



उत्पाद मैनुअल
शीट रबड़ जोईटिंग और रबड़ सम्मिलन जोईटिंग
आईएस 638: 2024 के अनुसार

PRODUCT MANUAL
FOR SHEET RUBBER JOINTING AND
RUBBER INSERTION JOINTING
ACCORDING TO IS 638: 2024

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 638 : 2024
	शीर्षक Title	:	Sheet Rubber Jointing and Rubber Insertion Jointing
	संशोधनों की संख्या No. of amendments	:	Nil
2.	नमूना दिशानिर्देश Sampling Guidelines		
a)	कच्चा माल Raw material	:	Composition of Rubber Compound shall be as per clause 4.1.2 of IS 638: 2024 Fabric Reinforcement for Rubber Insertion Jointing shall be as per clause 4.1.3 of IS 638: 2024
b)	समूहीकरण दिशानिर्देश Grouping Guidelines	:	Nil
c)	नमूने का परिमाण Sample Quantity	:	01x01m Sheet, 02 Nos Slab(150x150x10mm), 02 Nos Slab(150x150x2mm), 02 Nos Buttons(29x12.5mm), 04 Nos

d)	परीक्षण अनुरोध में घोषित : किए जाने वाले पैरामीटर Parameters to be Declared in Test Request	:	i. Grade ii. Type iii. Thickness of sheet iv. Purpose for sheet jointing v. 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	:	Please refer ANNEX – A
4.	निरीक्षण और परीक्षण की स्कीम Scheme of Inspection and Testing	:	Please refer ANNEX – B
5.	एक दिन में संभावित परीक्षण Possible tests in a day	:	Construction and Workmanship, Tensile Strength & Elongation at Break, Resistance to Bending and Hardness.
6.	लाइसेंस का दायरा /Scope of the Licence:		
	Licence is granted to use Standard Mark as per IS 638:2024 with the following scope:-		
	Name of the product	Sheet Rubber Jointing and Rubber Insertion Jointing	
	Type	Type A and/or Type B	
	Grade	Grade 1 and/or Grade 2	
	Jointing Material	Sheet rubber and/or Rubber insertion Jointing	
	Joints Subjected to	Water and Air Pressure and/or Steam Pressure	

BUREAU OF INDIAN STANDARDS
Manak Bhawan, 9 Bahadur Shah Zafar Marg,
New Delhi – 110002

ANNEX-A
List of Test Equipment

(INDICATIVE LIST, FOR GUIDANCE ONLY)

Sl. No.	Tests used in with Clause Reference	Test Equipment
1.	Construction and Workmanship (clause 4.2)	-Thickness gauge
2.	Tensile Strength and Elongation at Break (clause 4.4)	- Dies and cutters - Thickness gauge -Cone gauge - Tensile-testing machine -Vernier Calipers -Steel scale
3.	Accelerated Ageing (clause 4.5)	- Hot air oven with count hour meter - Dies and cutters - Thickness gauge -Cone gauge - Tensile-testing machine -Vernier Calipers -Steel scale
4.	Compression Set (clause 4.6)	-Compression - Apparatus - Oven - Thickness Gauge -Air conditioner
5.	Resistance to Bending (clause 4.7)	- Thickness Gauge -Vernier calliper -Round metal rod -Vice
6.	Adhesion (clause 4.8)	-Air conditioner -Humidity chamber -Adhesion Test Machine -Cutting Tools
7.	Hardness (clause 4.9)	-Hardness testing machine

ANNEX-B

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 : a) **Rubber Compound** – Rubber compound from mixing made in one cycle of mixing. b) **Sheet rubber jointing or rubber insertion jointing** – All sheet rubber jointing or rubber insertion jointing of one type and grade manufactured from the same type of rubber compound under essentially similar conditions and produced in a day.

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 license and Licence Number (i.e. CM/L.....) shall be incorporated, and the packing, marking shall be done as per the provisions of the Indian Standard, provided always that the product thus marked conforms to all the requirement of the specification. In addition, details of BIS website shall be marked as follows: “For details of BIS certification 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 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		
Clause	Requirement	Test Method			No. of samples	Frequency	Remarks
		Clause	Reference				
4.1	Material						
4.1.1	Jointing material	4.1.1	IS 638:2024	R	5	Each control unit	
4.1.2	Composition of rubber compound	4.1.2	-do-	R	5	-do-	
4.1.3	Breaking load of fabric reinforcement for rubber insertion jointing	4.1.3	IS 638:2024 & IS 1969 Pt.1	R	1	Each consignment	Each consignment of reinforcement of cotton fabric for rubber insertion jointing supplied at one time.
4.2	Construction and workmanship						
4.2.1	Visual examination	4.2.1	IS 638:2024	Firm to have adequate in-process controls to check compliance of this parameter as given in the Indian Standard. However, appropriate records shall be maintained by the manufacturer for evidence of conformity			
4.2.2	Thickness and number of plies	4.2.2, 4.2.2.1 & 4.2.2.2	IS 638:2024	R	5	Each control unit	
4.3	Size	4.3	-do-	R	5	-do-	
4.4	Tensile strength and elongation at break	4.4	IS 638:2024 & IS 3400(Part 1)	R	3	-do-	In case any of the samples fail to meet the relevant requirements the entire material in the control unit shall be considered unfit for the purpose of marking.

4.5	Accelerated ageing	4.5.1	IS 638:2024, IS 3400(Part 4) & IS 3400 (Part 1)	R	3	Every eleventh control unit	In case of any failure each control unit shall be tested till 5 consecutive control units are found to be satisfactory and only then frequency suggested in this table may be followed.
4.6	Compression set	4.6.1 & 4.6.2	IS 638:2024 & IS 3400(Part X)	R	3	Every fifth control unit	All sheet rubber jointing or rubber insertion jointing of same material, thickness, types grade, manufacture under the similar conditions of manufacture in a day
4.7	Resistance to bending	4.7.1	IS 638:2024	R	3	Each control unit	-
4.8	Adhesion	4.8	IS 638:2024 & IS 3400(Part 5)	R	1	-do-	--
4.9	Hardness	4.9	IS 638:2024 & IS 3400(Part 2)	R	3	Each control unit of rubber	-