

PD 5758

Amendment No. 3, published 21 February, 1966
to British Standard 6 V.3 : 1943
High strength plywood for aircraft

Revision

Clause 1. Species of timber. In the third line, delete 'and Rock Maple', and delete the fifth and sixth lines.

Clause 2. Quality of veneer. Insert the following at the end of Subclause (a):
'No end joints are permissible.'

In Subclause (b), delete all reference to beech and maple in the table and notes.

Clause 3. Assembly of veneers. Delete Subclause (c).

Clause 5. Thickness. Subclause (d). Insert the following after 'Appendix B':
'with a maximum of 8 mm (approximately $\frac{5}{16}$ in) to the construction of which the provisions of (b) to (f) below shall apply.'

New Subclause. Insert the following new subclause:

'(g) Boards exceeding 8 mm in thickness may be supplied to this specification, in which case the provisions of (b) to (f) above may be modified by agreement between manufacturer and purchaser.'

Clause 6. Type of glue. Delete this clause and substitute:

'6. Bonding.

(a) Bonding between veneers in boards covered by Clause 5 (a) shall be Bonding WBP which is defined as follows:

Bonding meeting the test requirements of this British Standard and using an adhesive of the type * which by systematic tests and by records in service of the product over many years has been proved highly resistant to weather, micro-organisms, cold and boiling water, steam and dry heat.

(b) For boards covered by Clause 5 (g), the bonding between veneers shall be Bonding WBP or Bonding BR which is defined as follows:

Bonding meeting the test requirements of this British Standard and using adhesives which have good resistance to weather and to the boiling water tests, but which fail under the very prolonged exposure to weather that Bonding WBP will survive. Bonding BR will withstand cold water for many years and is highly resistant to attack by micro-organisms.

Bonding BR shall be supplied unless otherwise specified.'

Insert the following footnote:

*At present only certain phenolic adhesives have been shown to meet this requirement.'

Clause 11. Marking. Subclause (a).

Item (iv). Delete this item and substitute:

'(iv) The bonding (i.e. WBP or BR).'

Item (v). Delete this item and renumber items (vii), (viii) and (ix) as (vi), (vii) and (viii) respectively.

Item (ix). Before 'thickness' insert 'specified'.

Clause 13. Tests. Delete Subclauses (a) and (b) and substitute:

'(a) Adhesion of veneers and resistance to water. The adhesion between the veneers shall be such that:

(i) When tested as described in Appendix D, Paragraphs 1 and 2, the test pieces shall show no signs of separation of the veneers.

(ii) When tested as described in Appendix D, Paragraph 3, there shall be appreciable resistance to separation and a reasonable amount of wood fibre shall be left adhering to one or both of each pair of separated surfaces.'

Re-letter Subclause (c) as Subclause (b).

Appendix A. Description of characteristics. In Paragraph 3, delete all after 'Birch' in the second line.

In Paragraph 11, delete 'and 17' in the second line.

Appendix D. Method of determining the resistance to water. Delete and substitute:

'APPENDIX D.

Method of Test for Adhesion of Veneers and Resistance to Water

1. Saw the selected board (see Clause 12) into small test pieces approximately 4 in to 6 in square and examine them visually for signs of separation of the veneers.

2. Divide the test piece into two lots, treat as follows and then examine all the test pieces visually for signs of separation:

(a) First lot (Bonding WBP and BR). Immerse completely in water at $15 \pm 5^{\circ}\text{C}$ ($59 \pm 9^{\circ}\text{F}$) for 16 to 24 hours.

(b) Second lot (Bonding WBP).

(i) Immerse completely in boiling water under normal atmospheric conditions for 72 hours, then quench in water at room temperature.

or (ii) Steam in a closed vessel at 2 kgf/cm^2 (30 lbf/in^2) gauge pressure for 12 hours, the test pieces being above the level of condensate or free water, then quench as in (i).

or (iii) As for (ii), but at 1 kgf/cm^2 (15 lbf/in^2) gauge pressure for 24 hours.

NOTE: (i) is the preferred method, and shall be used in cases of dispute. Methods (ii) and (iii) are alternatives suitable for the purpose intended but are not necessarily exactly equivalent. The times given (72, 12 and 24 hours) may be aggregates of shorter periods, the test pieces being left in cold water between such periods.

(c) Second lot (Bonding BR). Immerse completely in boiling water under normal atmospheric conditions for 3 hours, then quench in water at room temperature.

3. After the treatments in Paragraph 2, test the adhesion between the veneers of the test pieces, in the wet state, by a forcible separation or knife test.'

Figures. Delete all references to beech and maple in the captions to Figs. 1 to 9 and Fig. 13.

Delete Fig. 17.