INTERNATIONAL STANDARD 2430

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Plywood — Veneer plywood with rotary cut veneer for general use — Classification by appearance of panels with outer veneers of poplar

Contreplaqué — Contreplaqué à plis, avec placages déroulés, pour usage général — Classification, selon l'aspect, des panneaux à placages extérieurs de peuplier

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FOREWORD

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Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 2430 was drawn up by Technical Committee ISO/TC 139, *Plywood*, and circulated to the Member Bodies in December 1971.

It has been approved by the Member Bodies of the following countries :

Australia	India	Romania
Austria	Iran	South Africa, Rep. of
Belgium	Italy	Spain
Canada	Netherlands	Sweden
Czechoslovakia	New Zealand	Thailand
Egypt, Arab Rep. of	Norway	United Kingdom
Germany	Poland	U.S.S.R.
Hungary	Portugal	

The Member Body of the following country expressed disapproval of the document on technical grounds :

France

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Plywood — Veneer plywood with rotary cut veneer for general use — Classification by appearance of panels with outer veneers of poplar

1 SCOPE AND FIELD OF APPLICATION

This International Standard establishes the permissible defects for the classification by appearance of surfaces of general purpose veneer plywood[1)] with rotary cut outer veneers of poplar.

NOTE — Species of poplar wood used for this purpose are indicated in the annex.

2 REFERENCE

ISO 2426, *Plywood — Veneer plywood with rotary cut veneer for general use — General rules for classification by appearance.*

3 CLASSIFICATION BY APPEARANCE

3.1 Classification of panels by appearance according to the combination of the grades of their two surfaces should be carried out in accordance with ISO 2426.

3.2 The surface of the panels should be classified by appearance based on the permissible defects laid down in clause 4.

4 PERMISSIBLE DEFECTS

Each surface is individually classified in one of the grades E, I, II, III or IV as defined by the permissible defects indicated in the following table.

1) Defined in ISO 2074, *Plywood — Vocabulary.*

PERMISSIBLE DEFECTS

	Categories of defects		Grade				
			E	I	II	III	IV
4.1.1	Pin knots		Practically without defects (see ISO 2426)	permitted in number up to 3 per m^2	permitted without restriction in number		Veneers shall be free from rot and must be well glued. Defects inherent in wood and manufacturing defects are permitted provided they do not impair the mechanical properties and serviceability of the panel.
4.1.2	Sound intergrown knots			permitted up to an individual maximum diameter of: 15 mm | 25 mm | 50 mm; provided their cumulative diameter does not exceed: 60 mm | 100 mm | 300 mm per m^2. Such knots can have splits and stars provided they are: very slight | slight | without restriction; and properly filled			
4.1.3	Unsound or non-adhering knots and holes			excluded	permitted up to an individual maximum diameter of: 10 mm | 20 mm; provided their cumulative diameter does not exceed: 30 mm per m^2 and they are properly filled | 60 mm per m^2		
4.1.4	Irregularities in the structure of the wood			permitted: if very slight	if slight	permitted	
3.1.5	Splits and Checks	open		excluded	permitted, if properly filled, up to an individual maximum width of: 3 mm | 5 mm; and up to an individual maximum length of: 250 mm | 350 mm; and in number up to: 3 | 3 per metre of panel width		
		closed		permitted : 1 of an individual maximum length up to 200 mm per metre of panel width	permitted		
4.1.6	Inbark			excluded		permitted	
4.1.7	Defects due to borers and parasitic plants			excluded	permitted, if properly filled, occasional small worm holes, vertical to the panel plane, of diameter up to 5 mm	5 defects of width up to 10 mm per m^2	

PERMISSIBLE DEFECTS (*concluded*)

	Categories of defects	Grade E	Grade I	Grade II	Grade III	Grade IV
4.1.8	Sound discoloration	Practically without defects (see ISO 2426)	permitted if slight	permitted up to maximum 33 % of the surface of panel	permitted without restriction	Veneers shall be free from rot and must be well glued. Defects inherent in wood and manufacturing defects are permitted provided they do not impair the mechanical properties and serviceability of the panel.
			provided the mechanical properties are not impaired			
4.1.9	Unsound discoloration and decay		excluded			
4.1.10	Open joints		excluded	permitted, if properly filled, of maximum width up to 1 mm and in number no more than 1 per metre of panel width	4 mm	
4.1.11	Overlaps		excluded	permitted of a maximum length of 100 mm and in number up to 1 per m²	300 mm, 2 per m²	
4.1.12	Blisters		excluded			
4.1.13	Hollows, bumps and imprints		excluded	permitted if very slight	permitted if slight	
4.1.14	Roughness		permitted if very slight	permitted if slight		
4.1.15	Sanding through		excluded		permitted up to an extent of 1 000 mm² per m² of panel surface	
4.1.16	Glue penetration		excluded	permitted if slight and occasional	permitted up to an extent of 5 % of the panel surface	
4.1.17	Inserts — patch — shim		excluded	permitted, if properly made, not exceeding 3 % of total panel surface	without restriction	
4.1.18	Inclusions of aluminium clips		excluded	permitted		
4.1.19	Defects at the edges of the panel due to — sanding or — sawing		—	permitted up to 5 mm from the edge	5 mm	
4.1.20	Other defects which are not indicated		To be considered under the heading of the category of defect most similar to it			

