Manak Bhawan, 9, Bahadur Shah Zafar Marg, New Delhi – 110002

## भारतीय मानक ब्यूरो

(उपभोक्ता मामले, खाद्य एवं सार्वजनिक वितरण मंत्रालय, भारत सरकार)

#### **BUREAU OF INDIAN STANDARDS**

(Ministry of Consumer Affairs, Food & Public Distribution, Goyt, of India)

Phones: 23230131 / 2323375 / 23239402

Website: www.bis.gov.in, www.manakonline.in

#### व्यापक परिचालन मसौदा

हमारा संदर्भ : सीईडी 20/टी-08

09 जुलाई 2024

तकनीकी समिति : लकड़ी और अन्य लिग्नोसेल्युलोसिक उत्पाद अनुभागीय समिति , सीईडी 20 प्राप्तकर्ता :

- 1. सिविल अभियांत्रिकी विभाग परिषद, सीईडीसी के सभी सदस्य
- 2. लकड़ी और अन्य लिग्नोसेल्युलोसिक उत्पाद अनुभागीय समिति , सीईडी 20 के सभी सदस्य
- 3. रुचि रखने वाले अन्य निकाय।

महोदय/महोदया,

निम्नलिखित मानक का मसौदा संलग्न है:

प्रलेख संख्या	খীৰ্ঘক	
	सजावटी प्लाईवुड - विशिष्टता	
सीईडी 20(26108)WC	भाग 1- पृष्ठावरित सतह	
	(आई एस 1328 का तीसरा पुनरीक्षण) (आई एस 7316 का सम्मिश्रण)	
	(आई सी एस संख्या : 79.060.10)	

कृपया इस मसौदे का अवलोकन करें और अपनी सम्मतियाँ यह बताते हुए भेजे कि यह मसौदा प्रकाशित हो तो इन पर अमल करने में आपको व्यवसाय अथवा कारोबार में क्या कठिनाइयां आ सकती हैं।

#### सम्मतियाँ भेजने की अंतिम तिथि: 09 सितम्बर 2024

सम्मति यदि कोई हो तो कृपया अधोहस्ताक्षरी को ई-मेल द्वारा <u>ced20@bis.gov.in</u> पर या उपरित्तिखित पते पर, संलग्न फोर्मेट में भेजें। सम्मतियाँ बीआईएस ई-गवर्नेंस पोर्टल, <u>www.manakonline.in</u> के माध्यम से ऑनलाइन भी भेजी जा सकती हैं।

यदि कोई सम्मित प्राप्त नहीं होती है अथवा सम्मित में केवल भाषा संबंधी त्रुटि हुई तो उपरोक्त प्रालेख को यथावत अंतिम रूप दे दिया जाएगा। यदि सम्मित तकनीकी प्रकृति की हुई तो विषय सिमित के अध्यक्ष के परामर्श से अथवा उनकी इच्छा पर आगे की कार्यवाही के लिए विषय सिमित को भेजे जाने के बाद प्रालेख को अंतिम रूप दे दिया जाएगा।

यह प्रालेख भारतीय मानक ब्यूरो की वेबसाइट www.bis.gov.in पर भी उपलब्ध हैं। धन्यवाद।

भवदीय

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वैज्ञानिक ई एवं प्रमुख
सिविल अभियांत्रिकी विभाग

संलग्रः उपरलिखित

(उपभोक्ता मामले, खाद्य एवं सार्वजनिक वितरण मंत्रालय, भारत सरकार)

#### **BUREAU OF INDIAN STANDARDS**

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#### WIDE CIRCULATION DRAFT

Our Reference: CED 20/T- 08 09 July 2024

TECHNICAL COMMITTEE: WOOD AND OTHER LIGNOCELLULOSIC PRODUCTS

**SECTIONAL COMMITTEE, CED 20** 

#### **ADDRESSED TO:**

- 1. All Members of Civil Engineering Division Council, CEDC
- 2. All Members of Wood And Other Lignocellulosic Products Sectional Committee, CED 20 and its Subcommittees
- 3. All others interested.

Dear Sir/Madam,

Please find enclosed the following draft:

Doc No.	Title
CED 20(26108)WC	DECORATIVE PLYWOOD – SPECIFICATION Part 1 – Veneered Surface (Third Revision of IS 1328) (Amalgamating IS 7316) (ICS 79.060.10)

Kindly examine the attached draft and forward your views stating any difficulties which you are likely to experience in your business or profession, if this is finally adopted as National Standard.

