

Australian Standard[®]

**Rigid cellular plastics sheets for
thermal insulation**

**Part 2: Rigid cellular
polyisocyanurate (RC/PIR)**

This Australian Standard was prepared by Committee PL/16, Rigid Cellular Plastics for Thermal Insulation. It was approved on behalf of the Council of Standards Australia on 13 December 1991 and published on 16 March 1992.

The following interests are represented on Committee PL/16:

Board of Fire Commissioners, N.S.W.
Commercial Refrigeration Manufacturers Association of Australia
CSIRO, Division of Building, Construction and Engineering
Master Builders Construction and Housing Association
Metropolitan Fire Brigades Board, Melbourne
The Plastics Institute of Australia
Railways of Australia Committee

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PREFACE

This Standard was prepared by the Standards Australia Committee for Rigid Cellular Plastics for Thermal Insulation under the direction of the Plastics Standards Board, to supersede AS 1366.2—1981. AS 1366, *Rigid cellular plastics sheets for thermal insulation*, has four parts, the others being as follows:

Part 1: *Rigid cellular polyurethane (RC/PUR)*

Part 3: *Rigid cellular polystyrene —Moulded (RC/PS—M)*

Part 4: *Rigid cellular polystyrene —Extruded (RC/PS—E)*

The products covered by this Standard are mainly intermediate products used as insulants, either by their manufacturer or by another manufacturer, in the production of thermal insulation products (e.g. building panels, cool store panels, insulation for bulk containers).

Density has been used over a number of years as a means of classifying cellular plastics. Because of advances in technology, similar physical characteristics may be achieved by materials of different apparent density; for this reason the density of the material is not included in the list of specified physical properties.

The subsequent processing of the sheets is the determining factor in the fire hazard associated with the use of these materials (i.e. the potential for harm to life or property resulting from the occurrence of a fire). For example, when used in buildings, cellular plastics may need to be faced with lining materials in order to achieve adequate fire performance. Thus it is not relevant to include a fire performance test for the materials specified in this Standard. The users of these materials should apply suitable fire performance tests to products in their finished form. Purchasers of products fabricated from these materials should specify such tests in their purchasing agreements. For building structures and components, suitable tests are described in AS 1530, *Methods for fire tests on building materials, components and structures*, Part 3: *Simultaneous determination of ignitability, flame propagation, heat release and smoke release* and Part 4: *Fire resistance test of elements of building construction*.

A combustion characteristics test has been included; however, it must be emphasized that a combustion characteristics test gives no indication of the fire hazard associated with the use of the sheet, but is used to compare relative combustion properties of the material. The test has been included to ensure a specified minimum level of fire retardancy in the sheet.

Reference should be made to AS 2627, *Thermal insulation of dwellings—Design guide*, for installation of thermal insulation in domestic dwellings and for guidance on correct placing of vapour barriers for protection in situations where temperature differentials may occur. For industrial and commercial applications, expert advice should be sought.

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