AS 3740:2021

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Waterproofing of domestic wet areas

AS 3740:2021

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Association of Wall and Ceiling Industries of Australia
Australasian Concrete Repair and Remedial Building Association
Australian Building Codes Board
Australian Industry Group
Australian Institute of Building Surveyors
Australian Institute of Waterproofing
Australian Tile Council
Better Regulation Division
CSIRO
Engineered Wood Products Association of Australasia
Housing Industry Association
Institute of Building Consultants

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Waterproofing of domestic wet areas

Originated as AS 3740—1989.
Previous edition AS 3740—2012.
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Preface

This Standard was prepared by the Standards Australia Committee BD-038, Wet Areas in Buildings, to supersede AS 3740:2010.

The objective of this document is to set out the criteria for waterproofing wet areas within domestic buildings. It gives minimum requirements for materials, designs and installations.

The objective of this revision is to bring this document in line with the current waterproofing practices in the building industry.

Changes from the previous edition include the following:

(a) Restructure for useability.

(b) Addition of figures with examples of application.

(c) Addition of information on risk levels of different areas.

(d) Inclusion of appropriate details for various risk levels.

(e) Clarification of usage definitions.

(f) Increased ease of reference for varying conditions.

(g) Revision of design and installation techniques.

(h) Expansion of information on shower and bath scenarios.

(i) Inclusion of informative integrity testing.

The role of waterproofing is to install waterproofing systems as a combination of waterproof and water-resistant materials in order to retain water within the designated wet area and exclude water from non-water-resistant building elements. It is intended that water be managed to an outfall at surface and substrate. Systems are intended to accommodate expected service conditions of the wet area to prevent damage by water and accumulated moisture to building elements.

This document is not to be interpreted as preventing the use of materials, systems or methods that meet the design and installation criteria set out in this document, but are not specifically referred to herein (alternative solution).

Additional requirements may need to be considered for wet areas intended for use by people with disabilities.

Standards Australia thanks Stormtech for permission to reproduce the following: Figure 4.3.1(A), Figure 4.3.1(B), Figure 4.3.1(C), Figure 4.3.2, Figure A.6(C) and Figure A.6(D). These figures are copyright of Stormtech. All rights reserved.

The terms “normative” and “informative” are used in Standards to define the application of the appendix to which they apply. A “normative” appendix is an integral part of a Standard, whereas an “informative” appendix is only for information and guidance.

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Australian Standard®

Waterproofing of domestic wet areas

Section 1 Scope and general

1.1 Scope

This document sets out minimum requirements for the materials, design and installation of waterproofing for domestic wet areas.

This document applies to internal wet areas as defined in the National Construction Code (NCC).

NOTE 1 Appendix A provides design considerations for categories of wet area waterproofing.

The following are excluded from the scope of this document:

(a) Situations where flooding of the wet areas occurs through overflowing of vessels or plumbing failures.

(b) Concrete admixtures or penetrant sealers or similar.

(c) Decorative coatings.

(d) Communal or group wet areas such as shower areas as in swimming pool complexes, sporting facilities, steam rooms, and similar situations.

NOTE 2 A suggested checklist of items to be reviewed following installation of waterproofing is provided in Appendix D.

NOTE 3 A method to determine whether the subfloor moisture content is suitable for the installation of waterproof membranes is provided in Appendix F.

1.2 Normative references

The following documents are referred to in the text in such a way that some or all of their contents constitutes requirements of this document:

NOTE Documents referenced for informative purposes are listed in the Bibliography.

AS 1288, *Glass in buildings—Selection and Installation*

AS 1566, *Copper and copper alloys—Rolled flat products*

AS 1684.2, *Residential timber-framed construction, Part 2: Non-cyclonic areas*

AS 1684.3, *Residential timber-framed construction, Part 3: Cyclonic areas*

AS 1684.4, *Residential timber-framed construction, Part 4: Simplified—Non-cyclonic areas*

AS 1884, *Floor coverings—Resilient sheet and tiles—Installation practices*

AS 2870, *Residential slabs and footings*

AS 3500.2, *Plumbing and drainage, Part 2: Sanitary plumbing and drainage*

AS 3588, *Shower bases and shower modules*

AS 3600, *Concrete structures*

AS 3700, *Masonry structures*

AS/NZS 1170.1, *Structural design actions, Part 1: Permanent, imposed and other actions*

AS/NZS 1170.2, *Structural design actions, Part 2: Wind actions*

AS/NZS 2269 (all parts), *Plywood—Structural*

AS/NZS 2588, *Gypsum plasterboard*

AS/NZS 2908.2, *Cellulose-cement products, Part 2: Flat sheets*

AS/NZS 2924.1, *High pressure decorative laminates—Sheets made from thermosetting resins, Part 1: Classification and specifications*

AS/NZS 4858, *Wet area membranes*

1.3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

1.3.1
backing rod
section of closed cell foam made from polyethylene or similar suitable product

1.3.2
bond breaker
system that prevents the membrane bonding to the substrate, bedding or lining in order to dissipate the shear forces that may otherwise cause failure of the membrane

Note 1 to entry: This may include proprietary transition tapes when used in accordance with the product specifications.

1.3.3
dry film thickness
DFT
measurement of thickness of a coating remaining on the surface after full cure of the coating

1.3.4
competent person
person who has acquired, through education, training, qualification or experience or a combination of these, the knowledge and skill enabling that person to perform the task required

1.3.5
efflorescence
accumulation of calcium and/or other soluble salts that stains or etches surface finishes after evaporation of the solvent (water)

Note 1 to entry: Typically, cement-based installation materials may provide the initial source of soluble salts.

1.3.6
fall
difference in level over a given length in the direction of flow

Note 1 to entry: Commonly expressed as the ratio or percentage of unit rise to horizontal distance.

1.3.7
flashing
strip or sleeve of impervious material dressed, fitted or built-in to provide a barrier to moisture movement, or to divert the travel of moisture, or to cover a joint where water would otherwise penetrate between wet and dry areas

1.3.8
flashing, perimeter
flashing used at the floor-wall junction

1.3.9
flashing, vertical
flashing used at wall junctions within wet areas

1.3.10
floor waste
grated inlet within a floor intended to drain the floor surface

1.3.11
full cure stage
stage of curing at which the product is cured for service

Note 1 to entry: This may include components such as membranes, primers, sealants, and other materials requiring curing.

1.3.12
hob
upstand at the perimeter of a shower area

1.3.13
insert bath
bath where the bath lip is installed onto a horizontal plinth or surface

1.3.14
leak control flange
flange connected to a waste pipe, at the point at which it passes through the floor substrate

Note 1 to entry: Intended to prevent leakage and enable tile bed drainage into the waste pipe and connection of waterproofing membrane into the waste pipe.

1.3.15
linear drain
longitudinal floor waste containing a channel, waste outlet, and grating

Note 1 to entry: Also known as shower channel, strip grate.

1.3.16
maximum retained water level
point at which surface water will start to overflow out of the shower area

1.3.17
may
indicates the existence of an option

1.3.18
membrane
barrier that is impervious to moisture

Note 1 to entry: A barrier may be a single or multi-part system.

1.3.19
membrane states
stages of curing

Note 1 to entry: See also 1.3.26 recoat stage, 1.3.23 overlay stage, 1.3.11 full cure stage.

1.3.20
membrane, external
membrane that is installed behind the wall sheeting or render

Note 1 to entry: Usually external membranes are preformed trays or sheet material systems.