Tried and Tested

Exploring Issues with Building Product Certification

Stormtech

INTRODUCTION

Following several high-profile incidents like the Docklands apartment fire and the Infinity cables recall, the problem of non-conforming building products has continued to receive industry attention. With the rising cost of construction and supply chain issues across the globe, all parties in the building and procurement process, from architects and designers to builders and plumbers, need to be on guard and informed of the risks of products that fail to meet performance claims or fall short of Australian standards.

According to available data, market penetration of non-conforming products in several key construction product sectors in Australia may be up to 50%.[1] This figure is concerning, and once an inferior product is installed, it is typically very difficult to uninstall. This leaves all project stakeholders subject to a range of unexpected costs, inconveniences and penalties.

Understanding the National Construction Code (NCC) and Plumbing Code of Australia (PCA) pathways used to ensure product conformance is especially important given the expanding variety of new and innovative products that are being sold. It can be challenging to determine whether a building product or material will perform as required and will comply and/or conform with the NCC and relevant Australian standards given the thousands of building products manufactured in Australia and abroad.

A variety of methods can be used to test and demonstrate that a building product or material will work as intended. Below we focus on building product certification, and highlight what to look for, potential misuses and other related considerations.

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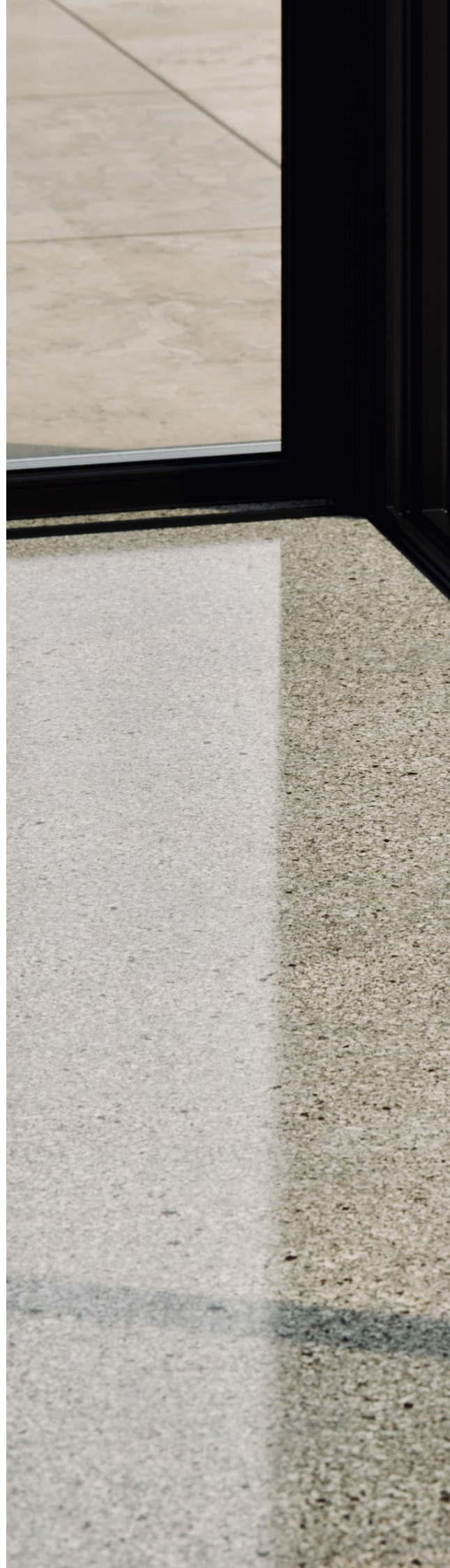
WHAT DOES CERTIFICATION MEAN?

Product certification is the process of certifying that a certain product has passed performance and quality assurance tests. Put simply, product certification lets you know that a product is safe, reliable and performs to the expected level. It is used across the design and construction industry as a benchmark for product safety and quality, and highlights manufacturers that are reliable and trustworthy.

When it comes to building products, independent third-party certification is the most valuable. When a product is certified by a third party, it usually means that an independent organisation has examined the product's manufacturing process and has independently decided that the final product complies with certain standards for quality, performance or safety. The method of certification is usually independently developed and verified thereby reducing conflict of interest and providing a benchmark on which to compare similar products.