#### Last Date for comments: 09 September 2024

Comments if any, may please be made in the enclosed format and emailed at <a href="mailto:ced20@bis.gov.in">ced20@bis.gov.in</a> or sent at the above address. Additionally, comments may be sent online through the BIS e-governance portal, <a href="https://www.manakonline.in">www.manakonline.in</a>.

In case no comments are received or comments received are of editorial nature, kindly permit us to presume your approval for the above document as finalized. However, in case comments, technical in nature are received, then it may be finalized either in consultation with the Chairman, Sectional Committee or referred to the Sectional Committee for further necessary action if so desired by the Chairman, Sectional Committee.

The document is also hosted on BIS website www.bis.gov.in.

Thanking you,

Yours faithfully,
Sd/Dwaipayan Bhadra
Scientist 'E' & Head
Civil Engineering Department

**Encl: As above** 

#### FORMAT FOR SENDING COMMENTS ON THE DOCUMENT

[Please use A4 size sheet of paper only and type within fields indicated. Comments on each clause/sub-clause/ table/figure, etc, be stated on a fresh row. Information/comments should include reasons for comments, technical references and suggestions for modified wordings of the clause. Comments through e-mail to <a href="mailto:ced20@bis.gov.in">ced20@bis.gov.in</a> shall be appreciated.

**Doc. No.**: CED 20(26108)WC **BIS Letter Ref**: CED 20/T-08

Title: DECORATIVE PLYWOOD - SPECIFICATION Part 1 - Veneered Surface (Third Revision

of IS 1328) (Amalgamating IS 7316) (ICS 79.060.10)

Last date of comments: 09 September 2024

Name of the Commentator/ Organization:

SI No.	Clause/ Para/ Table/ Figure No. commented	Type of Comment (General/ Technical/ Editorial)	Comments/ Modified Wordings	Justification of Proposed Change

#### **BUREAU OF INDIAN STANDARDS**

#### DRAFT FOR COMMENTS ONLY

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Draft Indian Standard

## DECORATIVE PLYWOOD - SPECIFICATION Part 1 – Veneered Surface

(Third Revision of IS 1328) (Amalgamating IS 7316) (ICS 79.060.10)

Wood and Other Lignocellulosic Products Sectional Committee, CED 20 Last Date of comments - 09 September, 2024

#### **FOREWORD**

(Formal clauses will be added later)

Decorative plywood is extensively utilized across various sectors due to its versatility and aesthetic appeal. In the construction industry, it is a popular choice for building paneling, enhancing the visual appeal and functionality of walls and ceilings in residential, commercial, and public buildings. Its application extends to the transportation industry as well, where it is used for the interior lining of railway coaches, buses, and ships.

In the realm of furniture making, decorative plywood is favored for its ability to combine strength with beauty. It is used to craft a wide range of furniture pieces, including cabinets, tables, chairs, and shelves, offering a high-quality finish that can mimic more expensive solid wood. Additionally, it plays a significant role in general interior decoration, where it is used for creating decorative elements, wall panels, partitions, and custom designs that elevate the interior aesthetics of various spaces.

Decorative plywood typically features natural veneered surfaces, which offer the classic look of real wood while providing enhanced stability and resistance to warping. Alternatively, it can come with various polymeric overlays, such as melamine-laminated surfaces that are highly resistant to scratches and stains, PU-lacquered finishes that provide a glossy and durable coating, and pre-laminated plywood that is ready to use with a finished surface, saving time and effort in processing.

The standard (IS 1328) for decorative plywood was first published in 1958 and has undergone revisions in 1970, 1982, and 1996. In this latest revision, the standard has been divided into two parts: Part 1 covers plywood with decorative veneer surfaces, while Part 2 covers plywood with other decorative surfaces. This revision (Part 1) also incorporates modifications from IS 7316, reflecting current requirements, including requirements of formaldehyde content and emission.

In formulation of this standard, due weightage has been given to standards and practices prevailing in different countries and also relating the same to the climatic conditions and requirements in our country.

A scheme of labelling environment friendly products known as ECO-Mark has been instituted at the instance of the Ministry of Environment, Forests and Climate Change, Government of India. The ECO-Mark is administered by the Bureau of Indian Standards (BIS) under the Bureau of Indian Standards Act, 2016 as per the Resolution No. 71 dated 21st February 1991 and Resolution No. 425 dated 20 October 1992 published in the Gazette of the Government of India. For a product to be eligible for ECO-Mark, it shall also carry the Standard Mark (ISI mark) of BIS besides meeting. For this purpose, the Standard Mark of BIS would be a single mark being a combination of the ISI Mark and the Eco logo. Requirements to be satisfied for a product to qualify for the BIS Standard Mark for Eco friendliness will be optional. Manufacturing units will be free to opt for ISI Mark alone also.

