

उत्पाद मानुयल
रबर चप्पल के लिये विनिर्देश
IS 11544:1986 के अनुसार

**PRODUCT MANUAL FOR
Specification for Slipper, Rubber
According to IS 11544:1986**

भारतीय मानक ब्यूरो (अनुरूपता मूल्यांकन) विनियम की स्कीम-I के तहत यह उत्पाद मानुयल प्रमाणीकरणके प्रचलन में रीति और पारदर्शिता के सुसंगत सुनिश्चित करने के लिए सभी क्षेत्रीय /शाखा कार्यालयों एवं लाइसेन्स धारियों द्वारा संदर्भ सामग्री के रूप में उपयोग किया जाएगा। बीआईएस लाइसेन्स /प्रमाण पत्र प्राप्त करने के इच्छुक भावी आवेदकों द्वारा भी इस दस्तावेज़ का उपयोग किया जा सकता है।

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

1.	उत्पाद Product	:	IS 11544:1986
	शीर्षक Title	:	रबर चप्पल के लिये विनिर्देश Specification for Slipper, Rubber
	संशोधन संख्या No. of amendments	:	0 Nil
2.	नमूनाकरण दिशा निर्देश Sampling Guidelines		
a)	कच्चा माल Raw material	:	Materials/components shall conform to following requirements: (i) Rubber Components : Components shall be made from rubber conforming to physical requirements as per Table 1 (cl.3.2.1) (ii) Bottom Filling Material: Self blown rubber sponge (iii) Adhesive: Rubber-based (see IS 4663:1968) adhesive (iv) Fabrics Sheeting Brown for Outerlining, Sheeting White fir Inner-lining and Cloth, Cotton Binding Black Cut on Bias : Shall be used as per requirements specified at Table 2 (v) Thread : Cotton sewing thread conforming to variety no.31 of IS 1720:1978 (Also See

			cl.3.2.5)
b)	समूहिकरण दिशा निर्देश Grouping Guidelines	:	कृपया Annex-Aदेखें Please see Annex-A
c)	नमूनेका परिमाण Sample Size	:	5 Pairs
3.	परीक्षण उपकरणों की सूची List of Test Equipment	:	कृपया Annex-Bदेखें Please refer Annex –B
4.	निरीक्षण व परीक्षण स्कीम Scheme of Inspection and Testing	:	कृपया Annex-Cदेखें Please refer Annex - C
5.	एक दिन में संभावित परीक्षण Possible tests in a day	:	(i) Thickness and Width of rubber components as per Table 3 & shape and design as per cl.3.1. (ii) Construction as per cl.3.2.6, Exposed Edges of Vamp as per cl.3.2.6.2, Lasting Allowance as per cl.3.2.6.3, Rubber Foxing as per cl.3.2.6.4 (iii) Workmanship and Finish as per clause 3.2.8 (iv) Mass, Thread Ends, Picks as per Table 2
6.	लाइसेन्स का कार्यक्षेत्र/Scope of the Licence :		
	IS 11544:1986 के अनुसार मानक मुहर का उपयोग करने के लिए लाइसेन्स निम्नलिखित कार्यक्षेत्रके लिए प्रदान किया जाता है Licence is granted to use Standard Mark as per IS 11544:1986 with the following scope:		
	उत्पाद का नाम Name of the product	Specification for Slipper, Rubber	
	Pattern, Shape and Design	As shown in Fig. 1 and 2 of IS 11544/Any other design agreed to between purchaser and manufacturer	
	Sizes	Sizes as applicable	

**ANNEX-A TO PRODUCT MANUAL
FOR Specification for Slipper, Rubber
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GROUPING GUIDELINES

To apply for grant of licence and Inclusion accordingly following Grouping Guideline is to be followed for grant of licence and inclusion

1. One Sample of any size of each pattern, shape and design shall be drawn for covering all sizes of that design/pattern shape. However, manufacturing and testing facility for each size must be verified.
2. However, while considering grant of licence/inclusion of additional sizes/ pattern, shape and design, it will be ensured that the applicant/licensee has got the complete manufacturing and testing facilities for all the sizes and pattern, shape and design intended to be covered.
3. During operation of the licence, BO will ensure that all the sizes/ pattern, shape and design 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
TO PRODUCT MANUAL
FOR Specification for Slipper, Rubber
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LIST OF TEST EQUIPMENT

