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उत्पाद मैनुअल

पॉलिमर के तले युक्त कपड़े के बूट्स (जंगल बूट्स) — विशिष्टि
17861: 2022 के अनुसार

**PRODUCT MANUAL FOR
TEXTILE BOOTS WITH POLYMERIC SOLE (JUNGLE BOOTS) — SPECIFICATION
ACCORDING TO IS 17861: 2022**

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 17861 : 2022
	शीर्षक Title	:	TEXTILE BOOTS WITH POLYMERIC SOLE (JUNGLE BOOTS)
	संशोधनों की संख्या No. of amendments	:	01
2.	नमूना दिशानिर्देश Sampling Guidelines		
a)	कच्चा माल Raw material	:	metallic perforation resistant insert conforming to IS 17275 (Part 1) or non-metallic perforation resistant insert conforming to IS 17275 (Part 2) {as applicable} 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	:	Please see Annex - A

c)	नमूने का परिमाण Sample Quantity	:	5 Pairs (In case samples are sent to a different lab for testing of Chemical requirements, 2 pairs are required to be sent separately). Components may be provided 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. Type 2. Sizes and fittings 3. Material of Sole 4. Additional requirements Note: This section indicates declared values to be specified against a parameter (to be specified 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	:	Please refer to Annex – B
4.	निरीक्षण और परीक्षण की स्कीम Scheme of Inspection and Testing	:	Please refer to Annex – C
5.	एक दिन में संभावित परीक्षण Possible tests in a day (on conditioned samples as applicable)		
	1. Design 2. Size & Fitting 3. Height of upper 4. Weight 5. Chemical Requirements 6. whole footwear a. Construction b. Upper Outsole bond strength c. Consolidation test d. Ergonomic features e. Energy absorption of seat region 7. Upper Colour (except Fastness to light) 8. Lining 9. Insole 10. Insocks 11. Sole a. Tear Strength b. Abrasion resistance c. Interlayer bond strength		

	12. Eyelets (material, dimension and pull out force) 13. Laces (except Fastness to light) 14. Closing thread 15. Outer Toe Caps (except Colour Fastness to light) 16. Toe Puff & Counter Stiffener 17. Additional requirements of whole footwear - Penetration Resistance - Electrical resistance (Antistatic) - Heat insulation of sole complex - Cold insulation of sole complex 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 17861: 2022 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 17861: 2022 with the following scope:		
	Name of the product	Textile Boots with Polymeric Sole (Jungle Boots)	
	Type	Type 1 (For use in dry conditions only) Type 2 (For use in wet/slushy conditions)	
	Sizes and fittings	4 to 12 (UK) for adult men and women (as applicable)/ Fitting G and/or H	
	Material of Sole	PU single density/PU-PU double density/PU rubber double density/Rubber (single/double density)	
	Additional requirements	Without Additional Requirements, or	
		With Additional Requirements (As applicable given under)	
		Whole footwear	- Penetration Resistance - Electrical Resistance-Antistatic Footwear - Heat insulation of sole complex - Cold insulation of sole complex

ANNEX – A
GROUPING GUIDELINES

1. POLYMERIC SOLE (JUNGLE BOOTS) have been classified in following types based on use pattern:
 - a) Type 1 — For use in dry conditions only; and
 - b) Type 2 — For use in wet/slushy conditions.
2. Material of Sole has been
 - a) PU single density
 - b) PU-PU double density
 - c) PU rubber double density
 - d) Rubber (single/double density)
3. Additional requirements
 - a) Penetration Resistance
 - b) Electrical Resistance-Antistatic Footwear
 - c) Heat insulation of sole complex
 - d) Cold insulation of sole complex
4. **Sizes and fitting:** 4 to 12 (UK) for adult men and women (as applicable)/ Fitting G and/or H.
5. For considering grant of licence/inclusion of varieties, one sample of each Type and material of sole of any size and fitting shall be drawn and tested to cover that Type and material of sole for all the sizes and fittings being manufactured.
6. Additional Requirements shall be indicated in the scope of licence only if the sample has been tested for those Additional requirements.
7. However, 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.
8. 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.

