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Australian Standard 1795, Part 1—1979

**LAMINATED SHEETS AND
COMPOSITE BOARDS FOR
ELECTRICAL PURPOSES**

Part 1 – CLASSIFICATION AND GENERAL REQUIREMENTS

[Title Allocated by Defence Cataloguing Authority:
INSULATING SHEET, ELECTRICAL (Composite Panels and
Laminated Panels, General Specifications)]



STANDARDS ASSOCIATION OF AUSTRALIA
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THE FOLLOWING SCIENTIFIC, INDUSTRIAL AND GOVERNMENTAL organizations and departments were officially represented on the committee entrusted with the preparation of this standard:

Australian Electrical and Electronic Manufacturers Association
Confederation of Australian Industry
Department of Construction
Department of Productivity
Department of Public Works, N.S.W.
Electrical Contractors Associations of Australia
Electricity Supply Association of Australia
Metropolitan Water, Sewerage and Drainage Board, Sydney
Plastics Institute of Australia Incorporated
Railways of Australia Committee
Telecom Australia

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To keep abreast of progress in industry, Australian standards are regularly reviewed. Suggestions for improvement to published standards, addressed to the head office of the Association, are welcomed.

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February 1980

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Amendment No 1

to

AS 1795, Part 1—1979

**LAMINATED SHEETS AND COMPOSITE BOARDS FOR
ELECTRICAL PURPOSES**

PART 1—CLASSIFICATION AND GENERAL REQUIREMENTS

SUMMARY: The following sections of the standard are covered by this amendment: Clauses 1, 5.13.3 and 5.13.4.

Published on 1 March 1980.

AUSTRALIAN STANDARD SPECIFICATION

**LAMINATED SHEETS AND
COMPOSITE BOARDS FOR
ELECTRICAL PURPOSES**

Part 1
**CLASSIFICATION AND
GENERAL
REQUIREMENTS**

AS 1795, Part 1—1979

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PREFACE

This standard was prepared by the Association's Committee on Electrical Accessories as a revision of AS C108—1951 which it accordingly supersedes.

The object of this standard is to establish a classification system for different types of panel and to nominate constructional requirements and performance tests. Dimensions of switchboard insulating panels are covered in Part 2.

The classification system used recognizes two types of panel: insulating panels and mounting panels. For the present, requirements have been included for insulating panels while provision has been made for the inclusion of requirements for mounting panels at a later date.

During the preparation of this standard it was realized that several of the panels covered would have applications at high frequencies as well as at power frequencies. Hence it was found necessary to alter the original title of AS 1795 from 'Insulating Panels for Electrical Purposes (at Power Frequencies)' to the broader 'Laminated Sheets and Composite Boards for Electrical Purposes'. The title of Part 2 has been changed to reflect this wider scope.

The classification system used in this standard is based on the system given in BS 5102, Phenolic Resin Bonded Paper Laminated Sheets for Electrical Applications, with two additions. The first addition caters for mineral-based composite panels, and the second addition covers a special type of laminated panel which has some properties similar to those of composite panels.

While several tests have been included to assess the important characteristics of insulating panels, these do not at present include tracking tests and surface resistivity tests. These tests are under consideration and may be included in a future edition.

In the application of this standard, reference may be necessary to the following standards:

- AS 1767 Insulating Oil for Transformers and Switchgear
- AS 3000 Wiring Rules
- AS C32 Method for the Measurement of Voltage with Sphere-gaps (One Sphere Earthed)
- BS 4 Keys and Keyways and Taper Pins
Part 3—Solid and Split Taper Pins
- AS 267 Determination of Power-factor and Permittivity of Insulating Materials (Hartshorn and Ward Method)

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard Specification for LAMINATED SHEETS AND COMPOSITE BOARDS FOR ELECTRICAL PURPOSES

PART 1—CLASSIFICATION AND GENERAL REQUIREMENTS

1 SCOPE. This specification sets out requirements for—

- (a) phenolic resin-bonded paper laminated sheets, and
- (b) bitumen-impregnated asbestos cement boards,

intended for use either as mounting panels for switchgear or for the insulation of live parts, or both.

NOTE: The sheets and boards collectively are hereinafter referred to as 'electrical panels'.
NOTE 2: SEE AMENDMENT 1

2 DEFINITIONS. For the purpose of this specification, the following definitions apply:

2.1 Phenolic resin-bonded paper laminated sheets—sheet or board made from layers of cellulosic paper treated with thermosetting synthetic resin of phenolic type and bonded together under heat and pressure.

NOTES:

- 1. The laminated sheets are hereinafter referred to as 'laminated panels'.
- 2. It is recognized that these laminated panels may contain some proportion of other synthetic resins or additives which are required to produce certain properties, such as flame retardancy.

2.2 Bitumen-impregnated asbestos cement boards—sheet or board made from bitumen-impregnated cement-bonded asbestos fibre and bonded together under pressure.

NOTE: The asbestos cement boards are hereinafter referred to as 'composite panels'.

2.3 Direction 'A' and direction 'B'—for laminated panels, two directions in the plane of lamination, mutually at right-angles, one of which is parallel to an edge of the sheet.

3 CLASSIFICATION.

3.1 General. In accordance with the test requirements of Clause 5, electrical panels shall be classified as—

- (a) insulating panels, when they are intended for the insulation of live parts; or
- (b) mounting panels, when they are intended for the mounting of electrical components or equipment.

NOTE: Appendix A gives guidance on the selection of electrical panels for various purposes.