



Plumbing products & the pathways to compliance

- NCC, WELS & WaterMark

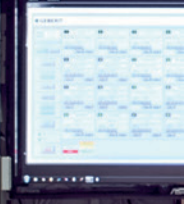


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PP21 01 NUP
Auftrag Nr. 19 100
DIN Spülventil V102LS
March 2020

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Introduction

In 2014, Master Builders Queensland conducted a survey into the use of non-conforming products in the construction sector.ⁱ The results were a cause for concern, particularly when it comes to plumbing products – 40% of those surveyed said they had found non-conforming products in their projects and, of that figure, the highest percentage (21.6%) involved plumbing products.ⁱⁱ

To put that another way, while non-conforming products are a problem across the construction sector, the worst offenders in this sense are plumbing products. The blame for this situation lies not just with those who install these products. Everybody in the building product supply chain, including architects, is responsible for ensuring they comply with regulations and are fit-for-purpose.ⁱⁱⁱ

So, what are the regulations surrounding plumbing products? What is the difference between ‘non-compliant’ and ‘non-conforming’ sanitaryware products? What are WELS and WaterMark and how do they relate to the National Construction Code (NCC)? And most importantly, how can specifiers ensure they are meeting all their regulatory responsibilities?

This whitepaper is intended to answer all these questions and more. Beginning by defining all the above-mentioned terms, it goes on to identify the potential ramifications of installing inappropriate products, explain the regulations that apply to the installation of plumbing products, and outline the ways architects and designers can ensure they don’t become part of the problem.

Definitions

As a first step, it is important to define terms. Though they may sometimes be used interchangeably, there are important differences between the terms ‘non-compliant’, ‘fit for purpose’ and ‘non-conforming’, as they apply to sanitaryware and plumbing products.

Non-Conforming Building Products

A non-conforming building product (NCBP) is “a product that purports to be something it is not and is marketed or supplied with the intention of deceiving those who intend using it.”^{iv} In other words, NCBPs simply do not conform with regulations, regardless of application.

Non-Compliant Building Products

In contrast, non-compliant products (NCPs) and materials – which are also sometimes referred to as ‘Not Fit for Purpose’ – are defined as “products or materials used in situations where they do not comply with the requirements of the NCC.”^v Here,

the application is important. While the product may be of good quality and suitable for other types of applications, it is not fit to be used for the specific application in question.

Non-compliant use of a product in this way is typically associated with decisions by those in the chain of custody around how a product is used. This could be through substitution, ignorance of the requirements or through an unintended error.

The consequences of using NCBPs or NCPs can be serious. Beyond the threat they pose to public safety, the use of such products also undermines the integrity of Australia’s built environment. It can result in long-lasting reputational damage to those involved, and in accordance with various state laws, can result in significant financial penalties as well as the prosecution of organisations or individuals.





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The Regulatory Framework

So, how are plumbing products regulated in Australia? What measures have regulatory authorities taken to ensure non-conforming and non-compliant products do not find their way into Australian homes, schools, and places of work?

The National Construction Code

Produced by the Australian Building Codes Board, the National Construction Code (NCC) is “a performance-based code that sets standards regarding the safety, health, amenity, accessibility, and sustainability of Australian buildings.”^{vi}

As per the NCC, there are three ways to ensure that plumbing products (and indeed all types of building components) are compliant and fit for purpose.

^{vii} The first, and most commonly-followed, pathway is called Deemed-to-Satisfy (DTS). Straight forward and prescriptive, DTS Solutions are the result of the evaluation of evidence of suitability, expert judgement,

or a combination of both. DTS provisions are generally met by compliance with applicable installation Standards and local regulatory requirements, in the case of plumbing and drainage the applicable Standard would be AS3500 parts 0-4 and local and state plumbing regulations.

The second, and less commonly used, method of demonstrating compliance is by a Performance Solution. Customised according to the requirements of specific projects, performance solutions must be equivalent to, or exceed the performance of the DTS provisions. Verification of performance must be provided, this can be in the form of (but not limited to) test data, calculation method or expert judgement. A Performance Solution Report (PSR) must be submitted with the planning application.