A product certification scheme refers to a set of testing criteria stipulated in regulations, standards or guidelines as well as the requirements for bodies certifying products, processes and services. Typically, certification schemes are developed to contain both the performance test procedures that the product must undergo as well as the requirements that the product must satisfy in order to be certified. Below are some examples relevant to the Australian building sector:

WaterMark

In accordance with the NCC, certain plumbing and drainage products and materials must be certified and authorised for use in a plumbing or drainage installation under the WaterMark Certification Scheme, which is administered by the Australian Building Codes Board (ABCB). WaterMark product certification protects community health and safety by ensuring plumbing and drainage products are fit for purpose and authorised for installation by a licensed plumber.

WaterMark is a mandatory scheme that applies to products listed in the WaterMark Schedule of Products. These products are to be certified through the WaterMark certification process and listed on the WaterMark Product Database. To achieve certification under WaterMark, the relevant product must be tested by an accredited testing laboratory, comply with the applicable technical specification, be manufactured in accordance with an approved quality management system, and clearly state its intended use.[2]

When a WaterMark Certificate of Conformity is issued, it is required that the certified product or material bear the WaterMark trademark. Certified products are listed on the WaterMark product database and provided with a Scope of Use statement specifying the intended use.

Note that not all plumbing and drainage products require WaterMark certification. The products that have been predetermined as not needing WaterMark certification are listed in the Schedule of Excluded Products.

Sustainability certification schemes

Manufacturers can demonstrate their dedication to good environmental, health and safety, social, and ethical practices by obtaining sustainable product certifications. The leading certification schemes in this category require independent third-party assessment to reduce bias and conflicts of interest and include Life Cycle Analysis data to account for the total environmental impact of the product, from the extraction of materials through to its end-of-life disposal.

Sustainable product certifications are becoming more common in construction because they are increasingly used within building rating systems such as GreenStar, which is administered by the Green Building Council of Australia (GBCA), and LEED (Leadership in Energy and Environmental Design). Global GreenTag is a leader in this category and is a robust, trusted and widely-recognised ecolabel. Their GreenRate program is a system for rating products that is intended to satisfy the criteria for GreenStar "Sustainable Products" credits.

Other examples of sustainable product certification schemes include:

• Australasian Furnishing Research and Development Institute's Green Tick, which is known as the furniture sustainability standard;

• Good Environmental Choice Australia, Australia's only independent, not-for-profit, multi-sector ecolabelling program;

• Environmental Choice New Zealand, the official environmental label of New Zealand; and

• Vinyl Council of Australia's Best Practice PVC, the standard for best environmental practice for manufacturing PVC, or vinyl, products.

CodeMark

Also worth mentioning is CodeMark, a voluntary third-party building product certification scheme that provides compliance of building materials, forms of construction and designs under the NCC. Products that receive certification under CodeMark are recognised across Australia as being compliant with specific requirements of the NCC.

Like WaterMark, CodeMark is administered by the ABCB. CodeMark issues Certificates of Conformity, which are designed to provide confidence and certainty to regulatory authorities and the market. A Certificate of Conformity is among the available options for meeting the NCC's "Evidence of Suitability" requirements.

MISUSES OF CERTIFICATION AND WHAT CERTIFICATION IS NOT

Incorrect application

It is important to be informed of the relevant regulatory requirements surrounding product certification. Some types of certifications are required for a given product installation, while others are not. The incorrect application of certification requirements can lead to inefficiencies, poor performance and restrict design freedom.

A key example of this is drainage and plumbing installations. Not all products used for such installations need to be WaterMark certified. Baths, sinks, and other fixtures like basins do not require a WaterMark certificate, but the waste outlets used in each of these fixtures do. Evaporative air conditioners, bain-maries, home dishwashing machines and clothes-washing machines are also excluded.

Stormwater pipes and fittings do not require WaterMark certification, but many of these products are still required to meet an Australian Standard specification (e.g. AS/NZS 3500.3:2021 "Plumbing and drainage, Part 3: Stormwater drainage").

Mistakes regarding scope and intended use

When specifying a certified product, ensure that it is certified for the intended application. A building product may have been performance tested and certified in a specific configuration or authorised for use in specific circumstances only. For example, if a product has been certified for interior use and is specified for exterior use, the product may not perform as expected. A more specific example is an aluminium panel product that has been fire tested and given a fire rating; the fire rating does not apply to the perforated version of the same panel.