ANNEX

LIST OF THE DIFFERENT BROADLEAVED SPECIES OF TROPICAL AFRICAN HARDWOOD USED FOR THE MANUFACTURE OF VENEER PLYWOOD

No.	Botanical name	Commercial name	Sources of supply
1	*Antiaris* sp. div. (*A. africana* Engl., *A. welwitschii* Engl.)	Ako Cherken Antiaris Kirundu	Ivory Coast, Ghana, Nigeria, Gabon, Zaïre, Senegal, Cameroun, East Africa
2	*Aucoumea klaineana* Pierre	Okoumé Gabon	Gabon, Spanish Guinea
3	*Baillonella toxisperma* Pierre	Moabi Kungulo	Gabon, Zaïre, Nigeria, Cameroun, Spanish Guinea, Angola
4	*Bombax buenopozense* (*Bombax flammeum* Ulbr.)	Kapokier	Zaïre, Ivory Coast, East Africa
5	*Canarium schweinfurthii* Engl.	Aiélé	Nigeria, Cameroun, Spanish Guinea, Ivory Coast, Gabon, Zaïre
6	*Carapa procera* D.C.	Crabwood african	Zaïre, Uganda
7	*Dacryodes buettneri* H.J. Lam. (*Pachylobus büttneri* Engl.)	Ozigo (Assia) Safucala	Gabon, Spanish Guinea, Angola
8	*Dacroydes igaganga* Aubr. and Pellegr.	Igaganga	Gabon
9	*Daniellia* sp. div. (*D. thurifera* Bennett, *D. klainei* Pierre, *D. ogea* Rolfe ex Holl)	Ogea Faro (Daniella, Oziya) Nsu	Ivory Coast, Nigeria, Zaïre, Spanish Guinea, Gabon
10	*Entandrophragma angolense* C.D.C. (*Entandrophragma macrophyllum* A. Chev.)	Tiama (Gédu-Nohor, Edinam) Kalungi	Ivory Coast, Ghana, Gabon, Nigeria, Cameroun, Zaïre, Angola, East Africa
11	*Entandrophragma candollei* Harms.	Kosipo Omu Heavy sapele	Ivory Coast, Nigeria
12	*Entandrophragma cylindricum* Sprague	Aboudikro Sapele Sapelli Penkwa	Ghana, Ivory Coast, Nigeria, Zaïre, Spanish Guinea, Cameroun, Angola
13	*Entandrophragma utile* Sprague	Sipo Utile Assié	Ghana, Gabon, Cameroun, Ivory Coast, Nigeria, Zaïre
14	*Eribroma oblonga* Bod (*Sterculia oblonga* Mast, *Sterculia elegantiflora* Hutch and Dalz)	Eyong Okoko Yellow sterculia	Nigeria, Cameroun, Gabon, Spanish Guinea, Ivory Coast
15	*Fagara heitzi* Aubr. and Pellegr., *Fagara inaequalis* Engl.	Olon	Gabon, Spanish Guinea, Cameroun, Zaïre
16	*Gossweilerodendron Balsamiferum* Harms.	Tola Agba Tola-Branca	Nigeria, Zaïre, Cabinda, Angola
17	*Khaya* sp. div. (*K. ivorensis* A. Chev., *K. klanei* Pierre, *K. anthotheca* C.D.C., *K. senegalensis* A. Juss.)	Acajou d'Afrique Khaya African mahagony Acajou blanc White mahagony Bissilom	Ivory Coast, Ghana, Nigeria, Cameroun, Angola, Spanish Guinea, Portuguese Guinea
18	*Lannea welwitschii* Engl.	Kumbi	Ivory Coast, Cameroun, Zaïre

No.	Botanical name	Commercial name	Sources of supply
19	*Lovoa trichilioides* Harms. (= *Lovoa kleineana* Pierre)	Dibétou	Nigeria, Cameroun, Ivory Coast, Spanish Guinea, Gabon
20	*Mansonia altissima* A. Chev.	Bete, Ofun, Mansonia	Nigeria, Zaïre, Ivory Coast
21	*Mimusops heckelii* A. Chev. (*Dumoria heckelii* Hutch and Dalz, *Dumoria africana* A. Chev.)	Makoré Baku Douka	Ghana, Ivory Coast, Spanish Guinea, Zaïre, Cameroun, Gabon
22	*Mitragyna ciliata* Aubr. and Pellegr., *Mitragyna stipulosa* O. Kuntze	Abura Bahia Elelon	Nigeria, Ghana, Ivory Coast, Gabon Zaïre, Spanish Guinea
23	*Monopetalanthus* sp. div. (*M. letestui* Pellegr., *M. pellegrini* A. Chev., *M. heitzii* Pellegr.)	Andoung Ekop	Spanish Guinea, Gabon, Portuguese Guinea, Zaïre
24	*Oxystigma oxyphyllum* J. Leonard (*Pterygopodium oxyphyllum* Harms.)	Tchitola Kitolo Fuba Tolarhinfuta	Rep. of Zaïre, Angola, Gabon Spanish Guinea, Nigeria
25	*Pterygota* sp. div.	Koto Pterygota	Ivory Coast, Ghana, Nigeria
26	*Pycnanthus angolens* Warb (*Pycnanthus kombo* Warb)	Ilomba	Cameroun, Spanish Guinea, Gabon, Ivory Coast, Zaïre, Ghana, Uganda East Africa, Angola
27	*Terminalia ivorensis* A. Chev.	Framiré Black Afara Emri	Ghana, Ivory Coast, Nigeria, Cameroun
28	*Terminalia superba* Engl. and Diels	Limba Afara, Corina Limbo Akom	Spanish Guinea, Nigeria, Ivory Coast, Cameroun, Ghana, Zaïre, Angola
29	*Tetraberlinia bifoliata* Hauman (*Berlinia bifoliata* Harms.)	Ekaba (Eko) Ekop	Spanish Guinea, Gabon, Cameroun Zaïre
30	*Triplochiton scleroxylon* K. Schum	Obeche Wawa Obechi Abachi Samba Ayous	Ghana, Nigeria, Ivory Coast, Zaïre, Cameroun, Spanish Guinea

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