



**उत्पाद मैनुअल
लेदर गॉटलेट्स और मिट्टेंस विशिष्टि
2573: 2023 के अनुसार**

**PRODUCT MANUAL
FOR LEATHER GAUNTLETS AND MITTENS
ACCORDING TO IS 2573:2023**

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 2573 : 2023
	शीर्षक Title	:	लेदर गॉटलेट्स और मिट्टेंस विशिष्टि LEATHER GAUNTLETS AND MITTENS
	संशोधनों की संख्या No. of amendments	:	Nil
2.	नमूना दिशानिर्देश Sampling Guidelines		
a)	कच्चा माल Raw material	:	Materials shall be as per CI 5.2.1 to 5.2.3 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-ए देखें Please see Annex – A

c)	नमूने का परिमाण Sample Quantity	:	3 जोड़े 3 Pairs 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 (incase of market surveillance, effort may be made to procure therequired quantity of product sample, as far as possible since raw material sample may not be available in market)
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		
	(i) Solvent extractable substances (ii) Chromium contents (iii) pH of aqueous extract (iv) Double hole stitch tear strength (v) Shrinkage temperature (vi) Dimensions (vii) Abrasion Resistance (viii) Length (ix) Single thread breaking load (x) Ends & Picks (xi) Mass (xii) Breaking load (xiii) Heat Resistance test 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:		
	“Licence is granted to use Standard Mark as per IS 2573:2023. with the followingscope:		
	Name of the product	लेदर गॉटलेट्स और मिट्टेंस LEATHER GAUNTLETS AND MITTENS	
	Types	Type 1/ Type 2/ Type 3	
	Sizes (applicable for Type 1)	Small/medium/large	

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ANNEX-A
GROUPING GUIDELINES

1. Gauntlets as per IS 2573:1986 is classified as below:

This standard covers three types of products, according to use, namely:

Type 1 - Leather gauntlets for welders,

Type 2 - Leather gauntlets for workers in iron and steel industry, and

Type 3 - Leather mittens for workers in iron and steel industry.

2. Sizes: Three sizes of leather gauntlets for welders are recommended on the basis of the total length, L as given below. No sizes are provided in the IS for Type 2 and Type 3.

Size	Length (L, mm)
Small	300 $\pm$ 5
Medium	350 $\pm$ 5
Large	400 $\pm$ 5

3. Considering the above, for GoL/CSoL, one sample of each type (of largest size in case of gauntlets for welders) shall be tested for all requirements to cover that type with all applicable sizes (sizes applicable for Leather Gauntlets for Welders).
4. The Firm shall declare the varieties of Gauntlets (Type 1/Type 2) they intend to cover in the Licence.
5. Scope of licence shall be restricted based on the manufacturing and testing facilities available.
6. 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 EQUIPMENTS****(INDICATIVE LIST, FOR GUIDANCE ONLY)**

Sl. No.	Tests Used In With Clause Reference	Test Equipment/Chemical
1	Solvent extractable substances, percent by mass	Desiccator Filter paper Thimbles or Glass filter Belts (Shleicher and Shull, No. 603 Whatman extraction thimbles 33 x80 or equivalent are suitable.) Oven Soxhlet extraction Apparatus Reagents Dichloromethane Petroleum hydrocarbon solvent Weighing balance
2	Chromium contents (as Cr_2O_3), Percent by mass	Kjeldahl or Erlenmeyer Flask Conical Flask Crucible - iron or nickel Reagents Burette, 50 ml. Filtration device Antibumping granules Wet oxidation method Nitric acid Sulphuric acid Perchloric acid Orthophosphoric acid Alkaline fusion method Sodium carbonate Potassium carbonate Sodium tetra borate Iodometric titration Potassium iodide Sodium thiosulphate Starch indicator
3	pH of aqueous extract	Flask pH meter Shaker Apparatus Reagents Analytical balance, Wide mouthed flask Measuring cylinder Volumetric flask Pipette, capacity 10 ml. Buffer solutions
4	Double hole stitch tear strength	metal wire, punch, testing machine as per 3.3 of LP 8 of IS 5914
5	Shrinkage temperature	Barometer Stop Watch Shrinkage Temperature Measurement Apparatus as per Cl 3.2 of LP 10 of IS 5914 glass beaker brass tube thermometer stirrer and heater

