS 8085 (Part 12)/ISO 10765
39	Breaking strength of lace CI 7.11, Table 12 SI no. i)	A tensile testing machine as per Annex K, conditioning chamber,
40	Lace tag strength CI 7.11, Table 12 SI no. ii)	Tensile strength testing machine as per L-1 and Slotted Plate as per L-1.2 of Annex L
41	Lace to lace abrasion CI 7.11, Table 12 SI no. iii)	as per IS 8085 (Part 17)/ISO 22774
42	Colour fastness to water CI 7.11, Table 12 SI no. iv)	<u>IS 6191 (Part 2)</u> 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 <u>IS/ISO 105-E01 : 2013</u> Test Device as per 4.1 of IS/ISO 105-E01 : 2013, oven, adjacent fabrics as per CI 4.3, Grey scale for assessing change in colour, Grey scale for assessing staining, Spectrophotometer or colorimeter for as per CI 4.6, acrylic

		resin plates, Flat-bottomed dish made of inert materials, Grade 3 water
43	Strength of Buckle/Ski hook /D-ring, CI 7.11 , Table 12 SI no. v)	tensile testing machine as per M-3, sharp knife or scissors, Upper leather, thickness about 2 mm, nylon or polyester shoe laces or suitable chape rivets and a clenching device (for buckles with a chape), thickness guage, scale, vernier calliper
44	Corrosion resistance CI 7.11 , Table 12 SI no. vi); CI 7.11 , Table 13 SI no. i)	<u>Method 1</u> Kipps generator, Means of suspending the test specimen in the glass vessel, Fume cupboard <u>Method 2</u> Sealable polyethylene (PE) bags, Sodium chloride test solution, Sealable vessel, bleached cotton fabric, dish, distilled water, cutter/scissor, timer
45	Chemical Requirement CI 7.12.1	As per IS 17011
46	Lead content CI 7.12.2	Nessler cylinders, P-Nitrophenol indicator Sol, Dil Hydrochloric acid, hydrogen sulphide solution, Standard lead solution, whatman filter paper

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 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/empanelled 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. For each Footwear heel drop category as per table 1 shall be marked on packing.

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 require ment R: required (or) S: Sub- contract ing permitted	Levels of Control		
Cl.	Requirement	Test Method			No. of Sample	Frequency	Remarks
		Clause	Reference				
5	Design	-	15844 (Part 3)	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		
6	Size and fittings	-	15844 (Part 3)	R			
7	Whole Footwear						
7.1.1	Bond Performance:	Annex C	15844 (Part 1)	R	One	each control unit	
	Upper to Mid Sole /Out Sole						
	Upper to Composite Sole						Applicable Only When the Sole is Composite
	Out Sole to Mid Sole (Multilayer)						1. Applicable if present and in case of Footwear is having multilayer soles 2. not applicable for composite sole.
7.1.2	Energy Absorption at seat region	-	15298 (Part 1)	S	One	Once a month	For each variety
7.1.3	Complete shoe flexing	(Method A)	ISO 24266	S	One	Once a month	For each variety
7.1.4	Washability	-	IS 8085 (Part 15)/ ISO 19954	S	One	once a month	For each variety

7.1.5	Slip Resistance	Annex E	IS 15844 (Part-1)	S	one	Once a month	1. For each variety 2. Not applicable for plated and cleated soles
7.1.6	Heel Drop	Fig 1	IS 15844 (Part-3)	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		
7.2, Table 2	Upper Material – Leather						
i)	Flexing resistance Dry condition Wet condition	-	IS 5914 (Part 6/Sec1)/ISO 5402-1 or IS 8085 (Part 20)/ISO 17694	S	One	each consignment of Raw material	Test Certificate/report should be obtained either from supplier or from any independent Laboratory
ii)	Tear strength	-	IS 5914 Part 5/Sec 2 ISO 3377-2	S	One	-do-	-do-
iii)	Colour fastness Dry rubbing Wet rubbing	-	IS 6191 (Part 4)/ISO 11640	S	One	-do-	-do-
iv)	Water vapour permeability, Water vapour coefficient	-	IS 15298 Part 1	S	One	-do-	1. Test Certificate/report should be obtained either from supplier or from any independent Laboratory 2. not applicable to water proof/water repellent leather
v)	Stitch tear strength double hold	-	LP 8 IS 5914	S	One	-do-	Test Certificate/report should be obtained either from supplier or from any independent Laboratory
vi)	Colour fastness to light grey scale,	-	IS/ISO 105-B02	S	One	-do-	-do-
vii)	Tensile strength	-	IS 5914 Part 8 ISO 3376	S	One	-do-	-do-

