



उत्पाद मैन्युअल
आई एस 2712: 2024 के अनुसार
गास्केट्स एवं पैकिंग - संपीडित एस्बेस्टोस रेशा जोड़
के लिए

दस्तावेज संख्या - पी एम/आई एस 2712/2/ अक्टूबर 2024

भारतीय मानक ब्यूरो की स्कीम-I (अनुरूपता मूल्यांकन) विनियम, 2018 के तहत यह उत्पाद मैन्युअल प्रमाणीकरण के प्रचालन में रीति और पारिश्रिता की सुसंगतता सुनिश्चित करने के लिए सभी क्षेत्रीय/शाखा कार्यालयों और लाइसेंसी द्वारा संदर्भ सामग्री के रूप में उपयोग किया जाएगा। बीआईएस प्रमाणीकरण लाइसेंस/ प्रमाणपत्र प्राप्त करने के इच्छुक भावी आवेदकों द्वारा भी इस दस्तावेज का उपयोग किया जा सकता है।

**PRODUCT MANUAL FOR
GASKETS AND PACKINGS- COMPRESSED ASBESTOS FIBER
JOINTING
ACCORDING to IS 2712: 2024**

Document No.- PM/IS 2712/2/ October 2024

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.

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1.	Product	:	IS 2712: 2024
	Title	:	Gaskets and Packings- Compressed Asbestos Fibre Jointing
	No. of Amendments	:	Nil
2.	Sampling Guidelines:		
a)	Raw material	:	-
b)	Grouping guidelines	:	Please refer ANNEX – <u>A</u>
c)	Sample Size	:	One or Two Sheets (full size) (so as to have a total area not less than 1 Sq. m.)
3.	List of Test Equipment	:	Please refer ANNEX – <u>B</u>
4.	Scheme of Inspection and Testing	:	Please refer ANNEX – <u>C</u>
5.	Possible tests in a day	:	Dimensions (Cl. 9.2), Density (Cl. 9.3), Compressibility and recovery (Cl. 9.5), Tensile strength (Cl. 9.10), Loss on ignition (Cl. 9.11)
6.	Scope of the Licence:		
	“Licence is granted to use Standard Mark as per IS 2712: 2024 with the following scope:		
	Name of product	Compressed Asbestos Fibre Jointing Sheet	
	Grade		
	Nominal thickness of Sheet	From ---mm, to ---- mm	

ANNEX-A**Grouping Guidelines**

1. Compressed Asbestos Fibre Jointing Sheets as per IS 2712: 2024 are grouped as given below based on Grades:

Group	Group I	Group II	Group III
Grade	W/1, W/2, W/3	O/1, O/2	A/1

2. The recommended nominal thickness of the compressed asbestos fibre jointing sheets are 0.4 mm, 0.5 mm, 0.75 mm, 1.0 mm, 1.5 mm, 2.0 mm, and 3.0 mm. Other thickness between 0.25 mm and 6 mm may also be made as agreed to between the manufacturer and the purchaser. Manufacturer shall declare the thickness which (s)he intends to cover in scope. Further, the Dimensions (Length and Width) of the Asbestos Sheet shall be as agreed to between the manufacturer and the purchaser.
3. Considering the above, the guidelines given below shall be followed for considering GoL/ CSoL:
 - (a) Sample of any Dimension (Length and Width) with from each Group shall be tested separately.
 - (b) Sample of sheet of highest and lowest thickness shall be tested to cover Sheets of all thickness in the range of thickness offered.
 - (c) For Group I, if Sheets of Grade W/1 is tested, then Sheets of Grade W/2 and W/3 may also be covered, provided that the material used remains same. Similarly, if Sheets of Grade W/2 is tested, then Sheets of Grade W/3 may also be covered, provided that the material used remains same.
 - (d) For Group II, if Sheets of Grade O/1 is tested, then Sheets of Grade O/2 may also be covered, provided that the material used remains same.
4. The Firm shall declare the varieties of compressed asbestos fibre jointing sheet intended to be covered in the Licence. The Scope of Licence may be restricted based on the Manufacturing and Testing capabilities of the Manufacturer.
5. During the operation of licence, it shall be ensured that all varieties covered in the license are tested in rotation, to the extent possible.

ANNEX--B**List of Test Equipment***Indicative list of major test equipment required to test as per the Indian Standard*

Sr No	Tests used in with clause reference	Test equipment
1.	Dimensions, Cl. 5	Tape, Steel scale/Vernier caliper, Micrometer
2.	Conditioning, Cl. 9.2	Oven, Desiccator, anhydrous calcium chloride
3.	Density, Cl. 9.3	Weighing balance
4.	Flexibility after accelerated aging, Cl. 9.4, Annex C	Oven, mandrel
5.	Compressibility and Recovery test, Cl. 9.5, Annex D	Compression testing machine, Cylindrical indenter, Dial indicators
6.	Stress relaxation, Cl. 9.6	Apparatus as per IS 6210
7.	Oil absorption, Cl. 9.7, Annex E	Oil and Fuel, Weighing balance, Arrangement as per Annex E
8.	Water absorption, Cl. 9.8, Annex F	Distilled water
9.	Resistance to acids, Cl. 9.9, Annex G	Acids, Tensile testing machine
10.	Tensile strength, Cl. 9.10, Annex H	Tensile testing machine, Desiccator
11.	Loss on ignition, Cl. 9.11, Annex J	Oven, Desiccator

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

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. Batch 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 below.

1.3 RECOMMENDED LEVELS OF CONTROL/CONTROL UNIT:

1.3.1 **Control Unit:** For the guidance of manufacturers, the recommended definition of Control unit is quantity of Compressed Asbestos Fibre Jointing Sheets or Rolls of same Grade and dimensions manufactured in a day from same consignment of raw material.

1.3.2 **Levels of Control:** 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 sub-contracted 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) also is 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. LABELLING AND MARKING – As per the requirement of IS 2712: 2024.

The Standard Mark, as given in the Schedule of the licence, shall be marked on each Sheet or Roll, as the case may be, provided always that the product thus marked conforms to all the requirement of the specification. In addition, the licence no. CM/L-_____ and details of BIS website shall be marked at an appropriate place on product or package 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 scope of the licence shall be marked with 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

(1)				(2)	(3)		
Test Details				Test equipment requirement R: required (or) S: Sub-contracting permitted	Levels of Control		
Cl.	Requirement	Test Method			No. of Sample	Frequency	Remarks
		Clause	Reference				
5, 9.2	Dimensions	5, 9.2	IS 2712	R	One	Each control unit	---
9.3	Density	9.3	IS 2712	R	One	Each control unit	---
9.4	Flexibility after accelerated aging	9.4, Annex C	IS 2712	S	As per agreement between manufacturer and supplier		
9.5	Compressibility and Recovery test	9.5, Annex D	IS 2712	R	One	Each control unit	---
9.6	Stress relaxation	9.6	IS 2712	S	One	Once in 4 months	See Note 1
9.7	Oil absorption	9.7, Annex E	IS 2712	R	One	Once in a week	---
9.8	Water absorption	9.8, Annex F	IS 2712	R	One	Once in a week	---
9.9	Resistance to acids	9.9, Annex G	IS 2712	R	One	Once in a week	---
9.10	Tensile strength	9.10, Annex H	IS 2712	R	One	Once in a week	---
9.11	Loss on ignition	9.11, Annex J	IS 2712	R	One	Once in a week	---

Note-1: In a period of four months, testing shall be done so as to cover each grade produced during the period. In case of failure, samples from all subsequent control units shall be tested till samples from three consecutive control units are found to be conforming. The original frequency may be restored, thereafter.