Sl. No.	Tests used in with Clause Reference	Test Equipment
1	Clause 3.2.1 & Table 1	
	i. Relative Density	Balance (LC-1 mg), balance straddle, beaker (250 ml), copper wire, conditioning chamber capable of maintaining 65±2 %RH and 27±2°C temperature
	ii. Hardness	Type A Shore Durometer, apparatus for calibration of durometer spring, conditioning chamber capable of maintaining 65±2 %RH and 27±2°C, stop watch
	iii. Change in initial hardness after accelerated ageing for 24hrs at 100 ±1 °C	Hot Air Oven, Type A Shore Durometer, apparatus for calibration of durometer spring, conditioning chamber capable of maintaining 65±2 %RH and 27±2°C, stop watch
2	Shape & Design as per cl.3.1. & cl.3.1.1.	Vernier Callipers
3	Flexural Endurance as per cl.3.2.1.1.	Hot Air Oven, Satra Ross Type Flexing Machine, piercing chisel
4	Fabrics Sheeting Brown for Outerlining, Sheeting White for Inner lining and Cloth Cotton Binding Black Cut on Bias cl.3.2.4 & Table 2	
	i) Mass	Weighing Balance, Graduated Steel Scale, Horizontal Flat Smooth Table
	ii) & iii) Thread Ends & Picks	Thread Counter with a low power microscope and a pointer, counting glass with an aperture, clamps, forceps, Graduated Steel Scale
	iv) Colour fastness	Balance (L.C.±0.01 g), Mechanical stirrer, Non-corrodible stainless steel balls, Hot plate, Soap , Sodium Carbonate, Wool, Cotton, Grey Scales
5	Manufacture cl.3.2.6	
	i) Construction as per Table 3	Vernier Callipers
	ii) Exposed Edges of Vamp as per cl.3.2.6.2	Thread Counter with a low power microscope and a pointer, counting glass with an aperture, clamps, forceps, Graduated Steel Scale
	iii) Lasting Allowance	Graduated Steel Scale

The list is indicative and not meant to be exhaustive

ANNEX C TO PRODUCT MANUAL

SCHEME OF INSPECTION AND TESTING FOR SPECIFICATION FOR SLIPPER, RUBBER ACCORDING TO IS 11544 : 1986

1. LABORATORY - A laboratory shall be maintained which shall be suitably equipped (as per the requirement given in column 2 of Table 1) and staffed, where different tests given in the specification shall be carried out in accordance with the methods given in the specification.

1.1 The manufacturer shall prepare a calibration plan for the test equipment.

2. TEST RECORDS – The manufacturer shall maintain test records for the tests carried out to establish conformity.

3. PACKING AND MARKING – The Standard mark as given in the Schedule of the licence shall be marked on each slipper and the outer packaging for each pair of slipper, provided always that the slipper to which this mark is thus applied conforms to every requirement of the specification.

3.1 The slippers shall be packed in new, dry, and clean condition. Each pair shall be wrapped in polyethylene paper and packed in a suitable carton and each carton shall bear a label with the following markings :

- a) Name of the material;
- b) Name of the manufacturer or his recognized trade-mark, if any;
- c) Month and year of manufacturer
- d) Size number; and
- e) Batch/Code number.

3.2 Each pair of slipper shall be marked with the following particulars on the waist of insole cover :

- a) The manufacturer's name or his recognized trade-mark, if any;
- b) Size number;
- c) Batch/Code Number; and
- d) Month and year of manufacture,

4. CONTROL UNIT – 10,000 pairs or fortnight production of the rubber slipper, whichever is earlier, manufactured from the same consignment of the raw material, shall constitute a control unit.

4.1 On the basis of test results, the decision regarding conformity or otherwise of a control unit to a given requirement shall be made as follows:

4.1.1 No. of samples shall be drawn from each control unit and to be tested for all the requirements as specified in Table 1 of the scheme.