It is also an issue if the product is certified, but not to the level required by the application. If the building product has a fire rating or load class that does not meet project requirements, there is a risk that the product will be non-compliant and prematurely fail during service. Products that have been certified in a different country under different regulations can also be a risk, especially if the certification is not explicitly recognised by Australian law.

Misrepresented certification

Marketing claims of a technical nature can sometimes give the false impression that the product has been tested to a standard criteria. "Marine grade" and "triple anodised" are examples of this practice. While these terms do have a technical meaning, without the proper evidence and testing by an independent testing organisation, they are merely product descriptions.

A similar phenomenon can be observed in the sustainability field. Greenwashing is the practice of (intentionally or unintentionally) distorting and misrepresenting the degree to which a product is ethical, sustainable or environmentally friendly. Claims of "50% recycled content", without more information, are misleading as it could mean "average", "best case" or "maximum". In the construction context, designers and specifiers should be wary of such claims as there are performance limitations for using that amount of recycled content in certain products. Other common greenwashing terms include "recyclable" (is the product even worth recycling?) and broad claims such as "eco-friendly", "sustainable", and "green".

Truly sustainable products will often be certified by an official vetting organisation and clearly labeled. Such products would have been tested against a standardised testing framework that enables comparison between similar products. Other tools such as Environmental Product Declarations and Life Cycle Assessments provide useful data when assessing a product's environmental impact.

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REDUCING RISKS OF INADEQUATE SPECIFICATION

A significant safety risk to the general public is created when products, materials, or systems are used that do not adhere to the NCC. To lessen your risk, you can take a number of actions, including:

- **Understand the background of each product and its intended use.** Work only with reliable manufacturers and suppliers who go through rigorous testing in Australia and can offer any necessary proof of suitability.

- **Develop a thorough understanding of the certification requirements.** Industry associations have produced best practice and educational documents for their members, offering a variety of information on what to look for, request, and consider when specifying building products. This helps to ensure that the products used in the construction industry are reliable, compliant, and conforming.

- **Exceed minimum requirements wherever possible.** This applies across the range of performance and quality criteria, including sustainable, quality, durability, grade of material, ease of installation, ease of use, performance and design for disassembly. If a manufacturer's minimum exceeds the minimum Australia standard, it is always preferable to specify the higher-performing product to reduce risk.

- **To prevent product substitution, strengthen quality assurance procedures.** If a substitution is required, make sure it is done with care and will not compromise the development's quality or compliance.

STORMTECH: CERTIFIED FOR SUCCESS

For over a quarter of a century, Stormtech has set the benchmark for quality and performance in the Australian drainage industry. Stormtech drainage solutions are high performing, durable and built to last. Stormtech products are not just fully compliant, they in fact exceed the minimum design and performance requirements in the NCC, PCA and all Australian standards relevant to plumbing and drainage. When using Stormtech, architects, specifiers and end-users can have confidence that they are using products that will reduce the risk of non-compliance and its associated costs, inconveniences and penalties.

As Australia's leading linear drainage manufacturer and supplier, Stormtech is committed to providing the highest quality, expertly tailored drainage solutions for today's building projects. Boasting an unrivalled depth of experience in linear drainage solutions, Stormtech welcomes questions on product selection, code compliance and fault-free installation.

All Stormtech drains are Watermark certified for use in Australia. Stormtech is also the only drainage manufacturer with GreenTag Level A Gold certification, which is the product rating certification approved by the Green Building Council of Australia. Stormtech works proactively with plumbing advisory services to ensure drainage remains fully compliant with NCC regulations and Australian standards and exceeds the minimums to ensure not only fit for purpose, but reliability and durability.

REFERENCES

[1] Australasian Procurement and Construction Council. "Procurement of Construction Products: A guide to achieving compliance." APCC.
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[2] Australian Building Codes Board. "Manual for the WaterMark Certification Scheme." ABCB.
     https://watermark.abcb.gov.au/sites/default/files/resources/2020/Manual_for_the_WaterMark_Certification_Scheme.pdf (accessed 16 March 2023).

All information provided correct as of March 2023