9. However, while considering grant of licence/inclusion of additional varieties, it shall be ensured that the applicant/licensee has got the complete manufacturing and testing facilities for all the varieties intended to be covered.
10. During operation of the licence, BOs shall ensure that all the samples are tested for all applicable requirements on the product, and sizes/varieties covered in the licence are tested in rotation.

ANNEX– B

LIST OF TEST EQUIPMENTS

(INDICATIVE LIST, FOR GUIDANCE ONLY)

S. No.	Test used in with clause reference	Test Equipment
1	Height of upper, Cl 5.3	vernier calliper, micrometer, scale, angle measuring apparatus
2	Weight, Cl 5.4	Weighing Scale
4	Construction, Cl 5.5.1, Toe Puff & Counter Stiffener Cl 5.15,	vernier calliper, scale
5	Upper Outsole bond strength, Cl 5.5.2	Tensile testing machine with a chart recorder, clamping jaws for tensile tester, razor or sharp knife, steel scale, sample press, humidity chamber,
6	Consolidation test, Cl 5.5.3	Tensile machine with autographic recorder, Steel scale, Vernier Caliper
7	Ergonomic features, Cl 5.5.4	treadmill, stairs (as per 5.1.2 of ISO 20344:2021); Smooth metal hinged plate, Clamping device, Sensor, conditioning chamber
8	Slip Resistance, Cl 5.5.5	A slip resistance test machine as per ISO 13287:2019, arrangement to maintain room temperature at 27+/-2 °C and requirements, Device for measuring the normal force, conditioning chamber, Sodium lauryl sulphate, ceramic tile floor
9	Energy absorption of seat region, Cl 5.5.6	Test equipment, capable of measuring compressive force up to 6000 N, Test punch as per IS 15298 Part 1, conditioning chamber
10	Water Resistance, Cl 5.5.7	Horizontal watertight trough (as per Cl. 5.15.1 of IS 15298: Pt 1:2015 Dynamic footwear flexing machine, Water holding tank, Flex counter, Weighing balance, Absorbent paper, PE bags/sheets (as per Cl. 5.15.2 of IS 15298: Pt 1: 2015), conditioning Chamber (to comply with Cl 5.15.2.3.2 of IS 15298: Pt 1: 2015)
12	Penetration Resistance, Cl 5.6.1	apparatus as per ISO 7500-1:2018/Apparatus as per Cl 5.1.1 of IS 17275 (Part 1), test nail, scale, vernier calliper
13	Electrical resistance (Antistatic), Cl 5.6.2	Testing instrument, capable of measuring electrical resistance with SS balls internal electrode and copper external electrode, conductive laquer, Device for measuring the conductive resistance of the lacquer, distilled water, conditioning chamber for dry and wet conditions, arrangement to maintain standard temperature
14	Heat insulation of sole complex, Cl 5.6.3	Sand bath, Thermal transfer medium, Temperature probe, Temperature measuring device, conditioning chamber
15	Cold insulation of sole complex, Cl 5.6.4	Insulated cold box, Thermal transfer medium, Temperature probe, Temperature measuring device, Copper plate, conditioning chamber
17	Tear strength, Upper Cl 5.7.2, Lining Cl 5.9.1, Lining Cl 5.8.2	arrangement to maintain standard temperature, acetone, Analytical balance, Glass vial with screw cap, Ultrasonic water bath, Disposable syringe and membrane filter, Glass vial with septum cap, Gas chromatograph with mass selective detector (GC-MS)/Liquid chromatograph with fluorescence detector (LC-FLD), Capillary column for gas chromatograph, (5 %-phenyl)-methylpolysiloxane phase, non-polar, bonded and cross-linked, low bleed, C18 reverse phase column for liquid chromatograph, methanol,
18	Water Vapour Permeability and	arrangement to maintain standard temperature, Micrometre dial gauge, Permeability Appts as per cl 6.6 & 6.7 of IS 15298 (Part-1), Jars or Bottles,

