केन्द्रीय मुहर विभाग-2

हमारा संदर्भ : के.मु.वि.-2/16: 15298 (Pt 4) 22 08 2019

विषय: IS 15298 (Part 4) : 2017/ ISO 20347 : 2012 (Personal Protective Equipment Part 4 Occupational Footwear) के अनुसार संशोधित Scheme of Inspection and Testing (SIT)

उपरोक्त विषय पर सक्षम प्राधिकारी द्वारा अनुमोदित परिपत्र अनुपालन हेतु संलग्न है।

(आदित्य दास)
वैज्ञानिक सी (सी एम डी-2)

प्रमुख (के.मु.वि.-2)
सभी क्षेत्रीय/शाखा कार्यालयो को इंट्रानेट के माध्यम से परिचालित

प्रतिलिपि:

आई टी एस विभाग - बीआईएस इंट्रानेट पर अपलोड करने के लिए

CENTRAL MARKS DEPARTMENT-2

Our Ref: CMD-2/16: 15298 (Pt 4) 22 08 2019

Subject: Revised Scheme of Inspection and Testing (SIT) for IS 15298 (Part 4) : 2017/ ISO 20347 : 2012 (Personal Protective Equipment Part 4 Occupational Footwear) incorporating amendment no. 1

Please find enclosed circular on the above subject, duly approved by the Competent Authority, for implementation.

(Aditya Das)
Sc. 'C' (CMD-2)

Head (CMD-2)

Circulated to all ROs/BOs

Copy to: ITS for hosting on BIS Intranet

CENTRAL MARKS DEPARTMENT-2

Our Ref: CMD-2/16: 15298 (Pt 4) 20 08 2019

Subject: Revised Scheme of Inspection and Testing (SIT) for IS 15298 (Part 4) : 2017/ ISO 20347 : 2012 (Personal Protective Equipment Part 4 Occupational Footwear) incorporating amendment no. 1

1) This has reference to the above and guidelines for implementation of amendment no. 1 to IS 15298 (Part 4) : 2017/ ISO 20347 : 2012 circulated vide note dated 05 02 2019.

2) However, concerns were raised by manufacturers in implementation of the amendment, specifically relating to:

    a. Difficulty in setting up in house facilities for testing Innocuousness as per IS 17011:2018 due to high cost involved. In addition, among the BIS recognized labs, only one lab i.e. M/s Atharva Labs (Noida) have confirmed availability of facilities.

    b. Difficulty in marking shelf life and obsolescence and also providing information in both English and Hindi

3) Due to the above, last date for the implementation of the amendment was extended to **30 Sept 2019** by the Competent Authority.

4) However, labs have now been recognized for testing as per the latest version (i.e. considering the amendment). In addition, CHD 19 in its meeting dated 20 May 2019 had discussed these issues and decided that while the requirement of innocuousness shall be retained, marking of shelf life and time period of obsolescence on the packaging shall be removed. Further, the details have been decided to be marked in English and any other language. This change shall be effected through an amendment (amendment no. 2) with the Chairman's approval.

5) However, since the amendment no. 2 is yet to be established, and the last date of implementation of the amendment no. 1 is only about a month away, to facilitate implementation of this amendment no .1, a revised Scheme of Inspection and Testing (SIT) has been prepared to supersede extant SIT for this IS, in which:

    a. Frequency of Innocuousness test has been reduced to: One consignment from each source (i.e. Supplier), **once every six months and subcontracting has been allowed**
    b. In the packing and marking clause, all details which are to be marked as per the standard have been retained except shelf life/time period of obsolescence. In addition, it has been specified that the details may be marked in English and any other language

6) Scheme of Inspection and Testing (SIT) for IS 15298 (Part 4) : 2017/ ISO 20347 : 2012 considering amendment no. 1 thus prepared is enclosed with a request to share the same with licensees and applicants for its implementation and also ensure implementation of amendment no. 1 within the last date.

(Aditya Das)
Sc. 'C' (CMD-2)

Head (CMD-2)

Circulated to all ROs/BOs

SCHEME OF INSPECTION AND TESTING FOR CERTIFICATION OF PERSONAL PROTECTIVE EQUIPMENT PART 2 SAFETY FOOTWEAR ACCORDING TO IS 15298 (Part 4) : 2017/ ISO 20347 : 2012 (SECOND REVISION)

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 Schedule of the license shall be stamped on each piece of protective footwear and the outer packaging for each pair of footwear, provided always that the Footwear to which this mark is thus applied conforms to every requirement of the specification. All markings shall be made inside of tongue or at top outer face of the boot so that least damage is done during working.