viii)	Elongation at break percent	-	IS 5914 Part 8 ISO 3376	S	One	-do-	-do-
ix)	Abrasion test	-	IS 15298 Part 1	S	One	-do-	-do-
7.3, table 3	Upper- coated fabric/textile or combinations thereof						
i)	Breaking strength	Method 1	IS 7016 (Part 2) /ISO 1421 :	S	One	-do-	-do-
ii)	Elongation at break,	Method 1	IS 7016 (Part 2) ISO 1421 or ISO 17706	S	One	-do-	-do-
iii)	Tear strength	-	IS 15298 (Part 1)	S	One	-do-	-do-
iv)	Strength at needle perforation	Method 'A'	IS 8085 (Part 13)/ ISO 17697	S	One	-do-	-do-
v)	Flexing resistance	-	IS 8085 (Part 20)/ISO 17694	S	One	-do-	-do-
vi)	Water vapour permeability	-	IS 15298 (Part 1)	S	One	-do-	1. Test Certificate/report should be obtained either from supplier or from any independent Laboratory not applicable for coated fabric 2.
	Water vapour coefficient						
vii)	Hydrolysis resistance	-	IS 15298 (Part 1)	S	one	-do-	1. Test Certificate/report should be obtained either from supplier or from any independent Laboratory 2. applicable for PU coated material
viii)	Colour fastness to light grey scale	-	IS/ISO 105-B02	S	One	-do-	Test Certificate/report should be obtained either from supplier or from any independent Laboratory

ix)	Bursting Strength	-	IS 1966 (Part 2)/ ISO 13938-2	S	One	-do-	1. Test Certificate/report should be obtained either from supplier or from any independent Laboratory 2. test applicable for Knitted Fabrics only
table 4 Clause 7.3,	Lining Material All Material (if used)						
i)	Tear strength	-	IS 15298(Part 1)	S	One	-do-	Test Certificate/report should be obtained either from supplier or from any independent Laboratory
ii)	Abrasion resistance	-	IS 15298(Part 1)	S	One	-do-	-do-
iii)	Colour fastness to rubbing (crocking),	-	IS/ISO 105 X12	S	One	-do-	-do-
iv)	Colour fastness to perspiration	contact method	IS 6191 (Part 6)/ISO 11641	S	One	-do-	-do-
v)	Water vapour permeability	-	IS 15298 (Part 1)	S	One	-do-	1. Test Certificate/report should be obtained either from supplier or from any independent Laboratory 2. excluding coated fabric
	Water vapour coefficient						
table 5 Clause 7.4	Insole (Applicable if used)						
i)	Flexing index	Annex F	IS 15844 (Part 1)	S	One	-do-	1. Test Certificate/report should be obtained either from supplier or from any independent Laboratory 2. applicable for cellulose board

ii)	Abrasion resistance	-	IS 15298 (Part 1)	S	One	-do-	Test Certificate/report should be obtained either from supplier or from any independent Laboratory
iii)	Water Absorption	-	IS 15298 (Part 1)	S	One	-do-	1. Test Certificate/report should be obtained either from supplier or from any independent Laboratory 2. applicable for cellulose board
	Water Desorption						
table 6 Clause 7.5,	In-sock/ Sock liner (if used)						
i)	Abrasion resistance	-	IS 15298(Part 1)	S	One	-do-	Test Certificate/report should be obtained either from supplier or from any independent Laboratory
ii)	Water Absorption Water Desorption	-	IS 15298(Part 1)	S	One	-do-	1. Test Certificate/report should be obtained either from supplier or from any independent Laboratory 2. not applicable for EVA
iii)	Heat resistance shrinkage linear	Annex J	IS 15844 (Part 1)	S	One	-do-	Test Certificate/report should be obtained either from supplier or from any independent Laboratory
table 7 Clause 7.6,	Outsole All Materials						
i)	Abrasion resistance	-	IS 3400 (Part 3)/ ISO 4649	S	One	-do-	-do-
ii)	Flexing resistance Bennewart method Ross flexing method	-	ISO 17707, Annex C and Annex E of IS 16645 /ISO 5423	S	One	-do-	-do-