The ECO criteria are based on the Gazette Notification No. 170 dated 16 May 1996 for wood substitutes as environment friendly products published in the Gazette of Government of India, as revised/amended from time to time.

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 a test or analysis, shall be rounded off in accordance with IS 2: 2022 'Rules for rounding off numerical values (second revision)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

#### Draft Indian Standard

## DECORATIVE PLYWOOD - SPECIFICATION Part 1 Veneered Surface

(Third Revision of IS 1328) (Amalgamating IS 7316)

#### 1 SCOPE

This standard Part 1 covers types of plywood with ornamental veneers on one or both faces and decorative plywood with ornamental faces produced by use of plurality of veneers used for decorative purposes.

#### 2 REFERENCES

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

#### 3 TERMINOLOGY

For purpose of this standard, the definitions given in IS 707 shall apply.

#### **4 GRADES AND TYPE**

- **4.1** Decorative plywood shall be of two grades, namely, BWR and MR.
- **4.2** Decorative plywood with ornamental veneers shall be of two types, namely Type 1 and Type 2. These two types shall conform to the requirements given in **7**.
- **4.3** Decorative plywood with ornamental faces produced by use of plurality of veneers shall be of one type namely Type 3 conforming to the requirements given in this standard. The pattern of the decorative face shall be as agreed to between the purchaser and the manufacturer.

#### **5 MATERIALS**

#### 5.1 Timber

- **5.1.1** The species of timber for the decorative face veneer in decorative plywood shall be specified by the purchaser while placing the order. The species of timber commonly used for decorative veneers or decorative plywood are given in Annex B.
- **5.1.2** Any species of timber maybe used for cores and backs of decorative veneered plywood. However, a list of species, given in Annex B of IS 303 may be used for guidance. Non-durable timbers and sapwood of all other timbers shall be given a preservative treatment. The preservative used shall be such as not to impart any colour or lasting smell, oiliness or stain to the plywood and shall not adversely affect the gluing of the veneer and the waxing and polishing of the surface. For the faces, generally it is a plurality

of veneers of different species or, if of the same species of different colours, either natural colours or artificially coloured.

**5.1.3** For ECO-mark, only species of wood from sources other than natural forests includes, Tree Outside Forest (TOF), rubber, coconut, cashew, walnut, agroforestry, farm forestry, industrial and social forestry plantations, etc and shade trees from tea and coffee estates shall be used for the manufacturer of particleboard.

#### 5.2 Adhesive

The adhesive for bonding veneers shall be MR and BWR type synthetic resin adhesive, conforming to IS 848, for MR and BWR grade veneered decorative plywood respectively.

#### 5.3 Plywood

Plywood base, when used in the manufacture of veneered decorative plywood of MR and BWR grade shall be of MR and BWR grade conforming to water resistance test as per IS 303.

#### **6 MANUFACTURE**

#### 6.1 Decorative face Veneers

Decorative face veneers shall be rotary cut or sliced and shall be not more than 1.0 mm in thickness from any timber for decorative plywood while for faces produced by use of plurality of veneers. The decorative face veneers shall be rotary cut or sliced from a wooden flitch made by laminations of veneers of different colours in pre-determined pattern and either rectangular or in a pre-determined moulded shape. These veneers shall not be more than 1 mm in thickness and shall be suitably matched and spliced. The veneers shall be spliced or taped at the edges. The veneers may have end grain joints in cases of special matching like centre-matching, V-matching, etc.

- **6.2** Decorative plywood shall be manufactured either by bonding the various layers of veneers in one operation or by bonding decorative veneers on to BWR or MR synthetic resin bonded plywood of suitable thickness.
- **6.3** Where decorative veneer is used on one side of the plywood only, a suitable back of required thickness balancing the strength of the decorative face veneer shall be provided.
- **6.4** Veneers forming anyone ply and the corresponding ply on the opposite side of the central plane of plywood shall be of the same species of timber and of the same nominal thickness, except in case of faces where they shall be of such thickness and strength as to balance each other.
- **6.5** If the purchaser requires boards with the decorative veneers matched to a particular design, for example, quartered, centred, serial, diamond or V-matched, it shall be so

specified. If certain number of decorative matched plywood panels are required to form a group to give an overall general effect, it shall be so specified by the purchaser giving the number of panels in each such group.