3.1 Packing shall be done as agreed between purchaser and supplier. In addition, the following details shall be permanently marked on each piece of footwear:

a) Size,
b) Manufacturer's name and brand,
c) Year and month of manufacture,
d) Number and year of the standard, based upon which the boots are produced,
e) Any other statutory marking.
f) BIS Licence No. (CM/L---)

3.2 Each pair of boot shall be supplied with the following information in English and any other language:

i) Name and full address of manufacturer,
ii) Details of customer care service provider,
iii) Instruction for storage and maintenance,
iv) For instructions on cleaning and drying, *see* IS 6519,
v) Wherever applicable, declaration to be made stating footwear is not for use in fire hazard/explosion
vi) prone areas/hot contact/electric resistance purpose,
vii) The footwear is not a GREEN footwear and not bio-degradable.
viii) BIS Licence No. (CM/L---)
ix) and BIS website details: "For details of BIS Certification please visit www.bis.gov.in" (These details also to be marked on the box)

4. **CONTROL UNIT-** 10,000 pairs or Fortnight production of the safety footwear, whichever is earlier manufactured from the same consignment of the raw material constitute a control unit.

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

4.1.1 No. of sample 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 confirm 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 specified therein, shall be carried out on the whole production of the factory covered by this scheme and appropriate records and charts maintained in accordance with paragraph 2 above. All the production which conforms to the Indian Standard and covered by the licence shall be marked with the BIS certification Mark.

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

6. REJECTION - 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.

PERSONAL PROTECTIVE EQUIPMENT PART 4 OCCUPATIONAL FOOTWEAR
ACCORDING TO IS 15298 (Part 4) : 2017/ ISO 20347 : 2012
(SECOND REVISION)
TABLE 1 LEVELS OF CONTROL
(Para 5.0 of the Scheme of Testing and Inspection)

TEST DETAILS (1)				**Test equipment requirement R:required (or) S: Sub-contracting permitted (2)**	**LEVELS OF CONTROL**			
Clause	Requirement	Test Method			No. of Samples	No. of test pieces from each sample	Frequency	Remarks
		Clause	Reference					
5.2	**DESIGN**							
5.2.1	General	5.2.1	IS 15298 (Pt 4)	R	1 from each of 3 sizes	1	Each control unit	Applicability will be as defined in Table 2 of IS 15298 (Pt2)
5.2.2	Height of upper	6.2	ISO 20344:2011	R	1 from each of 3 sizes	1	Each control unit	-do-
5.2.3	Seat Region	5.2.3	IS 15298 (Pt 4)	R	All		-do-	-do-
-do-	Design A	-do-	-do-	R	-do-	1	-do-	-do-
-do-	Design B	-do-	-do-	R	-do-	1	-do-	-do-
-do-	Design C	-do-	-do-	R	-do-	1	-do-	-do-
-do-	Design D	-do-	-do-	R	-do-	1	-do-	-do-

-do-	Design E	-do-	-do-	R	-do-	1	-do-	-do-
	WHOLE FOOTWEAR							-do-
5.3.1	**Sole Performance :**			R				-do-
5.3.1.1	Construction	5.3.1.1	IS 15298 (Pt 4)	R	All		Each control unit	-do-
5.3.1.2	Upper / Outsole bond strength	5.2	ISO 20344:2011	R	1 from each of 3 sizes	1	-do-	-do-
5.3.2	Leak proofness	5.7	ISO 20344:2011	R	-do-	-do-	-do-	-do-
5.3.3	Specific ergonomic features	5.1	-do-	R	3 pairs from 3 different sizes	1 pair	-do-	-do-
5.3.4	Slip resistance	5.11	-do-	**S**	-do-	-do-	**Once in a month**	-do-
5.3.6	Innocuousness	-	IS 17011	**S**	One consignment from each source (i.e. Supplier) shall be tested **once every six months**			
5.4	**UPPER**							-do-
5.4.1	General	5.4.1	IS 15298 (Pt 4)	R	1 from each of 3 sizes	1	Each control unit	-do-
5.4.2	Thickness	6.1	ISO 20344:2011	R	-do-	3	-do-	-do-
5.4.3	Tear strength	6.3	-do-	R	-do-	-do-	-do-	-do-
5.4.4	Tensile properties	6.4.1	-do-	R	-do-	-do-	-do-	-do-
5.4.5	Flexing resistance	6.5	-do-	R	-do-	1	-do-	-do-
5.4.6	Water vapour permeability and co-efficient	6.6 & 6.8	-do-	R	-do-	-do-	-do-	-do-
5.4.7	pH value	6.9	-do-	R	1	2	-do-	-do-
5.4.8	Hydrolysis	6.10	-do-	R	1 from each of 3 sizes	1	-do-	-do-
5.4.9	Chromium VI content	6.11	ISO 17075	R	1	2	-do-	-do-

