

VERSION 4: SEPTEMBER 2025

TECHNICAL FACT SHEET

Water Penetration Resistance



The National Construction Code (NCC) requires that, for all building types:

A roof and external wall (including openings around windows and doors) must prevent the penetration of water that could cause:

- Unhealthy or dangerous conditions, or loss of amenity for occupants; and
- Undue dampness or deterioration of building elements

The NCC requires evidence of compliance with either a performance requirement or a deemed-to-satisfy provision clause F3P1 (Volume 1) and clause H2P2 (Volume 2) to support the form of construction, materials or design.

Compliance with AS 2047

In most cases, when it comes to windows and doors, this is satisfied by the provision of a **Certificate of Compliance** to AS 2047 as evidence that the system provides the required level of water penetration resistance as calculated in accordance with AS 1170.2 or AS 4055 and starting at a minimum of 150 Pa.

However, in some circumstances, where the sill of a door or servery window is required to meet a **functional requirement** for a smooth transition from inside to out, such as for wheelchair access under AS 1428.1, it may not be possible for the window or door system itself to meet the water penetration resistance requirements of AS 2047.



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Compliance with the NCC

It is the builders' responsibility to ensure adherence to the NCC. Windows and doors that cannot meet the required water rating do not meet the **deemed-to-satisfy** requirements of the NCC. In this circumstance, it may be necessary to adopt a **performance solution**.

Windows and doors with compromised water penetration resistance may be used, provided they are part of a performance solution. This may include a combination of large verandas, draftstoppers, drainage grates or protection by other building elements. The type of protection required will depend on local wind speeds, the surrounding environment and the degree to which the window or door is exposed to wind-driven rain.



Certificate of Compliance

Where a performance method has been adopted, certification of the design rests with the building designer, and evidence must be provided in accordance with clause A5G2 of both Volume 1 and Volume 2 of the NCC.

In some cases, the performance solution might only address the water penetration resistance. In that case, all other performance requirements of the window or door system should be verified through product testing as required by AS 2047, including:

- Serviceability deflection,
- Operating force,
- Air infiltration,
- Ultimate strength.

IMPORTANT NOTE: AGWA recommends that window and door manufacturers and suppliers take this into consideration when tendering for work. Products that do not meet the water rating requirements of AS 2047 should be clearly noted on quotations and notice given that the product supplied is not water rated and will be deemed fit for purpose by the purchaser as one element of a performance solution.

