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उत्पाद मैनुअल

सैंडल और स्लिपर — विशिष्टि

6721 : 2023 के अनुसार

**PRODUCT MANUAL FOR
SPECIFICATION FOR SANDAL AND SLIPPERS
ACCORDING TO IS 6721 : 2023**

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 6721 : 2023
	शीर्षक Title	:	SANDAL AND SLIPPERS- Specification
	संशोधनों की संख्या No. of amendments	:	2
2.	नमूना दिशानिर्देश Sampling Guidelines		
a)	कच्चा माल Raw material	:	Upper, insole (top covering), Lining, Bottom sole and midsole may be made up of any type of natural or synthetic material or combinations thereof. Declaration of the raw material used to be submitted 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 for each variety. (3 pairs for physical testing and one pair for chemical analysis.). 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	:	Category, Type and sizes Note: Apart from the above, any other requirements/parameters may also be declared as per the standard, as applicable.
3.	परीक्षण उपकरणों की सूची List of Test Equipment	:	कृ पया Annex-B देखें Please see Annex – B
4.	निरीक्षण और परीक्षण की स्कीम Scheme of Inspection and Testing	:	कृ पया 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 are possible (on conditioned samples as applicable and availability of in-house test facility)		
6.	लाइसेंस का दायरा /Scope of the Licence:		
	“Licence is granted to use Standard Mark as per IS 6721 : 2023 with the following scope:		
	उत्पाद का नाम Name of the product	SANDAL AND SLIPPERS	
	Footwear type	Sandal, and/or Slipper	
	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	

ANNEX-A
GROUPING GUIDELINES

As per the Indian Standard, following varieties for sandals and slippers may be applicable:

- a) Based on type, footwear are divided into the following Category –
 - a. Sandal
 - b. Slipper
- b) Based on use, sandals and slippers are divided into the following Category –
 - a. Kids (Children and infants)
 - b. Adult
- c) Adult Category of Footwear are further classified into two types as given below:
 - a. Type 1
 - b. Type 2

The requirement given is relaxed for Type 2 Adult footwear and relaxed even further for Kids category of footwear when compared with Type 1 adult category footwear.

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

1. Each footwear type (sandal, slipper) of any size is required to be tested to be included in the scope of Licence for all the sizes.
2. Each category (Adult/Kids) and each Type (Type 1/Type 2 for adults) of each footwear type (sandal, slipper) may be tested to be covered in the scope of Licence.

All combinations of components and material 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 and material combination to all the requirements of the Indian Standard.

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.

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 EQUIPMENT
(INDICATIVE LIST, FOR GUIDANCE ONLY)

Sl. No.	Tests used in with clause reference	Test Equipment / Chemicals
1	Category and type, Clause 5	lasts of applicable sizes
2	Thickness of the upper/Insole and sole components , Clause 7.4	thickness guage
3	Bond strength, Clause 8, Table 1, i., Inter layer bond strength, Clause 8, Table 1, x.	Tensile testing machine with a chart recorder, clamping jaws for tensile tester, razor or sharp knife, steel scale, sample press, humidity chamber,
4	Toe post attachment strength, Clause 8, Table 1, ii., toe ring attachment Clause 8, Table 1, iii	A tensile testing machine, A press knife, A rigid template, twist drill, electric drill as per CI C 3, conditioning chamber
5	Strap to outsole strength, Clause 8, Table 1, iv.	A tensile testing machine as per CI 4.1 of IS 8085 (Part 11), A Vernier calliper LC of 0.5 mm, laces, A knife or a similar cutting tool, conditioning chamber
6	Attachment strength of back strap and Buckle / D-ring, Clause 8, Table 1, v, vii	A tensile testing machine, as per CI D-3, knife, scale
7	Attachment strength of Elastic, Limit of useful extension, Clause 8, Table 1, vi.	Tensile testing machine as per 4.1 of IS 8085 (Part 12), steel ruler, sewing machine, Polyurethane (PU) coagulated woven fabric, conditioning chamber
8	Hydrolysis resistance, Clause 8, Table 1, viii.	desiccator, flexing apparatus as per B2 of Annex B of IS 16645, conditioning chamber, arrangement for testing in air at 5 °C + 2 °C, refrigerated cabinet at -5 °C +/- 2 °C
9	Heel pull off strength, Clause 8, Table 1, ix.	Tensile-testing machine as per CI 4.1 of IS 8085 (Part 10), Devices for attaching the shoe heel, Device for chunky heels, Dividers
10	Slip Resistance, Clause 8, Table 1, xi.	A slip resistance test machine 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 of IS 15844 (Part 1)
11	Abrasion resistance, Clause 8, Table 1, xii.	Abrasion machine as per cl 5.1 of IS 3400 (Part3), abrasive sheet asper cl 5.2, hollow drill, balance, standard reference compounds
12	Flexing resistance, Clause 8, Table 1, xiii.	Flexing machine as per CI 2.1 of IS 8085 (part 4), PU adhesive, as per CI 2.2 , Cutting device, a hot air gun or an oven set at 50 °C, Heat sensitive crayons as per CI 2.6, Primers as per CI 2.7, T square, with an internal angle of (90 ± 1)°, A thin strip of metal with a length scale or stepped thickness flexing machine, (D 3, Figure 1) of Annex D, vernier calipers, chisel thermometer with LC of 1 °C, thickness gauge

