



उत्पाद मानुयल
सीधे संच कत तले के साथ चमड़े के सुरक्षा जूते - व शष्ट
IS 11226 : 1993 के अनुसार

**PRODUCT MANUAL FOR
LEATHER SAFETY FOOTWEAR HAVING DIRECT MOULDED RUBBER SOLE
ACCORDING TO IS 11226 : 1993**

भारतीय मानक ब्यूरो (अनुरूपता मूल्यांकन) विनियम की स्कीम-I के तहत यह उत्पाद मानुयल प्रमाणीकरण के प्रचलन में रीति और पारदर्शिता के सुसंगत सुनिश्चित करने के लिए सभी क्षेत्रीय/शाखा कार्यालयों एवं लाइसेंस धारियों द्वारा संदर्भ सामग्री के रूप में उपयोग किया जाएगा। बीआईएस लाइसेंस/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	:	11226 : 1993
	शीर्षक Title	:	सीधे संच कत तले के साथ चमड़े के सुरक्षा जूते - व शष्ट Leather Safety Footwear having Direct Moulded Rubber Sole
	संशोधन संख्या No. of Amendments	:	दो 02
2.	नमूनाकरण दिशा निर्देश Sampling Guidelines:		
a)	कच्चा माल Raw material	:	(i) Upper : Full chrome leather conforming to IS 5677 (ii) Insole : Leather Board conforming to IS 5867 / Chrome fibre board (reconstituted) (iii) Stiffener : Shall be made of vegetable tanned sole leather splits conforming to Type 1 of IS 7554. (iv) Lining : Lining leather conforming to Type 1 or Type 3 of IS 3840 shall be used. (v) Threads : Rot-proof cotton sewing threads variety No. 35 conforming to IS 1720 and rot-proof linen thread complying with the requirements given in Annex B shall be used for stitching of upper. (vi) Lasting tacks : Mild Steel, rust proof, 12.0 ± 1 mm and

			10 ± 1 mm long lasting tacks shall be used. (vii) Shanks : Iron shanks conforming to Type 1 of IS 10945 shall be used. (viii) Eyelets : Aluminium or steel eyelets conforming to size (collar diameter) 10 of table1 of IS 5041 shall be used. (ix) Cotton NEWAR : White, 19 + 1 mm wide cotton NEWAR (see IS 1895) shall be used. (x) Toe Compound : Gum glue or latex based compound shall be used. (xi) Laces : Fabric laces of colour matching with colour of upper leather shall be provided for boots and shoes. Laces shall comply with requirements of cl. 5.2.9. (xii) Steel toe caps : Steel toe caps of Type 2 of IS 5852, with performance requirement 22 mm, Min; shall be used.
b)	समूहिकरण दिशा निर्देश Grouping guidelines	:	कृपया Annex-A देखें Please refer ANNEX-A
c)	नमूने का परिमाण Sample Size	:	3 Pair of Shoes
3.	परीक्षण उपकरणों की सूची List of Test Equipment	:	कृपया Annex-B देखें Please refer ANNEX –B
4.	निरीक्षण व परीक्षण स्कीम Scheme of Inspection and Testing	:	कृपया Annex-C देखें Please refer ANNEX –C
5.	एक दिन में संभावित परीक्षण Possible tests in a day:		
	i. Relative Density ii. Hardness iii. Tensile strength & Elongation at Break iv. Workmanship and Finish v. Mass vi. Flexing Resistance vii. Thickness viii. Performance test		
6.	लाइसेन्स का कार्यक्षेत्र Scope of the Licence:		
	IS 11226 : 1993 के अनुसार मानक मुहर का उपयोग करने के लिए लाइसेन्स निम्नलिखित कार्यक्षेत्र के लिए प्रदान किया जाता है “Licence is granted to use Standard Mark as per IS 11226 : 1993 with the following scope:		
	उत्पाद का नाम Name of the product	Leather safety footwear having direct moulded rubber sole	
	Type	Type 1/ Type 2/ Type 3/Other modified design	

	Size	Sizes as applicable
	Additional Requirement (Optional)	With or Without Oil resistant soles and heels.