5.5	**LINING**(Vamp lining & quarter lining)							-do-
5.5.1	Tear strength	6.3	ISO 20344:2011	R	1 from each of 3 sizes	3	Each control unit	-do-
5.5.2	Abrasion resistance	6.12	-do-	R	3	4	-do-	-do-
5.5.3	Water vapour permeability and co-efficient	6.6, 6.8	-do-	R	1 from each of 3 sizes	1	-do-	-do-
5.5.4	pH value	6.9	-do-	R	1	2	-do-	-do-
5.5.5	Chromium VI content	6.11	ISO 17075	R	1	2	-do-	-do-
5.6	**TONGUE**							-do-
5.6.1	Tear Strength	6.3	-do-	R	1 from each sizes	3	-do-	-do-
5.6.2	pH Value	6.9	ISO 20344:2011	R	1	2	Each control unit	-do-
5.6.3	Chromium VI content	6.11	ISO 17075	R	-do-	-do-	-do-	-do-
5.7	**INSOLE & INSOCK**							-do-
5.7.1	Thickness	7.1	ISO 20344:2011	R	3	1	Each control unit	-do-
5.7.2	pH Value	6.9	-do-	R	1	2	-do-	-do-
5.7.3	Water absorption and desorption	7.2	-do-	R	3	1	-do-	-do-
5.7.4	**Abrasion Resistance**							-do-
5.7.4.1	Insoles	7.3	-do-	R	3	1	-do-	-do-
5.7.4.2	In socks	6.12	-do-	R	3	4	-do-	-do-
5.7.5	Chromium VI content	6.11	ISO 17075	R	1	2	-do-	-do-
5.8	**OUTSOLE**							-do-
5.8.1	Design	5.8.1	IS 15298 (Pt 4)	R	-do-	1	-do-	-do-

5.8.1.1& Table 17	Outsole thickness	8.1.2	ISO 20344:2011	R	1 from each of 3 sizes	1	Alternate control unit	-do-
5.8.1.2	Cleated Area		-do-	R	1 from each of 3 sizes	1	Alternate control unit	-do-
5.8.1.3	Cleat Height	8.1	-do-	R	1 from each of 3 sizes	1	Alternate control unit	-do-
5.8.2	Tear strength	8.2	-do-	R	-do-	-do-	-do-	-do-
5.8.3	Abrasion resistance	8.3	-do-	R	-do-	-do-	-do-	-do-
5.8.4	Flexing Resistance	8.4	-do-	R	-do-	-do-	-do-	-do-
5.8.5	Hydrolysis	8.5	-do-	R	-do-	-do-	-do-	-do-
5.8.6	Interlayer Bond Strength	5.2	-do-	R	-do-	-do-	-do-	-do-
6	**ADDITIONAL REQUIREMENTS FOR OCCUPATIONAL FOOTWEAR**							Applicable as per Table 16
6.2	**WHOLE FOOTWEAR**							-do-
6.2.1	Penetration Resistance		ISO 20344:2011	R	1 pair from each of 3 sizes	1 pair	Alternate Control Unit	-do-
6.2.2	**Electrical Properties**							-do-
6.2.2.1	- Conductive footwear	5.10	ISO 20344:2011	R	1 pair from each of 3 sizes	1 pair	Alternate Control Unit	-do-
6.2.2.2	-Antistatic Footwear	5.10	-do-	R	-do-	-do-	-do-	-do-
6.2.2.3	Electrically Insulating Footwear	5.11	EN 50321	R	-do-	-do-	-do-	-do-
6.2.3	**Resistance to inimical**							-do-

	Environments							
6.2.3.1	Heat Insulation of sole complex	5.12	ISO 20344:2011	R	2 from different sizes	1	-do-	-do-
6.2.3.2	Cold Insulation of sole complex	5.13	-do-	R	-do-	-do-	-do-	-do-
6.2.4	Energy absorption of seat region	5.14	-do-	R	1 pair from each of 3 sizes	1 pair	-do-	-do-
6.2.5	Water resistance	5.15.1 or 5.15.2	-do-	R	3 pairs (minimum 2 different sizes)	-do-	-do-	-do-
6.2.6	Ankle protection	5.17	-do-	R	-do-	-do-	-do-	-do-
6.2.7	Cut resistance footwear	6.14, 6.2.8.4	-do- IS 15298 (Pt 4)	R	-do-	-do-	-do-	-do-
6.3	**UPPER**							-do-
6.3	Water penetration and water absorption	6.13	ISO 20344:2011	R	3	1	Alternate Control Unit	-do-
6.4	**OUTSOLE**							-do-
6.4.1	Resistance to hot contact	8.7	ISO 20344:2011	R	-do-	-do-	-do-	-do-
6.4.2	Resistance to fuel oil	8.6.1	-do-	R	1 from each of 3 sizes-	1	-do-	-do-

Note-1:

i) Where samples are required from each of three sizes, these shall comprise the largest, the smallest and a middle size of the footwear under test.

ii) If one or two sizes are only manufactured in any particular control unit, then samples from the available sizes are to be tested.

iii) If any sample of any size fails, the production of the particular control unit to be treated as fail.

iv) If it is not possible to obtain a large enough test piece from the footwear, then a sample of the material from which the component has been manufactured may be used instead and this should be noted in the test report.

Note-2: 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-3: Levels of control given in column 3 are only recommendatory in nature. The manufacturer may define the control unit/batch/lot and submit his own levels of control in column 3 with proper justification to BO Head.