		Apparatus for Wetting Test Piece as per Cl 3.1 of LP 10 of IS 5914
6	Dimensions	Steel Scale Steel Tape Vernier Calipers Micrometer
	Abrasion Resistance	Martindale Ball Plate Method (IS 5914 (Part 2/Sec 2) Apparatus and materials as per Cl 4 of IS 5914 (Part 2/Sec 2) : 2017 Determination of Abrasion Resistance Section 1 Taber Method (IS 5914 (Part 2/Sec 1) Apparatus as per Cl 5 of IS 5914 (Part 2/Sec 1) : 2022 Martindale Abrasion Machine as per cl. 6.12.2.1 of IS 15298 (Part 1), Reference Abradant Pad, Backing Fabric Punch Weight, Specimen Holder, Abrading Base, Balance, Conditioning Chamber, Dial Gauge, Filler Gauge, Woven felt, Hygrometer, Air conditioner, Thermometer.
12	Length, m/Kg. Min	Wrap Reel Tensioning Device Weighing Balance Gummed paper
13	Single thread breaking load, Newtons Min	Testing Machine variable-speed drive conditioning chamber
17	Ends/cm & Picks/cm	Thread counter with Low power microscope Conditioning chamber Clamps Forceps
19	Mass, g/m ²	Horizontal, Flat Smooth Table Graduated Steel Scale Capable of weighing to an accuracy of 0.005 g. Conditioning chamber Arrangement for carrying out test in standard atmosphere (Cl 6.2.1 of IS 1964) Weighing balance T-square Oven
20	Breaking load on 5 cm x 20 cm Raveled strips, min	Tensile-Testing machine Equipment, for cutting test specimens. Equipment, in which test specimens can be immersed in water preparatory to wet testing Grade 3 water, in accordance with ISO 3696 for wetting test specimens Arrangement for conditioning at 27+-2 degree centigrade
22	Heat Resistance test	Arrangement as per Cl 6 of IS 2573

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 : all the pairs of Leather gauntlets or mittens of the same type and of any size (applicable to gauntlets for welders) manufactured in a day and manufactured from the same raw materials

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 gauntlet and mitten provided always that each gauntlet and mitten to which this mark is thus applied 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 material shall also be marked with the following additional requirement on package/Product of gauntlet and mittens:

- a) “For BIS certification details please visit www.bis.gov.in”
- b) *Any other requirement not specified in the Indian Standard*

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:Sub-contracting permitted	Levels of Control		
Cl.	Requirement	Test Methods			No. of Sample	Frequency	Remarks
		Clause	Reference				
5.1	Shape, design and dimension	Cl 5.1	IS 2573:2023	R	Firm to have adequate in-process controls to check compliance of this parameter as per the tolerances given in the Indian Standard. However, appropriate records shall be maintained by the manufacturer for evidence of conformity		
5.2	Material						
	Leather	Cl.5.2.1 &Table 1	IS 2573 :2023	S	One	Each Consignment and each type of leather	Test Certificate/report should be obtained either from supplier or from any independent Laboratory.
	Thread	5.2.2 &Table 2	-do-	S	One	Each Consignment	Test certificate should be obtained either from
	Canvas	5.2.3 &Table 3	-do-	S	One	-do-	supplier or from any independent testing lab.
5.3	Manufacture						
	Type 1	From Cl.5.3.1 to 5.3.1.11	-do-	R	Firm to have adequate in-process controls to check compliance of this parameter as per the tolerances given in the Indian Standard. However, appropriate records shall be maintained by the manufacturer for evidence of conformity		
	Type 2	From Cl.5.3.2 to 5.3.2.12	-do-	R			
	Type 3	From Cl.5.3.3 to 5.3.3.15	-do-	R			
6.	Heat Resistance Test	Cl 6	-do-	R	One	Each control unit	