ANNEX-A

TO LEATHER SAFETY FOOTWEAR HAVING DIRECT MOULDED RUBBER SOLE ACCORDING TO IS 11226 : 1993

GROUPING GUIDELINES

- IS 11226 classifies Leather safety footwear having direct moulded rubber sole in the following three types:
 - Type 1 Ankle boots
 - Type 2 Jodhpuri shoes
 - Type 3 Derby shoes
 - Or any other design as agreed to between manufacturer and purchaser
- Above classification may be divided in to 3 groups based on the sizes for drawl of samples for the purpose of GoL/CSoL-

Group	Type	Size(English /French)	Samples to be drawn
1	Type 1 or Type 2 or Type 3 or any other design (If for two or all)*	Up to 5/38	One sample of any size **
2	Type 1 or Type 2 or Type 3 or any other design (If for two or all)*	5 ¹ / ₂ to 8/ 39 to 42	One sample of any size **
3	Type 1 or Type 2 or Type 3 or any other design (If for two or all)*	8 ¹ / ₂ and above/ 43 and above	One sample of any size **

* If the Applicant /Licensee applies for two or more types, testing to be done for each type separately.

** Samples of any size can be taken for considering other sizes in the same group.

- Additional Requirements shall be indicated in the scope of licence only if the sample has been tested for those Additional requirements.
- However, while considering grant of licence/inclusion of additional sizes/types, 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.
- During operation of the licence, BO will ensure that all the sizes/types 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 LEATHER SAFETY FOOTWEAR HAVING DIRECT MOULDED RUBBER SOLE
ACCORDING TO IS 11226 : 1993

List of Test Equipment

Major test equipment required to test as per the Indian Standard

S.No.	Tests used in with Clause Reference	Chemicals And Equipment's
1	Construction Cl. 5.4	Micrometer, Scale, Vernier calliper.
2	Mass Cl. 5.5	Weighing Balance
3	Performance Test Cl. 5.6	Impact apparatus as per Annex D of IS 11226 Drilling machine, Clamping device.
4	Adhesion Test Cl. 5.7	Conditioning Chamber, Adhesion Tester (SATRA sole adhesion tester or its equivalent).
5	Relative Density Cl. 5.2.11 Table 1 & 2 (IS 3400 Pt 9)	Analytical Balance, Beaker, Distilled water/Deionized water Method A Balance pan straddle, Beaker, Surface-active material such as detergent/methyl alcohol or denatured spirit. Method B Density bottle with stopper, Vacuum desiccator/ Hot plate/Heating mantle
6	Shore Hardness 5.2.11 Table 1 & 2 (IS 3400 Pt 2)	Methods N, H, L and M (Cl. 5.2 of IS 3400 Pt 2): Vertical plunger, Means for applying a contact force and an additional intending force to the plunger, Means for measuring the increase in depth of indentation of the plunger caused by the indenting force, Flat annular foot, Means for gently vibrating the apparatus, Micrometer. Methods CN, CH, CL and CM (Cl. 5.3 of IS 3400 Pt 2): Cylindrical surfaces of radius greater than 50 mm, Surfaces with double curvature of large radius greater than 50 mm, Cylindrical surfaces of radius 4 mm to 50 mm or small test pieces with double curvature, Small O-rings and articles of radius of curvature less than 4 mm, Micrometer.
7	Tensile Strength & Elongation at Break 5.2.11 Table 1 & 2 (IS 3400 Pt 1)	Test rig for ring test pieces, Dies and cutters, Thickness gauge/ Cone gauge, Scale, Tensile testing machine as per clause 7.4 of IS 3400 PT 1, Clamping device.
8	Flexing resistance 5.2.11 Table 1 & 2 (IS 3400 Pt 16)	Ross flexing machine, Piercing tool and holder, Scale, Micrometer.
9	Change in Initial Hardness 5.2.11 Table 1	Air Oven, Shore hardness tester as per Clause 5.2 or 5.3 of IS 3400 Pt 2, Micrometer.

	(IS 3400 Pt 2 & Pt 4)	
10	Oil Resistance to liquid 5.2.11 Table 2 (IS 3400 Pt 4)	Iso octane, Toluene, Mineral Oil, Hydraulic Buffer, Air Oven.
11.	Laboratory condition	To maintain the laboratory condition Air conditioner, room heater, room temp meter, hygrometer, humidifier are required.

The above list is indicative only and may not be treated as exhaustive.

ANNEX C
SCHEME OF INSPECTION AND TESTING
FOR LEATHER SAFETY FOOTWEAR HAVING DIRECT MOULDED RUBBER
SOLE ACCORDING TO IS 11226 : 1993

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 equipments.

