Australian Standard®

Urea-formaldehyde foam thermal insulation—Installation requirements for in situ set foam

This Australian Standard was prepared by Committee BD/58, Thermal Performance and Insulation of Dwellings. It was approved on behalf of the Council of Standards Australia on 27 August 1992 and published on 15 February 1993.

The following interests are represented on Committee BD/58:

Acceptable Standards of Construction Committee, N.S.W.
Aluminium Development Council
Association of Consulting Engineers, Australia
Association of Municipal Electricity Authorities, Victoria
Australian Cellulose Insulation Manufacturers Association
Australian Clay Brick Association
Australian Construction Services—Department of Administrative Services
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Ministry of Housing and Construction, Victoria
Royal Australian Institute of Architects
The Plastics Institute of Australia
Thermal Insulation Contractors Association, N.S.W.
University of Adelaide
University of Melbourne
Victoria Solar Energy Council

This Standard was issued in draft form for comment as DR 81076.

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First published as AS 4075—1993.

PUBLISHED BY STANDARDS AUSTRALIA
(STANDARDS ASSOCIATION OF AUSTRALIA)
1 THE CRESCENT, HOMEBUSH, NSW 2140
ISBN 0 7262 7817 3

PREFACE

This Standard was prepared by the Standards Australia Committee on Thermal Performance and Insulation of Dwellings.

Because of the nature of the process of manufacturing and dispensing foamed urea-formaldehyde into the internal cavities of walls, ceilings and floors of buildings, successful application requires attention to the specifications for raw materials used to make urea-formaldehyde foam, the properties of the set foam and the requirements for its installation. Two of these areas are covered in the first two parts of this Australian Standard:

AS 4073 *Urea-formaldehyde thermal insulation—In situ set foam*

AS 4074 *Methods of testing raw materials for producing urea-formaldehyde foam thermal insulation*

The third area, requirements for the installation, is covered in this Standard, which specifies the procedures for installing urea-formaldehyde foam insulation in dwellings in order to obtain the optimum thermal performance of this insulating material. Requirements were arrived at from a consideration of similar overseas Standards together with experience in Australian installations.

CONTENTS

STANDARDS AUSTRALIA

Australian Standard

Urea-formaldehyde foam thermal insulation —Installation requirements for in situ set foam

1 SCOPE This Standard sets out recommended practice for the installation of urea-formaldehyde (UF) foam, which is manufactured and dispensed on site into the cavities of suitably constructed walls, ceilings and floors for thermal insulation purposes. This Standard defines constructions to which this application is limited.

2 APPLICATION

2.1 General The purpose of this Standard is to provide procedures that will ensure optimum installation and performance of urea-formaldehyde foam insulation as described in AS 4073 and AS 4074. Installation of UF foam insulation should meet the general requirements of AS 3999 and the specific requirements of this Standard.

This Standard includes a requirement for the installer to ensure that formaldehyde concentrations in building air do not exceed limits acceptable to relevant health authorities.

2.2 Relationship with regulations This Standard is intended to provide technical requirements for implementation by reference in statutory (building) regulations.

The requirements of this Standard may be read in conjunction with, but do not take precedence over, any statutory regulations that may apply in any area.

NOTE: It should be noted that an installation may come under the jurisdiction of several authorities with differing areas of responsibility, and that an approval from one does not necessarily constitute an approval from others.

3 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

AS

1886 Glossary of terms relating to plastics

2352 Glossary of terms for thermal insulation of buildings

2464 Methods of testing thermal insulation

2464.5 Part 5: Steady-state thermal transmission properties by means of the heat flow meter

2464.6 Part 6: Steady-state thermal transmission properties by means of the guarded hot plate

2627 Thermal insulation of dwellings—Design guide

3999 Thermal insulation of dwellings—Bulk insulation—Installation requirements

4073 Urea-formaldehyde thermal insulation—In situ set foam

4074 Methods of testing raw materials for producing urea-formaldehyde foam thermal insulation

4 DEFINITIONS For the purposes of this Standard the definitions given in AS 1886 and AS 2352 apply.

5 RAW MATERIALS

5.1 Properties of raw materials UF resin and foaming agent used for the production of UF foam must possess properties agreed upon by manufacturers and installers, these properties being measured by AS 4074. These properties are not specified in this series of Standards but must be set at values such that the manufacturer can prove that foam produced from this product meets requirements for set foam properties in AS 4073.

5.2 Storage and transport of raw materials Resin and foaming agent shall not be stored or transported in direct sunlight or in conditions which expose them to temperatures less than 5°C or in excess of the following:

(a) Liquid resin: 30°C.

(b) Powdered resin: 40°C.

(c) Foaming agent: 40°C.

Resin and foaming agent have limited shelf lives (usually three and six months respectively) and shall not be used if the expiry date for shelf life is exceeded. If the resin has thickened or has a lumpy consistency it shall not be used.