iii)	Hydrolysis resistance	-	IS 15298(Part 1)	S	one	-do-	1. Test Certificate/report should be obtained either from supplier or from any independent Laboratory 2. Only for PU sole
iv)	Tear Strength	-	IS 15298(Part 1)	S	One	-do-	Test Certificate/report should be obtained either from supplier or from any independent Laboratory
v)	Tensile Strength	-	IS 3400 (Part 1)/ISO 37	S	One	-do-	-do-
vi)	Elongation at break,	-	IS 3400 (Part 1)/ISO 37	S	One	-do-	-do-
vii)	Compression set	Annex G	IS 15844 (Part 1)	S	One	-do-	1. Test Certificate/report should be obtained either from supplier or from any independent Laboratory 2. Only for cellular sole
table 8 Clause 7.7	Midsole (Applicable if used)						
i)	Compression set	Annex G	15844 (Part 1)	S	One	-do-	Test Certificate/report should be obtained either from supplier or from any independent Laboratory
ii)	Split tear strength	Annex H	15844 (Part 1)	S	One	-do-	-do-
iii)	Heat shrinkage	Annex J	15844 (Part 1)	S	one	-do-	-do-
iv)	Elongation at break,	-	IS 3400 (Part 1)/ISO 37	S	One	-do-	-do-
table 9 Clause 7.8	Counter Stiffener (Applicable if used)						
i)	First dry collapsing load, hardness	A-3.2.6	IS 7554	S	One	-do-	-do-
ii)	Resilience	A-3.4	IS 7554	S	One	-do-	-do-

iii)	Moisture resistance	A-3.5	IS 7554	S	One	-do-	-do-
iv)	a) Initial dry area shape retention	A-3.1	IS 7554	S	One	-do-	-do-
	b) Area shape retention after 10th collapse, dry	A-3.3	IS 7554	S	One	-do-	-do-
v)	Peel strength	Annex C	IS 15844 (Part 1)	S	One	-do-	-do-
table 10 Clause 7.9	Velcro Fastener (applicable if used)						
i)	Peel strength	-	IS 8085 (Part 18)/ISO 22777	S	One	-do-	-do-
ii)	Shear strength	-	IS 8085 (Part 19)/ISO 22776	S	One	-do-	-do-
table 11	Elastic Tape (Applicable if used)						
Clause 7.10							
i)	Limit of useful extension	-	IS 8085 (Part 12)/ISO 10765	S	One	-do-	-do-
ii)	Needle Strength	-	Method 'A' of IS 8085 (Part 13)/ISO 17697	S	one	-do-	-do-
table 12 Clause 7.11	Fasteners (Lace/ Buckle/Eyelet/D- Ring/Ski-Hook/Metal trims) [Applicable if used and not for decorative purpose]						
i)	Breaking strength of lace	Annex 'K'	15844 (Part 1)	S	One	-do-	-do-
ii)	Lace tag strength	Annex 'L'	15844 (Part 1)	S	One	-do-	-do-
iii)	Lace to lace abrasion	-	IS 8085 (Part 17)/ISO 22774	S	One	-do-	-do-
iv)	Colour fastness to water	Contact method	IS 6191 (Part 2)/ISO 11642 or IS/ISO 105-E01	S	One	-do-	1. for lace 2. Test Certificate/report should be obtained either from supplier or

							from any independent Laboratory
v)	Strength of Buckle/Ski hook /D-ring,	Annex 'M'	15844 (Part 1)	S	One	-do-	Test Certificate/report should be obtained either from supplier or from any independent Laboratory
vi)	Corrosion resistance	Method 1 and Method 2	IS 17098	S	One	-do-	1. Test Certificate/report should be obtained either from supplier or from any independent Laboratory 2. Applicable for all including decorative metal part
Table 13 Clause 7.11	Spike/Studs, (if used Applicable on Removable Spikes/Studs)						
i)	Corrosion resistance	Method 1 and Method 2	IS 17098	S	One	-do-	applicable for metallic spikes
7.12.1	Chemical Requirement	Table 1	IS 17011 (for critical substances Category 1 and Category 2)	S	one	-do-	1. Test Certificate/report should be obtained either from supplier or from any independent Laboratory 2. Applicable on all the components of sports shoe which are in direct contact of foot
7.12.2	Lead content	-	IS 12240 (Part 5)	S	one	-do-	1. Test Certificate/report should be obtained either from supplier or from any independent Laboratory 2. applicable only for PVC