#### **7 REQUIREMENTS**

#### 7.1 Type 1

Type 1 veneered decorative plywood shall comply with the requirements specified in **7.1.1** to **7.1.4**.

- **7.1.1** Open splits, checks or open joints not more than 150 mm in length and 0.5 mm in width shall be permissible provided the same are rectified with a veneer insert bonded with synthetic resin adhesive, as the case may be, and further provided that the insert matches with the surrounding veneer in colour as well as in figure.
- **7.1.2** The decorative veneered surface shall be free from torn grain, dead knots, quote, discolouration and sapwood.
- **7.1.3** The decorative veneered surface shall be selected for figure, texture, colour and grain-characteristics. It shall be free from all manufacturing and wood defects except to the extent permitted under **7.1.1.** All veneers shall be matched or mismatched to achieve a decorative effect in colour, figure and grain.
- **7.1.4** If the purchaser requires boards with the decorative veneers matched to a particular design for example, quarter etc, centred, diamond-or V- matched or where it is required that there should be complete absence of pin knots, it shall be so specified. If certain number of decorative matched plywood panels are required to form a group to give an overall general effect it shall be so specified by the purchaser giving the number of panels in each such group.

#### 7.2 Type 2

Type 2 veneered decorative plywood shall comply with the requirements specified in **7.2.1 to 7.2.3**.

- **7.2.1** Open splits, checks, or open joints not more than 200 mm in length and 1 mm in width shall be permissible, provided these are rectified in the manner specified under **7.1.1**. Tight knots and patches not more than 25 mm in diameter, and pin knots not more than 4 film in diameter, shall be permissible.
- **7.2.2** The decorative veneer shall be free from the torn grain. dead knots, dote and discolouration. Sapwood, if it does not affect the appearance, shall he permissible. All veneers shall be matched or mismatched to achieve a decorative effect in colour, figure and grain.
- **7.2.3** The decorative veneered surface shall be selected for figure, texture, colour and grain

characteristics. It shall be free from all manufacturing and wood defects, except to the extent permitted in

#### 7.3 Type 3

Type 3 veneered decorative plywood shall comply with the requirements specified in **7.3.1** to **7.3.3**.

- **7.3.1** Open splits, checks or open joints not more than 150 mm in length and 0.5 mm in width shall be permissible provided the same are rectified with a veneer insert bonded with BWR or MR adhesive, as the case may be, and further provided that the insert matches with the surrounding veneer in colour and in figure.
- **7.3.2** Decorative veneered surface shall be free from torn, grain, dote, worm hole, discolouration or other visual defects.
- **7.3.3** Decorative veneer surface shall be selected for figure, texture, colour and grain characteristics. It shall be free from all manufacturing and wood defects except to the extent permitted under **7.3**. All veneers shall be matched or mis-matched to achieve a decorative effect in colour, figure and grain.

#### **8 DESIGNATION OF DIMENSIONS AND TOLERANCES**

**8.1** Any dimensions (length and width) and number of ply as agreed to between the manufacturer and the purchaser may be used and shall be declared by the manufacturer. Prevailing dimensions of plywood boards are as given below:

Length, mm 2 400, 2 100, 1 800, 1 500, 1 200 and 900

Width, mm 1 200 and 900

Thickness, mm 3, 4, 6, 9, 12, 19 and 25

NOTE — Any other thickness as agreed to between the manufacturer and the purchaser may also be used.

#### 8.2 Squareness and Edge Straightness

Edge straightness and squareness shall be tested as per Annex C.

#### 8.3 Tolerances

The tolerances on the dimensions of finished plywood sheet shall be as given in Table 1.

# Table 1 Tolerances on Dimensions of Decorative Plywood (Clause 8.3)

SI No.	Dimension	Tolerance
(1)	(2)	(3)
i)	Length	+ 6 mm – 3 mm
ii)	Width	+ 3 mm – 1 mm
iii)	Thickness a) less than 6 mm; and b) 6 mm and above	± 10 percent ± 5 percent
iv)	Squareness, Max	2 mm /1 000 mm or 0.2 percent
v)	Edge straightness, Max	2 mm /1 000 mm or 0.2 percent

#### 9 FINISH

**9.1** The decorative plywood shall be uniform in thickness within the tolerance limits specified in **8.3**.

#### 10 PHYSICAL AND MECHANICAL REQUIREMENTS

Test boards selected as described in 10 shall be subjected to the test specified in 10.1 and 10.2.