4.1.2 If the sample fails to conform in any of the requirements laid down in the specification, such, entire control unit represented by the sample shall be considered unfit for the purpose of marking.

5. LEVELS OF CONTROL - The tests, as indicated in Table 1 and at the levels of control therein, shall be carried out on the whole production of the factory which is covered by this scheme and appropriate records and charts maintained in accordance with paragraph 2 above.

5.1 All the production which conforms to the Indian Standards and covered by the licence should be marked with Standard Mark.

6. REJECTIONS – 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. A separate record providing the detailed information regarding the rejected control units and mode of their disposal shall be maintained, such material shall in no case be stored together with that conforming to the specification.

TABLE 1
LEVELS OF CONTROL

(1)				(2)	(3)		
<u>Test Details</u>				<u>Test equipment requirement</u> <u>R: required (or)</u> <u>S: Sub-contracting permitted</u>	<u>Levels of Control</u>		
<u>Cl.</u>	<u>Requirement</u>	<u>Test Method</u> <u>Cl. Ref.</u>	<u>Test Method</u> <u>IS</u>		<u>No. of Sample</u>	<u>Frequency</u>	<u>Remarks</u>
3.1	Shape and Designs	3.1	IS 11544	R	One	Each Pair	-
3.2	Material						
3.2.1	Rubber Components						-
	Relative Density	Col (8) of Table 1	IS 3400(Part 9):1978	S	One	Each consignment	-
	Hardness, IRHD	Col (8) of Table 1	IS 3400(Part 2):1980	S	One	Each consignment	-
	Change in initial Hardness after accelerated ageing for 24 h at 100 ±1 °C	Col (8) of Table 1	IS 3400(Part 2):1980 & IS 3400(Part 4):1978	S	One	Each consignment	-
3.2.1.1	Flexural endurance	Appendix B	IS 11544	R	One	Every 4 th Control unit	-
3.2.4	Fabrics Sheeting	3.2.4	IS 11544				
	Mass/m ² , g	Col (5) of Table 2	IS 1964:1970	R	One	Each control unit/consignment	-
	Ends/cm	Col (5) of Table 2	IS 1963:1981	R	One	Each control unit/consignment	-
	Picks/cm	Col (5) of Table 2	IS 1963:1981	R	One	Each control unit/consignment	-
	Colour fastness	Col (5) of Table 2	Test number A1 (See Table 2) of IS/ISO 105-C10:2006 (superseding IS 687:1979)	S	One	Once in 3 months	Not applicable for sheeting white

3.2.4.1		3.2.4.1	IS 11544	R	One	Each control unit/consignment	-
3.2.5	Thread	3.2.5	IS 1720:1978	S	One	Once in 3 months	-
3.2.6	Manufacture and thickness and width requirements of individual components	3.2.6 (Table 3)	IS 11544	R	Adequate dimensional and visual checks	-	-
3.2.6.1	Vamp design	3.2.6.1	IS 11544	R	-Do-	-	-
3.2.6.2	Vamp construction	3.2.6.2	IS 11544	R	-Do-	-	-
3.2.6.3	Vamp lasting	3.2.6.3	IS 11544	R	-Do-	-	-
3.2.6.4	Rubber foxing	3.2.6.4	IS 11544	R	-Do-	-	-
3.2.6.5	Pre moulded rubber outer sole and heel and insole	3.2.6.5	IS 11544	R	-Do-	-	-
3.2.7	Vulcanization process	3.2.7	IS 11544	R	Adequate visual examination	-	-
3.2.8	Workmanship and finish	3.2.8	IS 11544	R	Adequate visual examination	-	-
3.2.9	Preservation	3.2.9	IS 11544	R	Each slipper	-	-

Note-1: Whether test equipment is required or sub-contracting is permitted in column 2 shall be decided by the Bureau and shall be mandatory. Sub-contracting is permitted to a laboratory recognized by the Bureau or Government laboratories empanelled by the Bureau.

Note-2: The control unit and levels of control as decided by the Bureau are obligatory, to which the licensee shall comply with.