13	Chemical requirements, clause 8, Table 1, xiv	As per IS 17011 for critical substance category I and category II as specified under 3.6 of the IS
14	Lead content, Clause 8, table 1, xv	Nessler cylinders, P-Nitrophenol indicator Sol, Dil Hydrochloric acid, hydrogen sulphide solution, Standard lead solution, whatman filter paper
15	Tear strength, Clause 8.1, Table 2, 8.2 Table 3, 8.3, Table 4,	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 Tensile testing machine as per 3.2 of LP:7 of IS 5914:1970, press knife as per 3.1 of LP:7 of IS 5914:1970, conditioning chamber
16	Flexing endurance, Clause 8.1, Table 2, ii.	flexing machine as per IS 8085 (Part 20)/ISO 17694, Press knife, Optical magnifier, Distilled or deionised water, Filter paper, Desiccator, Vacuum pump, conditioning chamber
17	Abrasion resistance, Clause 8.2, Table 3, ii., Clause 8.3, Table 4, ii.	Abrasion machine as per CI 4 of IS 8085 (Part 6), horizontal abradant table, cutting device, table felt, polyurethane foam
18	Grain crack Index, Clause 8.4, Table 5, i.	apparatus as per 4 of ISO 3378, conditioning chamber, thickness gauge
19	Density, g/cm ³ , Min, Clause 8.4, Table 5, ii.	thickness gauge, balance with LC of 0.0001g, vernier calliper (LC 0.01 mm), arrangement for standard atmospheric conditions of lab as per ISO 2420
20	Abrasion resistance, Clause 8.4, Table 5, iii.	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
21	Density, Clause 8.4, Table 6, i.	Analytical balance (LC 1 mg), balance pan straddle, beaker, density bottle, conditioning chamber, arrangement for maintaining a standard laboratory temperature (27 °C $\pm$ 2 °C),

ANNEX C**SCHEME OF INSPECTION AND TESTING****1. QUALITY ASSURANCE PLAN**

1.1 It is expected that during operation of BIS licence, manufacturers will implement a Quality Assurance Plan (QAP) 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 (QAP) defining the control unit (i.e. lot/batch etc.), the levels of control (i.e. the frequency and number of samples for conducting the different tests as per the Indian Standard) and declare the arrangement for testing i.e. whether in-house or subcontracting/sharing for each applicable test and submit the same to BIS Branch Office for information. The manufacturer shall comply with the QAP and maintain test records in accordance with para 2.1.

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 with same combination of component and materials, 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. Manufacturer has the discretion of declaring their own levels of control or accept the levels of control given in this document.

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.

2. ENSURING COMPLIANCE THROUGH TESTING - Manufacturers shall ensure compliance of their products to all the requirements of the Indian Standard for which they may have in-house test facilities. However, there is no obligation to maintain in-house laboratory. Licensee may use alternative arrangements for tests of the production as per the declared QAP. Various alternatives are available for operation of BIS certification as given below and the relevant guidelines for availing such relaxations by the manufacturers, as amended from time to time, are to be referred :

- i) Shared testing resources like common facility,
- ii) Cluster based testing facility,
- iii) Sub-contracting to outside laboratories which may either be:
 - a) BIS recognised/empanelled laboratories, or
 - b) Any accredited laboratory as per ISO/IEC 17025

