

Specification for

Synthetic resin adhesives (phenolic and aminoplastic) for plywood

UDC 665.939.56:[678.632 + 678.652]:674.028 – 419.3

NO COPYING WITHOUT BSI PERMISSION EXCEPT AS PERMITTED BY COPYRIGHT LAW



Document Sharing Hub

Cooperating organizations

The Adhesives Standards Committee, under whose direction this British Standard was prepared, consists of representatives from the following Government departments and scientific and industrial organizations:

- Association of British Plywood and Veneer Manufacturers
- British Adhesive Manufacturers' Association*
- British Furniture Manufacturers' Federated Associations*
- British Paper Bag Federation
- British Plastics Federation*
- British Woodworking Federation*
- Department of Industry (Chemicals and Textiles)
- Department of the Environment (Building Research Establishment, Princes Risborough Laboratory)*
- Federation of Gelatine and Glue Manufacturers Limited
- Ministry of Defence*
- Royal Institute of British Architects
- Society of Chemical Industry
- Wall Paper Manufacturers Limited

The organizations marked with an asterisk in the above list, together with the following, were directly represented on the committee entrusted with the preparation of this British Standard:

- Timber Research and Development Association
- Timber Trade Federation

This British Standard, having been prepared under the direction of the Adhesives Standards Committee, was published under the authority of the Executive Board on 31 January 1979

© BSI 06-1999

First published February 1945
First revision December 1954
Second revision December 1963
Third revision January 1979

The following BSI references relate to the work on this standard:
Committee reference ADC/1
Draft for comment 78/52085

ISBN 0 580 10571 7

Amendments issued since publication

Amd. No.	Date of issue	Comments
6284	November 1990	Indicated by a sideline in the margin

Contents

	Page
Cooperating organizations	Inside front cover
Foreword	ii
1 Scope and field of application	1
2 References	1
3 Definitions	1
4 Types of adhesive	1
5 Instructions for use in preparing test boards	1
6 Test requirements	2
7 Resistance to cold water	2
8 Resistance to hot water or steam	2
9 Resistance to micro-organisms	2
10 Keeping qualities of the components	2
11 Marking	2
Appendix A Method of preparing plywood test pieces	3
Appendix B Method for determination of failing force	3
Appendix C Method for determination of resistance to cold water	4
Appendix D Method for determination of resistance to hot water or steam	4
Appendix E Method for determination of resistance to micro-organisms	4
Appendix F Method for determination of moisture content of veneers	5
Appendix G Tabular summary of requirements	6
Figure 1 — Test piece	3
Table 1 — Resistance to hot water or steam	2
Table 2 — Conditions of treatment of test pieces	4
Publications referred to	Inside back cover

Foreword

This British Standard has been prepared under the direction of the Adhesives Standards Committee. This revision is technically similar to the 1963 edition but fully metricates that edition. It is primarily intended for the use of manufacturers and others who require means of assessing or controlling the quality of phenolic and aminoplastic adhesives intended for use in plywood. In this revision the basis of classification adopted in the 1963 edition has been retained.

BS 1204-1 and BS 1204-2 deal with gap-filling and close-contact adhesives respectively.

It is current practice, in British Standard specifications concerned with wood products bonded with synthetic resin adhesives, to classify the durability of the joint in terms of its resistance to breakdown under various natural conditions of exposure; data on these have been obtained over a number of years. The results of these long-term trials have been linked with the behaviour of standard test pieces when these are immersed in cold, hot or boiling water or in steam, and such tests are the distinguishing requirements of these specifications.

The designations of the four types of synthetic resin adhesives specified in this British Standard (WBP, BR, MR and INT) are derived partly from the known degrees of durability and partly from the kind of test employed in the specification (see clause 4).

The various wet tests have been devised solely to differentiate between the types and have proved adequate for this purpose for the phenolic and aminoplastic resins with which this British Standard is concerned. With resins of other chemical formulations, compliance with the test requirements would not necessarily indicate equal durability, and confirmation of type grouping by actual service trials would be required.

The several British Standard specifications (see BS 6V 3, BS 2V 35, BS 1088 & BS 4079, BS 3444 and BS 1455) for plywood and blockboard provide complete methods for testing the bond quality of the relevant specified material and do not restrict the timber species used or the construction used. However, when the purchase of an adhesive alone is concerned, or for the purpose of checking one production batch against another, it is convenient to have a separate specification that uses plywood of a single species and of one construction only.

The standard timber, European beech (*Fagus sylvatica*)¹⁾, although not commonly used for plywood manufacture in the United Kingdom, is eminently suitable for discriminatory testing work.

IMPORTANT NOTE A manufacturer may authorize the use of particular extenders with the adhesive, and such addition may be found, on re-testing the mix, to change the characteristics or type (see clause 4) from that of the resin/hardener mix as supplied. Manufacturers should give guidance on this matter and users should not increase the amount of extender beyond that recommended.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their 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 6, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

¹⁾ See BS 7359.