- **10.1 Moisture Content** Veneered decorative plywood, when tested in accordance with IS 1734 (Part 1) shall have a moisture content of not less than 5 percent and not more than 15 percent.
- **10.2 Water Resistance Test** Veneered decorative plywood, when tested in the manner specified in **10.2.1** or **10.2.2** (as applicable), shall not show delamination or blister formation.
- **10.2.1** For MR Grade Three test specimens of size 250 mm x 100 mm shall be prepared from each of the boards selected and submerged in water at  $60 \pm 2^{\circ}$ C for a period of 3 h and dried for 8 h at a temperature of  $65 \pm 2^{\circ}$ C and then followed by two more cycles of soaking and drying under the same conditions described above.
- **10.2.2** For BWR Grade Three test specimens of size 250 mm x 100 mm shall be prepared from each of the boards selected and boiled in water for 8 h and dried for 16 h at a temperature of  $65 \pm 2^{\circ}$ C and then followed by two more cycles of soaking and drying under the same conditions described above.

NOTE – The cycles of drying or soaking can be made up of a number of shorter periods of drying or soaking. In such instances the specimen shall be kept in air at 27 °C  $\pm$  2 °C in between the shorter periods constituting the drying cycle, and be kept submerged in water at 27 °C  $\pm$  2 °C in between the shorter periods constituting the soaking cycle.

#### **10.3 Formaldehyde Content Test**

Test of free formaldehyde content in the sample shall be done by perforator method as per IS 13745 and test results of drawn sample shall meet the requirements of formaldehyde content as follows:

- a) Formaldehyde Class,  $E_1 \le 8$  mg/ 100 g of oven dry sample; and
- b) Formaldehyde Class,  $E_2 > 8$  mg/100 g of oven dry sample and  $\leq 30$  mg/100 g of oven dry sample.

#### 10.4 Steady-State Formaldehyde Emission Test (Optional Test)

Manufacturer will offer a stack of plywood made under a batch (not less than 50 pieces) bearing the batch number and date of manufacture along with details of plywood, that is, grade, size and thickness, adhesive used and any other (the manufacture wish to inform). After sampling, the sample will immediately cover in airtight polythene with date of sampling on the plywood.

Sample must be taken for test within 24 h of opening the airtight cover and within one month from the date of sampling, and test shall be done by the test method as given in IS/ISO 12460 (Part 1). The test results of drawn sample shall meet the requirements of formaldehyde emission value as follows:

- a) Formaldehyde Class,  $E_1 \leq 0.124 \text{ mg/m}^3$ ; and
- b) Formaldehyde Class,  $E_2 > 0.124 \text{ mg/m}^3$ .

#### 10.5 Other tests

For testing any other mechanical property of veneered decorative plywood, subject to agreement between the purchaser and the supplier, reference shall be made to the provisions of IS 1734 (Part 1 to Part 20).

#### 11 SAMPLING AND CRITERIA FOR CRITERIA FOR CONFORMITY

#### 11.1 Sampling

#### **11.1.1** *Lot*

All plywood sheets of the same type, grade, size and manufactured under similar conditions shall constitute a lot.

- **11.1.2** The conformity of a lot, to the requirements of this standard, shall be ascertained on the basis of tests on plywood selected from it.
- **11.1.3** These plywood shall be selected at random (see IS 4905 for reference).

#### 11.2 Criteria for Conformity

- **11.2.1** All the plywood sheets selected in accordance with **11.1.3** shall be measured for length, width, thickness, edge straightness, and squareness tests. These dimensions shall comply with the requirements specified in **8.1** to **8.2**, before proceeding with further testing.
- **11.2.2** If all the plywood sheets in **11.2.1** are found to be conforming, then from each of the plywood sheet, the test specimens shall be cut out from for the tests as mentioned in **9**.
- **11.2.3** A lot shall be considered as conforming to the requirements of this standard, if all the samples and test specimens pass the conditions as prescribed in **8** and **9**.
- **11.2.4** If any sample fails to conform the requirements, further samples shall be taken from the lot, double in number, and the lot shall be considered to have passed, if these samples conform to the requirements prescribed.