	Coefficient, Upper CI 5.7.3, Lining CI 5.8.4,	Holder, Fan, Silica Gel, Mesh, Conditioning Chamber, Oven, Balance, Stop Watch, Vernier Calliper, 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
19	Colour Fastness to Light, Upper CI 5.7.4, Binding Tape CI 5.10.2, Laces CI 5.18.2	Laboratory exposure devices as per 5.2 of IS/ISO 105-B02. 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)
20	Colour Fastness to Washing, Upper CI 5.7.4, Binding Tape CI 5.10.2, Laces CI 5.18.2,osing thread CI 5.11.2	Suitable mechanical laundering device(as per IS/ISO 105-C10, Weighing balance, Mechanical stirrer, Non-corrodible SS balls, Hot plate, Soap as per CI 5.1 of IS/ISO 105-C10, Sodium carbonate, Grade 3 water, Adjacent fabric, Non-dyeable fabrics, Grey scales, oven, Spectrophotometer/Colorimeter, Flat-bottomed dish made of inert materials, A set of 11 glass or acrylic resin plates
21	Water Repellency and Water Resistance, Upper CI 5.7.5	Spray device as per IS 390 : 2024, Metal spray nozzle as per IS 390 : 2024, Specimen holder, distilled or deionized Water, Graduated cylinder, conditioning chamber
24	Abrasion resistance, CI 5.8.3, Insole CI 5.12.2, Insocks CI 5.13.2, CI	test apparatus defined in the ISO 12947-1:1998 (Martindale Method), Reference abrasant, Fabric punch or press cutter, Weight, thickness guage, conditioning chamber
28	Abrasion Resistance, Lining CI 5.9.2	abrasant, Double-sided adhesive tape, An abrasion machine (as per CI 6.1.3) of IS 6994 (Part 6),
30	Width, Binding Tape CI 5.10.1	measuring table, scale
31	Breaking load, Binding Tape CI 5.10.1	Steel tape, Table of length atleast 4m,Tensile Testing Machine as per CI 6 of IS 1969 Part 1or CI 6 of IS 1969 Part 2, Equipement for cutting test specimens, Equipment in which test specimens can be immersed in water preparatory to wet testing, Grade 3 water, Nonionic wetting agent, Conditioning Chamber, Knife, apparatus as per IS/ISO 105-B02 and IS/ISO 105-C10, Oven , Alkaline solution, Acid solution, Adjacent fabric, Grey scale
35	Breaking load closing thread CI 5.11.1	Tensile Testing Machine & Drying oven as per CI. 5 of IS 4910 (Part 3)
37	Colour Fastness to perspiration closing thread CI 5.11.2	Test devices as per CI. 4.1 of IS/ISO 105- B02 E04, Oven, Alkaline solution complying with ISO 3696,, Acid solution complying with ISO 3696,, Adjacent fabric, Grey scale for assessing change in colour, Grey scale for assessing staining OR Spectrophotometer or colorimeter for assessing change in colour and staining, a set of glass or acrylic resin plates, Flat-bottomed dish made of inert materials.
39	Thickness, Insole CI 5.12.1, Insocks CI 5.13.1,	conditioning chamber, thickness measuring apparatus with graduated eyepiece
41	Water absorption & desorption, Insole CI 5.12.3	conditioning chamber, Water Absorption & Desorption Tester as per 7.2.2 of IS 15298 part 1, Brass Roller, Platform, IS 15298 part 1, Cotton gauge, Water Supply through flow meter, Press, Knife, Balance, Clock, Silicone grease
45	Bond Strength of Textile Layer and Insock, Insocks CI 5.13.3	Tensile Testing Machine with jaws with multiple speed, Steel Scale, Knife

