

Marine plywood —

Part 2: Determination of bonding quality using the knife test

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Committee responsible for this British Standard

The preparation of this British Standard was entrusted to Technical Committee B/541, Wood based panels, upon which the following bodies were represented:

- APA The Engineered Wood Association
- Association of British Plywood and Veneer Manufacturers
- British Marine Industries Federation
- British Woodworking Federation
- Canada Wood UK
- Department of Trade and Industry
- Eternit Building Materials
- Flat Roofing Alliance
- Forestry Commission
- Furniture Industry Research Association
- Institution of Structural Engineers
- Lloyds Register of Shipping
- Mineral Bonded Board Products Federation
- Ministry of Defence
- National Federation of Roofing Contractors
- National House-Building Council
- National Panel Products Association
- Timber Research and Development Association
- Timber Trade Federation
- Wood Panel Industries Federation
- Zurich Municipal Building Guarantee

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Foreword

This part of BS 1088 has been prepared by Technical Committee B/541. Together with BS 1088-1, it supersedes BS 1088:1966 and BS 4079:1966, which are withdrawn.

BS 1088 is issued in two parts:

— *Part 1: Requirements;*

— *Part 2: Determination of bonding quality using the knife test.*

This method of determining bonding quality was used to demonstrate conformity to the bonding quality requirements of BS 1088:1966. It has been shown over many years to produce reasonably consistent results; it is quick and simple to perform and requires no expensive apparatus. Its main limitations are that some physical strength is required and that operators need training and experience before they are able to make consistent visual assessments.

Since verification of conformity to BS 1088-1 may be made by any competent testing body which applies the tests specified in the standard, it was decided to make the shear test of BS EN 314-2 the method of verification of bonding quality. The knife test is, however, still widely used by manufacturers and has, therefore, been retained as a quality control test. BS 1088-1 specifies that where this test is used for that purpose, the manufacturer is required to prove that the bonding quality value required by internal controls ensures that the material will pass the shear test.

It has been assumed in the drafting of this standard that execution of its provisions will be entrusted to suitably qualified and experienced people, for whose use it has been prepared.

WARNING This British Standard calls for the use of substances and/or procedures that may be injurious to health if adequate precautions are not taken. It refers only to technical suitability and does not absolve the user from legal obligations relating to health and safety at any stage.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 11 and a back cover.

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1 Scope

This standard describes a method of assessing the bonding quality of marine plywood using two groups of test specimens, one of which has been immersed in cold water and the other of which has been immersed in boiling water or subjected to steam. It is intended for use as a manufacturing quality control test and not for demonstrating verification of conformity to a plywood specification.

2 Normative references

The following referenced document is indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

BS 1088-1, *Marine plywood — Part 1: Requirements*.

3 Principle

Test pieces are cut from the marine plywood to be assessed and subjected to immersion in cold water. In addition, a separate set of test pieces is either immersed in boiling water or subjected to steam. Following this treatment the plies of the test pieces are forcibly separated using a cranked chisel. The amount of adherent wood fibre is then assessed visually, compared to a master scale comprising a series of standard photographs and allocated a bonding quality number between 1 and 10.

4 Apparatus

4.1 Cranked chisel.

NOTE 1 The cranked chisel may be made from a 200 mm × 25 mm flat file. An example is shown in Figure 1.

NOTE 2 The cranked chisel should be kept sharp.

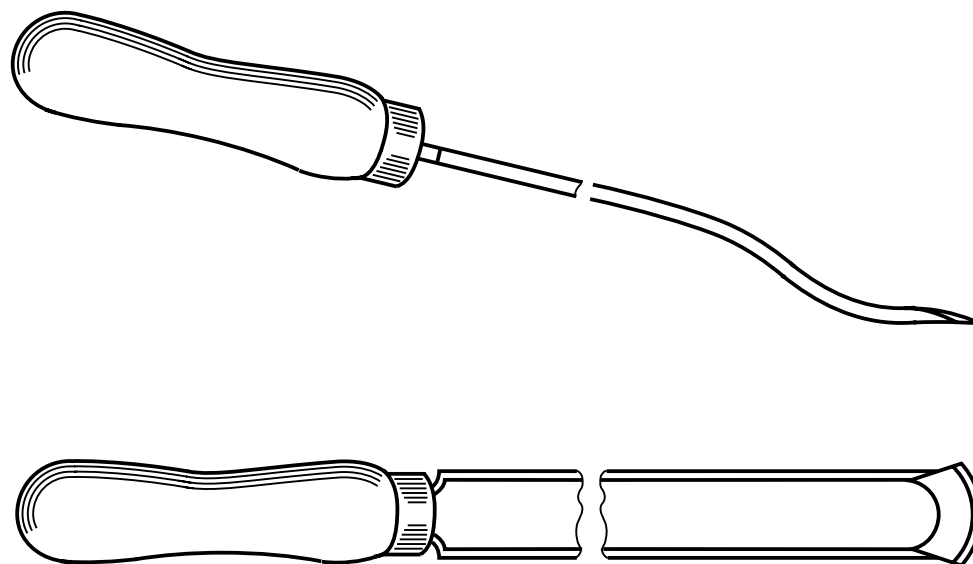


Figure 1 — Cranked chisel for the knife testing of marine plywood