#### 12 ADDITIONAL REQUIREMENTS FOR ECO-MARK

#### **12.1 General Requirement**

- **12.1.1** Veneered decorative plywood shall conform to the requirement specified in this standard.
- **12.1.2** The manufacturer shall produce to BIS, the environmental consent clearance from State Pollution Control Board as per the provisions of the Water (Prevention and Control of Pollution) Act, 1974 and Air (Prevention and Control of Pollution) Act, 1981, Water (Prevention and Control of Pollution) Act, 1981 and Water (Prevention and Control or Pollution) Cess Act, 1977 along with the authorization, if required under the Environment (Protection) Act, 1986, while applying for ECO-Mark appropriate with enforced rules and regulations of Forest Department.

#### 12.2 Specific Requirement

Veneered decorative plywood shall conform to the specific requirements given for ECO - Mark under relevant clauses of this standard.

NOTE— The manufacturer shall provide documentary evidence by way of certificate or declaration to the Bureau of Indian Standards while applying for ECO Mark.'

#### 13 MARKING

- **13.1** Each veneered decorative plywood sheet shall be legibly and indelibly marked or stamped with the following:
  - a) Manufacturer's name and his initials or his recognized trade-mark, if any
  - b) In words 'DECORATIVE PLYWOOD VENEERED SURFACE':
  - c) Grade and Type of Plywood;
  - d) Nominal length, width and thickness of plywood;
  - e) Batch No.;
  - f) Month and Year of manufacture;
  - g) Approved pattern mark, as applicable and
  - h) The criteria for which the plywood has been labelled as ECO Mark.

#### 13.2 BIS Certification Marking

The Veneered decorative plywood may also be marked with the Standard Mark.

**13.2.1** The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the Bureau of Indian Standards Act, 2016 and the Rules and Regulations framed there under, and the products may be marked with the Standard Mark.

# ANNEX A (Clause 2) LIST OF REFERRED INDIAN STANDARDS

IS. No.	Title
IS 303 : 2024	Specification for plywood for General purposes(third revision)
IS 707 : 1976	Glossary of terms applicable to timber technology and utilization (second revision)
IS 848: 2006	Specification for synthetic resin adhesive for plywood (phenolic and aminoplastic ( <i>first revision</i> )
IS 1734 (Part 1) to	Methods of test for plywood (second revision)
(Part 20): 1983	
IS 4905: 2015	Random sampling and randomization procedures (first revision)
IS 13745: 2020	Method for determination of formaldehyde content in woodbased panels by extraction method called perforator method ( <i>first revision</i> )
IS/ISO 12460 (Part 1): 2007	Wood-based panels — Determination of formaldehyde release: Part 1 Formaldehyde emission by the 1-cubic meter chamber method

#### **ANNEX B**

(Clause 5.1.1)

## SPECIES OF TIMBER COMMONLY USED FOR DECORATIVE VENEERS OR DECORATIVE PLYWOOD

Standard Trade Name	Botanical Name	Abbreviation
Champ	Micnelia spp.	CHM
Chaplash	Artocarpus Chapalsha	CHP
Chickrassy	Chukrasia Tabularis	CHI
Dipika (Lapse)	Mansoniadipikae	DIP
Kanju	Holoptelea Integrifolia	KAN
Kokko	Albizia Lebbeck	KOK
Laurel	Terminalia Tomentose	LAU
Mahogany	Swietenia Spp.	MAG
M:-;'.:li	Shorea Assamica	MAK
M::'J~I .'	Acerspp.	MAP
Padauk	Pterocarpus Dalbergioides	PAA
Poon	Calophyllum spp.	POO
Rosewood	Dalbergia latifolia	ROS
Silver Grey	Terminalia Bialata	SGR
Silver Oak	Grevillea Robusta	SOA
Siris	Albizia Chinensis (syn.	SIR
	A. stipulatai	
Sissoo	Dalbergia Sisso	SIS
TEAK	Tectona Grandis	TEA
Walnut	Juglans Spp. j	WAL
White Cedar	Dysoxylum Malabaricum	WCE

### ANNEX C

(Clause 8.2)

#### METHOD OF TEST FOR EDGE STRAIGHTNESS AND SQUARENESS

#### A-1 PROCEDURE FOR EDGE STRAIGHTNESS

**A-1.1** The straightness of the edges and ends of plywood shall be verified against a straight edge not less than the full length of the plywood. If the edge on the end of the plywood is convex, it shall be held against the straight edge in such a way as to give approximately equal gap at each end. The largest gap between the straight edge and the edge shall be measured to the nearest millimetre and recorded.

#### **A-2 PROCEDURE FOR SQUARENESS**

**A-2.1** The squareness of plywood shall be checked with a 1 200 mm x 1200 mm square, by applying one arm of the square to the plywood. The maximum width of the gap shall be recorded.