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 stamped on the underside of each footwear provided always that the leather safety footwear to which this mark is thus applied conforms to every requirement of the specification.

3.1 In addition, the following information shall be given on each leather safety footwear having direct moulded rubber sole:

- i) Sizes of the footwear and Manufacturer's name or his recognized trade mark, if any to be given legibly on the waist of the outer sole.
- ii) The size and fitting number of the footwear and year of manufacture shall be legibly marked on insole waist and also be legibly marked on the full sock.
- iii) Batch no.
- iv) Month and year of manufacture
- v) Type of shoes
- vi) BIS Licence No. CM/L_____;

3.2 Unless otherwise agreed to between the purchaser and the manufacturer, the footwear shall be packed as per clause 8.1.1 of IS 11226. The package shall be legibly marked with the following:

- a) Name of the material;
- b) Name of the manufacturer or his recognized trade-mark, if any;
- c) Batch/Code No.;
- d) Size and quantity of pairs packed.
- e) Type of footwear
- f) BIS website details: "For details of BIS Certification please visit www.bis.gov.in".

3.3 The packages shall be marked with green colour if safety footwears are meant for oil refineries.

4. CONTROL UNIT - For the purpose of this Scheme, the control units shall be as follows:

4.1 RAW MATERIALS - Each consignment of one type. In case the materials bear the Standard Mark, or received with manufacturer's Test Certificate further testing will not be

necessary. Otherwise, samples may be tested at an independent laboratory and test certificates obtained. Only materials which show conformity to the relevant Indian Standards shall be utilized in the manufacturing.

4.2 LEATHER COMPONENTS - The components of leather for footwear produced in one week.

4.3 FINISHED LEATHER BOOTS AND SHOES – Leather safety footwear of one type produced in one week from same consignment of raw material.

5. LEVELS OF CONTROL - The tests as indicated in column 1 of Table 1 and the levels of control in column 3 of Table 1, shall be carried out on the whole production of the factory which is covered by this plan and appropriate records 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 –A separate record shall be maintained giving information relating to the rejection of the production not conforming to the requirements of the specification and the method of its disposal. Such material shall in no case be stored together with that conforming to the specification. 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
LEVELS OF CONTROL

(1)				(2)	(3)		
TEST DETAILS				Test equipment requirement R: required (or) S: Subcontracting permitted	LEVELS OF CONTROL		
Clause	Requirements	Test Method Cl. Ref.	Test Method IS		No. of samples	Frequency	Remarks
5.2	Materials						
5.2.1	Upper Leather	5.2.1	IS 11226& IS 5677	S	One	Each Consignment of one type	No testing required if material received with raw material manufacturer's Test Certificate.
5.2.2	Insole	-	IS 5867	S	-do-	-do-	
5.2.3	Stiffener	-	IS 7554	S	-do-	-do-	
5.2.4	Lining Material	-	IS 3840	S	-do-	-do-	
5.2.5	Threads	-	IS 1720	S	-do-	-do-	
5.2.6	Grinderries	5.2.6	IS 11226	S	-do-	-do-	
5.2.6.1	Lasting Tacks	5.2.6.1	-do-	S	-do-	-do-	
5.2.6.2	Shanks	5.2.6.2	IS 10945	S	-do-	-do-	
5.2.6.3	Eyelets	-	IS 5041	S	-do-	-do-	
5.2.7	Cotton Newar	-	IS 1895	S	-do-	Each consignment of one type	
5.2.8	Toe compound	5.2.8	IS 11226	S	-do-	-do-	
5.2.9	Laces	5.2.9	IS 4778		-do-	-do-	
5.2.10	Steel Toe Cap	-	IS 5852	S	One pair	-do-	
5.2.11	Rubber Sole & Heel	5.2.11, Table 1 & Table 2	IS 11226	R	-do-	One week production	
5.3	Components	5.3 & Table 3	-do-	S	ten	Each consignment of one type	The thickness of components except rubber sole, heel and full sock shall be checked(not at skived portion) inhouse before lasting of upper
5.4	Construction	5.4.1 to 5.4.8	-do-	R	Each pair	-	

5.5	Mass	5.5		R	Ten	One week's production of one size	
5.6	Performance test	5.6 & Annex D	-do-	R	One pair	Each Control unit	
5.7	Adhesion Test on moulded bottom	5.7.1, 5.7.2 and Annex E	-do-	R	-do-	-do-	

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.