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(Reaffirmed 2001)
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भारतीय मानक

एसबेस्टॉस सीमेंट बिल्डिंग बोर्ड — विशिष्टि

(पहला पुनरीक्षण)

Indian Standard
ASBESTOS CEMENT BUILDING BOARDS — SPECIFICATION

(First Revision)

ICS 91.100.40

BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

November 1997

Price Group 3

FOREWROD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Cement Matrix Products Sectional Committee had been approved by the Civil Engineering Division Council.

Asbestos cement building boards are mainly used as interior fittings where no load or little load comes on them such as partitions, furniture and Dado work.

Asbestos cement building boards are different from:

a) Asbestos cement flat sheets (water cured or humid cured) intended for external use conforming to IS 2096: 1992 'Specification for asbestos cement flat sheet'.

b) Silica asbestos cement flat sheets conforming to IS 13000 : 1990 'Specification for shallow corrugated asbestos cement sheets'.

This is the first revision of the standard which was originally published in 1964. In this revision, besides incorporating the amendments already issued, all the tests have been aligned with the methods given in IS 5913 : 1989 'Methods of tests for asbestos cement products'. Modifications have also been done to refer latest versions of referred standards.

The technical committees responsible for formulation of this standard is given in Annex B.

For the purpose of deciding whether a particular requirement of this standard is complied with the final value, observed or calculated, expressing the result of test or analysis shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

ASBESTOS CEMENT BUILDING BOARDS — SPECIFICATION

(First Revision)

1 SCOPE

This standard specifies the requirements regarding composition, dimensions and tests of asbestos cement building boards. Asbestos cement flat sheets and silica asbestos cement flat sheets which are different, are not covered in this standard.

2 REFERENCES

The Indian Standards listed in Annex A are necessary adjuncts to this standard.

3 COMPOSITION

Asbestos cement building boards shall be made from a thorough and homogenous mixture of ordinary Portland cement, grade 33 conforming to IS 269 or ordinary Portland cement, grade 43 conforming to IS 8112 or ordinary Portland cement, grade 53 conforming to IS 12269 or rapid hardening Portland cement conforming to IS 8041, Portland slag cement conforming to IS 455, Portland pozzolana cement conforming to either IS 1489 (Part 1) or IS 1489 (Part 2) and Asbestos fibre to which other suitable fibres may be added. Pozzolanic materials, fillers and pigments which are compatible with Asbestos cement may be added.

4 COLOURING MATTER

The boards may be left in their natural colour or colouring matter may be added in the composition. They may receive coloured or uncoloured coatings on their surface. Pigments which are embodied in Asbestos cement for colouring purposes shall be of permanent colour and shall conform to the relevant Indian Standards. For guidance in ascertaining the colour and staining power of the pigments, IS 5913 may be referred to.

5 CLASSIFICATION

Asbestos cement building boards shall be of three classes namely, Class A, Class B and Class C, conforming to the dimensions given in Table 1.

Table 1 Dimensions of Asbestos Cement Building Boards

(*Clauses* 5, 7.1 *and* 8.3)

Class of Board	Length	Width	Thickness
	mm	mm	mm
(1)	(2)	(3)	(4)
A	2 440	1 220	6
	(2 400)	(1 200)	
	1 830		
	(1 800)		
	1 220		
	(1 200)		
B	2 440	1 220	5
	(2 400)	(1 200)	
	1 830		
	(1 800)		
	1 220		
	(1 200)		
C	2 440	1 220	4
	(2 400)	(1 200)	
	1 830		
	(1 800)		
	1 220		
	(1 200)		

NOTE — Values which are not in brackets are preferred sizes.

NOTE — By mutual agreement between the purchaser and the manufacturer the boards may be supplied in dimensions other than specified in Table 1.

6 GENERAL APPREARANCE AND FINISH

The finished product when delivered, shall be free from visible defects that impair its appearance or serviceability. The surface of the boards shall be of uniform texture and shall have atleast one smooth surface. They shall be flat, rectangular and shall have neatly trimmed straight and regular edges and shall be square at the corners.

7 TOLERANCES

7.1 Tolerances on Length and Width

Asbestos cement building boards shall not vary from

the nominal dimensions for length and width specified in Table 1 by more than ± 5 mm.

7.2 Tolerance on Thickness

From 3 mm to 5 mm — ± 0.5 mm
From 6 mm and above — ± 0.1e mm (± 10 percent)

where 'e' is nominal thickness of board.

8 TESTS

8.1 The samples of boards taken as described in **9** and tested for the various characteristics shall conform to the requirements specified in **8.2** to **8.4**.

8.2 Load Bearing Capacity Test

When tested in accordance with IS 5913 the average breaking load of two specimens taken from the same board shall be not less than 20 kg for Class A boards and 15 kg for Class B and Class C boards. Further, the breaking load of either of the specimens shall not be less than 15 kg for Class A boards and 10 kg for Class B and Class C boards.

8.3 Measurement of Thickness

The average thickness of the sheet when measured at three points at each end of the sheet approximately 20 mm from the edge by means of a metal plate gauge having diameter not less than 9 mm and reading to 0.1 mm shall correspond to the nominal thickness and the tolerance specified in Table 1 and **7.1** respectively.

8.4 Water Absorption Test

When tested in accordance with IS 5913 the amount of water absorbed by the specimen shall not exceed 40 percent of its dry weight.

9 SAMPLING

The sampling, inspection and acceptance shall be in accordance with IS 7639. Unless otherwise agreed to between the manufacturer and the purchaser, the maximum and minimum inspection lots shall be 3 000 and 400 sheets respectively.

10 MANUFACTURER'S CERTIFICATE

The manufacturer shall satisfy himself that the boards conform to the requirements of this standard and, if required, shall furnish a certificate to this effect to the purchaser or his representative clearly stating class of the board.

11 MARKING

Each board shall be stamped or marked by any suitable method on non weathering side with the following information:

a) Class of board;

b) Identification of source of manufacture;

c) Nominal thickness of board; and

d) Pictorial warning sign as given in IS 12081 (Part 2).

11.2 BIS Certification Marking

The product may also be marked with Standard Mark.

11.2.1 The use of Standard Mark is governed by the provision of the *Bureau of Indian Standards Act,* 1986 and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

ANNEX A

(*Clause* 2)

LIST OF REFERRED INDIAN STANDARDS

IS No.	*Title*	*IS No.*	*Title*
269 : 1989	Specification for 33 grade ordinary Portland cement (*fourth revision*)	8041 : 1990	Specification for rapid hardening Portland cement (*first revision*)
455 : 1989	Specification for Portland slag cement (*fourth revision*)	8112 : 1989	Specification for 43 grade ordinary Portland cement (*first revision*)
1489	Specification for Portland pozzolana cement:	11769 (Part 1) : 1987	Guidelines for safe use of products containing asbestos : Part 1 Asbestos cement products
(Part 1) : 1991	Flyash based (*third revision*)		
(Part 2) : 1991	Calcined clay based (*third revision*)	12081 (Part 2) : 1987	Recommendations for pictorial warning signs and precautionary notices for asbestos and products containing asbestos : Part 2 Asbestos and its products
5913 : 1989	Methods of test for asbestos cement products (*first revision*)		
7639 : 1975	Methods of sampling of asbestos cement products	12269 : 1987	Specification for 53 grade ordinary Portland cement

ANNEX B
(*Foreword*)

COMMITTEE COMPOSITION

Cement Matrix Products Sectional Committee, CED 53

Chairman	*Representing*
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Member Secretary
SHRI J. K. PRASAD
Additional Director (Civ Engg), BIS

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Bureau of Indian Standards

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