2.1 TEST RECORDS - The manufacturers shall maintain test records for the tests carried out (either in-house or at a sub-contracted or at shared test facility) to establish conformity of the product to the Standard for operation of licence. For the tests being subcontracted or conducted at a shared test facility, test results issued by the laboratories or test facilities, shall be made 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 sandal/slipper for each pair, 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. Kids sandal and slipper shall be marked as '0' whereas infants sandal and slipper shall be marked as '00' for Type.
- 3.2 Additional Marking requirements: The package 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 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
(Recommended Levels Of Control By BIS- For Guidance Only)

(1)				(3)		
Clause	Requirements	Test Method		No of Samples	Frequency	Remarks
		Clause	Ref.			
5	CATEGORY AND TYPE	--	IS 6721: 2023	Firm to have adequate in- process controls to checkcompliance of this parametergiven in the Indian Standard. However, appropriate recordsshall be maintained by the manufacturer for evidence of conformity		
6	construction	--	IS 6721: 2023			
7	material	--	IS 6721: 2023			
8, Table 6 Whole Footwear — Sandal and Slipper (8)						
i)	Bond strength	--	IS 15298-1	one	Each control unit	applicable only for stuck on products, when fore part is fully covered or strap width is more than 25 mm
ii)	Toe post attachment strength	Annex C	IS 6721: 2023	one	-do-	Applicable, if Toe post is present
iii)	Toe ring attachment strength	Annex C	IS 6721: 2023	one	-do-	
iv)	Strap to outsole strength	--	IS 8085 (Part 11)/ ISO 24263	one	-do-	Applicable, if present to be carried out for toe strap to outsole and rear strap to outsole,
v)	Attachment strength of back strap and Buckle /D-ring	AnnexD	IS 6721: 2023	one	-do-	Applicable, if present
vi)	Attachment strength of Elastic, Limitof useful extension	--	IS 8085 (Part12)/ ISO 10765	one	-do-	applicable if present

vii)	Attachment strength of back strap and Velcro	Annex D	IS 6721: 2023	one	-do-	applicable if present not applicable for slippers
viii)	Hydrolysis resistance	Annex-B and Annex-E	IS 15298 (Part 1)	one	Once in three months	Applicable for polyester PU sole only
ix)	Heel pull off strength,	--	IS 8085 (Part 10)/ISO 22650	one	Each control unit	1.Applicable for heel height 40 mm and above attached separately to the sandal/slipper 2.Not applicable for Kids category
x)	Inter layer bond strength	--	IS 15298-1	one	-do-	1. applicable only for multilayer pasted stuck-on bottom sole 2.Not applicable for Kids category
xi)	Slip Resistance,	Annex-E	IS 15844 (Part 1)	one	Once in three months	1. Not Applicable for Leather Sole 2.Not applicable for Kids category and Type 2 of adults category
xii)	Abrasion resistance,	--	IS 3400 (Part 3): 2021/ISO 4649	one	-do-	not applicable for leather sole
xiii)	Flexing resistance	--	IS 8085 (Part 4)/ISO 16177, (Belt Method at 90° diameter Mandrel) OR Annex D of IS 15844 (Part 1)	one	-do-	

			(Bennewart flex method)			
xiv)	Chemical requirements	Table 1 of IS 17011 for critical substances Category I and Category II as specified under 3.6 of IS 17011	IS 17011	one	Each consignment of raw material	1. All the components of sandal and slipper which are in direct contact of foot 2. Test Certificate/report should be obtained either from supplier or from any independent Laboratory
xv)	Lead content	--	IS 12240 (Part 5)	one	Each consignment of raw material	1. applicable only for PVC 2. Not applicable for Type 2 of adults category 3. Test Certificate/report should be obtained either from supplier or from any independent Laboratory
Optional Requirements						
8.1, Table 2 Upper (Raw Material Requirement) –All Materials						
	Tear strength		Method B of IS 7016 (Part 3/Sec		Each consignment of material or Test	

i)	Grain crack Index	--	IS 5914 (Part 7)/ISO 3378	one	-do-	
ii)	Density	--	IS 5914 (Part 4)/ISO 2420	one	-do-	
iii)	Abrasion resistance,mm/kcs	Annex-B	IS 6721: 2023	one	-do-	
8.4, Table 6 Outsole (Materials other than Leather)(Clause 8.4)						
i)	Density	--	IS 3400 (Part 9)/ISO 2781	one	-do-	