Finally, as a third option, compliance can involve a combination of DTS and Performance solutions.

Plumbing products that meet all the requirements associated, and comply with the NCC, WaterMark, and WELS are fit for purpose.

Those who specify such products can be confident that they are secure and reliable.

Who is responsible?

It is important to note that the responsibility for ensuring that plumbing products meet these standards extends beyond the person who installs them to all in the supply chain. This includes everybody from manufacturers, importers, wholesalers, distributors and retailers to architects, designers, engineers, and other specialists. And it includes those involved in product procurement, developers, builders, and approval authorities, themselves.^{viii}

That said, considering the sometimes complex nature of compliance, how can each of these parties be sure of this? There are six ways to ensure that a building product conforms with the requirements of the NCC:^{ix}

- Certificate of Accreditation from State or Territory authority
- Certificate from an appropriately qualified person
- Certificate from a product certification body accredited by JAS-ANZ
- Report registered by a registered testing authority
- Documentary Evidence detailed by the Australasian Procurement and Construction Council Guide to Procurement of Construction Products
- Certificate of Conformity, such as a WaterMark

WaterMark

In the case of plumbing products this last point, regarding WaterMark certification, is important. In operation since 2003 and managed by the Australian Building Codes Board, the scheme is to ensure plumbing products are fit for purpose and are authorised for installation by a licensed plumber.^x

As such, Volume 3 of the NCC requires a range of plumbing products – including sanitary fixtures (bidets, toilets, concealed cisterns, and urinals), tapware and showers (including thermostatics), appliances, hot water units, valves, pipes, jointing products, outlets, and other fittings – to be WaterMark certified.^{xi}

Certified products, as well as their associated

packaging and marketing material, must display both the WaterMark trademark and a specific WaterMark license number. In addition, products must be provided with a Scope of Use statement specifying their intended use, and must be listed on an online database.

WELS

Beyond NCC and WaterMark compliance, plumbing products installed in Australian buildings must also meet efficiency standards.

Introduced in 2005 and made compulsory in 2006, the Water Efficiency Labelling and Standards (WELS) applies a mandatory water efficiency and minimum performance standard and labelling system to all water-consuming products in Australia.^{xii} Focused on urban water consumption, WELS is intended to reduce overall water consumption, promote the adoption of efficient and effective water-using and water-saving technologies, and inform consumers in regards to the various water-using and water-saving products available.^{xiii}

It is estimated that by 2030, Australians could save in excess of \$2 billion (or an average of \$175 per household per annum) through reduced water consumption.^{xiv}

Applicable to showers, toilets, concealed cisterns, urinals, tapware, flow controllers, washing machine and dishwashers, WELS Certification is achieved through three segments – Star Rating (a scale from 1 to 6, with 6 being most efficient), Rate of Water Consumption, and Registration.

The WELS Regulator administers the scheme and is responsible for enforcing its compliance. It manages product registrations, while working with industry to maintain compliance. Civil penalties for non-compliance are up to \$13,320 per contravention for an individual, and up to \$66,600 for a corporation and, as with the other regulations discussed in this paper, all involved in the supply chain can be held liable.^{xv}

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GEBERIT

An organisation with almost 150 years' of experience, Geberit is a European leader in the manufacture and supply of high-quality plumbing and sanitary systems. Headquartered in Switzerland, the company has a presence in more than 50 countries, including Australia.

Beyond the standard of its products, which are manufactured with quality and reliability at the front of mind, Geberit is committed to innovation. The company carries out targeted, practical research and development that focuses on the end result, with innovations such as the world's first concealed cisterns, sold over 70 million worldwide, and the Geberit SuperTube drainage system that is currently available as a performance solution designed to create more living space for multi-residential buildings.

In addition, and as a cornerstone of its operations, the company is always ready to lend its support and expertise to its clients.

Geberit team are dedicated to assisting with the planning, installation, onsite training, and product maintenance to ensure the success of your architectural projects. Well versed in the above-mentioned requirements of the NCC, Watermark, and WELS, they can be relied on to help ensure you meet all your regulatory responsibilities every time.

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