49	Thickness, Sole CI 5.16.2	thickness and angle measuring apparatus,
50	Sole density, Sole CI 5.16.3	Balance (LC-1 mg), Balance straddle, Beaker (250 ml), Copper wire, oven, sinker, cutting device, wetting agent
51	Hardness, Sole CI 5.16.4	type A or type D Shore durometer as per CI 4 of IS 13360 (Part 5/Sec 11) , Hardness Tester as per IS 3400 (Part 2)
52	Ageing, Sole CI 5.16.5	Air Oven as per IS 3400 (Part 4) , IRHD Hardness Tester Plastometer, Supporting frame, Depth indicator, Specimen holder
53	Tear Strength, Sole CI 5.16.6	apparatus as per ISO 34-1:2015, Method A, Dies, Nick cutter, Testing machine
54	Abrasion resistance, Sole CI 5.16.7	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
55	Flexing Resistance, Sole CI 5.16.8	The apparatus described in ISO 17707:2005, Cutting tool, Measuring magnifier, conditioning chamber
56	Hydrolysis, Sole CI 5.16.9	as per IS 16255/ ISO 5423 : 1992, deionized water
57	Interlayer bond strength, CI 5.16.10	Tensile testing machine with a chart recorder, clamping jaws for tensile tester, razor or sharp knife, steel scale, sample press, humidity chamber,
58	Eyelets (material, dimension and pull out force), CI 5.17	Tensile testing machine,, sharp knife,
60	dimension, Laces CI 5.18.1	Measuring tape
63	Breaking load & Tag retention, Laces CI 5.18.3	A tensile testing machine, conditioning chamber
64	Abrasion resistance (Lace to lace), Laces CI 5.18.4	Lace to Lace cycle tester
65	Abrasion resistance (Lace to eyelet), Laces CI 5.18.4	Lace to Eyelet cycle tester
66	Chemical Requirements, CI 6	As per IS 17011

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: 10,000 pairs or Fortnight production of the TEXTILE BOOTS WITH POLYMERIC SOLE, whichever is earlier, of the same variety, manufactured from the same consignment of the 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 piece of the pair of JUNGLE BOOTS 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 footwear or its packaging shall also be marked with the following:

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.

TABLE 1
(ONLY FOR GUIDANCE PURPOSE)

(1)				(2)	(3)		
Test Details				Test equipment requirement R: required (or) S: Subcontracting permitted	Levels of Control		
Clause	Requirement	Test Method			No. of Sample	Frequency	Remarks
		Clause	Reference				
5.1	Design	-	IS 17861	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	Size & Fitting	-	IS 1638	R			
5.3	Height of upper	6.2	IS 15298(Part 1)	R			
5.4	Weight	-	IS 17861	R			
5.5	Properties of whole footwear						
5.5.1	Construction	-	IS 17861	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		
5.5.2	Upper Outsole bond strength	5.2	IS 15298(Part 1)	R	one	Each control unit	All sizes & varieties being manufactured shall be tested in rotation.
5.5.3	Consolidation test	-	IS 3400 (Part 5)	R	-do-	Each control unit	-do-
5.5.4	Ergonomic features	5.1	IS 15298(Part1)	R	-do-	Once a week	-do-
5.5.5	Slip Resistance	5.11	IS 15298 (Part 1)	S	-do-	Once in a month	-do-
5.5.6	Energy absorption of seat region	5.14	IS 15298(Part 1)	S	-do-	Once in a month	-do-

5.5.7	Water Resistance	5.15.1 or 5.15.2	IS 15298(Part 1) 6.2.5 of IS 15298 (Part 2).	S	One	Once in a month	-do-
5.6	Additional requirements of whole footwear						
5.6.1	Penetration Resistance	-	IS 17275(Part 1)(metallic)/ IS 17275(Part 2)(non-metallic) 5.8.2 of IS 15298 (Part 1), 5.8.3 of IS 15298 (Part 1)	R	One	Each control unit	-do-
5.6.2	Electrical resistance (Antistatic)	5.10	IS 15298(Part 1)	S	One	Once in a month	-do-
5.6.3	Heat insulation of sole complex	5.12	IS 15298(Part 1)	R	One	Once a week	-do-
5.6.4	Cold insulation of sole complex	5.13	IS 15298(Part 1)	R	One	Once a week	-do-
5.7	Upper						
5.7.1	Material	-	IS 17861	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		
5.7.2	Tear strength	6.3	IS 15298(Part 1)	S	One	Once in a month	-do-
5.7.3	Water Vapour Permeability and Coefficient	6.6 & 6.8	IS 15298(Part 1)	S	One	Once in a month	-do-
5.7.4	Colour Fastness to Light	-	IS/ISO 105-B02	S	One	Once in three months	-do-
	Colour Fastness to Washing	-	IS/ISO 105-C10	R	One	Alternate control unit	-do-

