



Fibreglass Reinforced Plastic (FRP / GRP) Structural Profiles

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ArchitEX™ FRP Structural Profiles are available in Isophthalic, Vinylester and Phenolic resin systems. Considerations such as corrosion, environment, temperature, fire resistance, smoke and smoke toxicity requirements must be taken into account, and will dictate which resin system is best suited for optimum performances over time.

With *incredibly high resistance* to chemicals exposure, **maximise your investment** without compromising on safety.

“Fire testing to AS/ISO 9239.1 (APL report P158950) showed that the results were CRF 10.9 kW/m² and Smoke Development Rate of 0 % -min. These results show that it would be suitable to be used as the floor covering to a non-sprinkler protected patient care area with in a hospital, where the occupant characteristics of occupants in this building would be more susceptible to smoke and fire spread then the population of a train.”

Eliminate corrosion concerns by selecting the best resin system for your application.

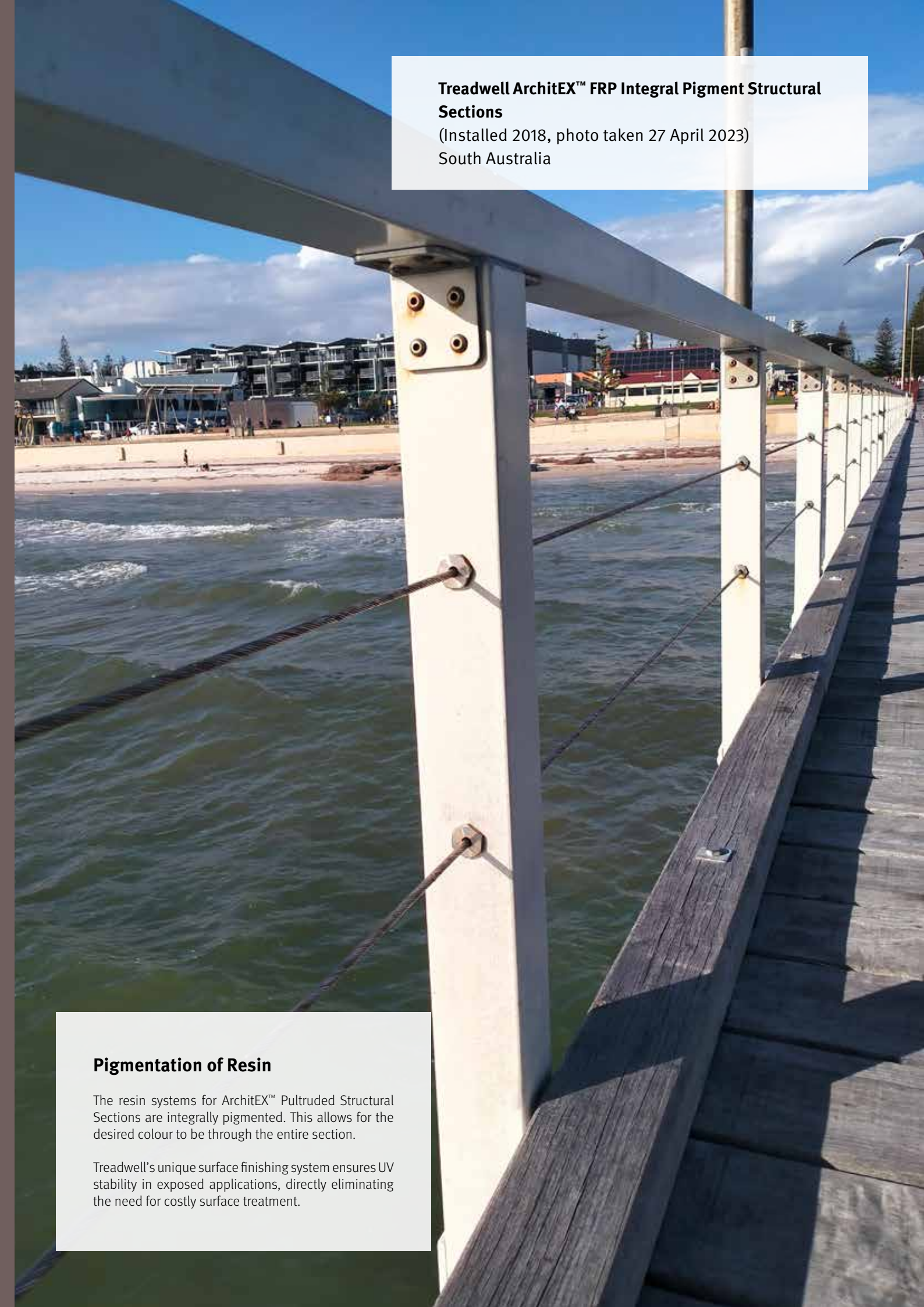
GLASS SYSTEMS:

The ArchitEX™ FRP Structural Profiles are manufactured using E-Glass Rovings. This range has the highest tensile strength with a reading of >500,000 psi.

UV RESISTANCE:

All ArchitEX™ FRP Structural Profiles are manufactured with UV Stabilisers. These stabilisers limit UV attack to 0.1% - Colour may fade over the lifetime of the structure, without compromising on structural integrity.





Treadwell ArchitEX™ FRP Integral Pigment Structural Sections

(Installed 2018, photo taken 27 April 2023)
South Australia

Pigmentation of Resin

The resin systems for ArchitEX™ Pultruded Structural Sections are integrally pigmented. This allows for the desired colour to be through the entire section.

Treadwell's unique surface finishing system ensures UV stability in exposed applications, directly eliminating the need for costly surface treatment.



Competitor's FRP Structural Sections

(Installed 2018, photo taken 27 April 2023)
South Australia

Experience has shown that using the natural resin colour and applying a paint coating can result in delamination of the coating from the structural section. This imagery demonstrates how easily a painted surface can delaminate in a marine environment.

This is caused by sand blasting (abrasion from wind). Having the necessary additives in the resin system (i.e. UV stabilisers and pigments) rather than in the paint coating provides stability within the section throughout its life.

This image shows how the natural resin yellows when subjected to the extreme UV exposure experienced in Australia. The white area shows the natural colour of the resin before it is exposed. The paint coating has flaked off.



DESIGN LIFE

Treadwell is able to offer solutions suiting a variety of design life requirements. For example, Treadwell premium V-Series® pultruded structural sections carry a fifty-five+ (55+) year (case proven) design life. NATA Laboratories show that with accelerated testing, the estimated design life exceeds one hundred (100) years.

MAINTENANCE

There is no maintenance requirements required with the ArchitEX™ range of structural sections.

We do, however, recommend that a regular product maintenance inspection regime is employed, and that connection hardware is checked periodically to prevent movement of sections. If sections are damaged due to vandalism and glass fibres are exposed, these simply need to be resealed with an EX-Series® Resin Seal Kit. Refer to EX-Series® Maintenance Manual for instructions.



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