

Australian/New Zealand Standard®

**Design and installation of sheet roof
and wall cladding**

Part 3: Plastic

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee PL/22, Plastic Building Sheets. It was approved on behalf of the Council of Standards Australia on 15 January 1996 and on behalf of the Council of Standards New Zealand on 5 February 1996. It was published on 5 March 1996.

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Building Research Association of New Zealand
Composites Institute of Australia
CSIRO, Division of Building, Construction & Engineering, Australia
Housing Industry Association, Australia
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AS/NZS 1562.3:1996

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Part 3: Plastic

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee PL/22 on Plastic Building Sheets, to amalgamate and supersede AS 2424—1991 (in part) and AS 2921—1987 (in part).

It is the third part in a series of sheet roof and wall cladding Standards which, when complete, will comprise:

AS

1562 Design and installation of sheet roof and wall cladding

1562.1 Part 1: Metal

1562.2 Part 2: Fibre-reinforced cement*

AS/NZS

1562.3 Part 3: Plastic (this Standard)

Plastic roof and wall cladding materials are installed using the normal procedures for other types of building sheets but with certain modifications to fixing techniques because of the inherent properties of the material. The purpose of this Standard is to reinforce general safety rules in relation to sheet installation and to highlight the differences in fixing techniques required for plastic sheets as compared with those used for sheets of other materials.

This Standard applies to the suite of Standards on plastic roof and wall cladding materials which, when complete, will comprise:

AS/NZS

4256 Plastic roof and wall cladding materials

4256.1 Part 1: General requirements

4256.2 Part 2: Unplasticized polyvinyl chloride (uPVC) building sheets

4256.3 Part 3: Glass fibre reinforced polyester (GRP)

4256.4 Part 4: Unplasticized polyvinyl chloride (uPVC) wall cladding and boards

4256.5 Part 5: Polycarbonate

In New Zealand technical requirements for building construction are contained in New Zealand Building Code and the Building Regulations. The following Code clauses are, or may be, relevant in respect to plastic building sheets: B1 Structure, B2 Durability, C3 Spread of Fire, E2 External Moisture, E3 Internal Moisture, F2 Hazardous Buildings Materials, G7 Natural Light, H1 Energy Efficiency.

The term 'normative' has been used in this Standard to define the application of the appendix to which it applies. A 'normative' appendix is an integral part of a Standard.

* In course of preparation.

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STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Australian/New Zealand Standard**Design and installation of sheet roof and wall cladding****Part 3: Plastic**

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE This Standard sets out procedures for the design and installation of plastic roof and wall cladding materials for walls and roofs.

The Standard is primarily intended to apply to the use of plastic roof and wall cladding materials complying with the AS/NZS 4256 suite of Standards (see Preface).

NOTES:

- 1 The sheets do not contribute to the structural or load-bearing capacity of the structure and due allowance should be made to the surrounding structure to compensate for the opening areas. For applications where structural design requirements must be satisfied, reference should be made to the design and testing provisions of AS 1562.1 for roofing without transverse joints.
- 2 For use of the sheets in abnormal environmental conditions (e.g. extremes of temperature), the advice of the manufacturer should be sought.

1.2 REFERENCED DOCUMENTS The documents referred to in this Standard are listed in Appendix A.

1.3 REFERENCED STANDARDS To facilitate the use of Joint Australia/New Zealand Standards in either country, where separate national Standards exist, cross-reference to these Standards in the text is designated AS XXXX/NZS YYYY. Compliance with this Standard is therefore achieved by reference to the Standard that is applicable to the country in which this Standard is being used.

SECTION 2 GENERAL REQUIREMENTS

2.1 SCOPE OF SECTION This Section sets out requirements for the handling, transport, storage and safety precautions in the use of plastic roof and wall cladding materials.

2.2 MATERIAL Plastic roof and wall cladding materials installed in accordance with this Standard shall comply with the relevant Australian/New Zealand Standard.

2.3 TRANSPORT, HANDLING AND STORAGE Plastic roof and wall cladding materials shall be transported and handled in a manner which prevents damage or disfigurement.

Sheets shall be protected from damage at all times and shall be stacked on a firm base to avoid damage or distortion. They shall be kept out of direct sunlight either by siting the stack in a shaded area or by covering the stack while providing adequate ventilation to prevent heat build up. The height of such stacks shall not exceed 750 mm.

2.4 SAFETY PRECAUTIONS

2.4.1 General Special care should be exercised when long length sheeting is being handled, particularly in windy conditions. Should work be interrupted for any reason, all loose sheeting or incomplete sections should be adequately secured against possible movement by wind.

2.4.2 Fire precautions Plastic materials are combustible and shall be stored and handled so that they do not contact sources of heat likely to cause combustion.

2.4.3 Safety mesh

2.4.3.1 General Safety mesh used in conjunction with plastic roof and wall cladding materials shall comply with the requirements of Appendix B.

2.4.3.2 Provision of safety mesh Safety mesh shall be used in roof construction, subject to local statutory or national building code regulations.

In Australia, safety mesh is not required where one or more of the following conditions prevail:

- (a) The roof makes an angle to the horizontal of—
 - (i) for Class 2 to 9 buildings, as defined by the Building Code of Australia, 40 degrees or more; and
 - (ii) for Class 1 and 10 buildings, as defined by the Building Code of Australia, 30 degrees or more.
- (b) There is a substantial and closely boarded floor or similar structure below the roof at a vertical distance of not more than 3 m measured from the highest point of the plastic sheet incorporated into the roof.

NOTE: This means that safety mesh may only be applicable to those parts of the roof that are over 3 m above a closely boarded floor or similar structure (i.e. only part of the roof may require safety mesh).

- (c) There is a raised single arch profile of overall height not less than 100 mm from the base support line and both female side lapping ribs are fixed over the supporting male underlapping ribs on either side for the entire length of the sheet. The resultant effective cover width shall be not greater than 450 mm.