5.7.5	Water Repellency and Water resistance	-	IS 390(for Type I) IS 7016 (Part 7)/ISO 1420 (for type 2)	S	One	Once in a month	-do-
5.8	Lining						
5.8.1	Material	-	IS 17861	S	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		
5.8.2	Tear strength	6.3	IS 15298(Part 1)	S	One	Once in a month	-do-
5.8.3	Abrasion resistance	6.12	IS 15298(Part 1)	S	One	Once in a month	-do-
5.8.4	Water Vapour Permeability and Coefficient	6.6 & 6.8	IS 15298(Part 1)	S	One	Once in a month	-do-
5.9	Outer Toe Caps						
5.9.1	Tear strength	6.3	IS 15298(Part 1)	S	One	Once in a month	-do-
5.9.2	Abrasion Resistance	-	IS 6994 (Part 6),	S	One	Once in a month	-do-
5.10	Binding Tape						
5.10.1	Width	-	IS 1954	R	One	Each control unit	-do-
5.10.1	Breaking load	-	IS 1969(Part 1)/ IS 1969(Part 2)	R	One	Alternate control unit	-do-
5.10.2	Colour Fastness to Light	-	IS/ISO 105-B02	S	One	Once in three months	-do-
5.10.2	Colour Fastness to Washing	-	IS/ISO 105-C10	R	One	Alternate control unit	-do-

5.16.1	Material	-	IS 17861	S	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		
5.16.2	Thickness		IS 15298(Part 1)	R			
5.16.3	Sole density	Method A	IS 3400: Part 9 IS 6664	R	One	Each control unit	-do-
5.16.4	Hardness	-	IS 13360 (Part 5/Sec 11) (for PU sole) & IS 3400 (Part 2) (for rubber sole)	R	One	Once a week	-do-
5.16.5	Ageing	-	IS 3400 (Part 2)/ IS 3400 (Part 4)	S	One	Once in a month	-do-
5.16.6	Tear Strength	8.2	IS 15298(Part 1)	S	One	Once in a month	-do-
5.16.7	Abrasion resistance		IS 15298(Part 1)	R	One	Each control unit	-do-
5.16.8	Flexing Resistance	8.4	IS 15298(Part 1)	S	One	Once a month	-do-
5.16.9	Hydrolysis	8.5	IS 15298(Part 1)	S	One	Once in a month	-do-
5.16.10	Interlayer bond strength	5.2	IS 15298(Part 1)	R	One	each control unit	-do-
5.17	Eyelets (material, dimension and pull out force)	Annex B	IS 17861	R	One	Each control unit	-do-
5.18	Laces						
5.18.1	Material and dimension	-	IS 17861	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		
5.18.2	Colour Fastness to Light	-	IS/ISO 105-B02	S			
					One	Once in three months	-do-

5.18.2	Colour Fastness to Washing	-	IS/ISO 105-C10	R	One	Alternate control unit	-do-
5.18.3	Breaking load & Tag retention	Annex C		S	One	Once in three months	-do-
5.18.4	Abrasion resistance (Lace to lace)	Method 1	ISO 22274	S	One	Once in a month	-do-
5.18.4	Abrasion resistance (Lace to eyelet)	Method 3	ISO 22274	S	One	Once in a month	-do-
6	Chemical Requirements		IS 17011	S	One	Each consignment of raw material	At least once every six months or whenever there is any change in source of raw material.