

Test Results – Rigidity Aluminium ‘Anolight’ Corrugated Sheet (unperforated)

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Ceram Building Technology was requested to carry out loading tests on various corrugated and plain aluminium panels to determine their relative rigidity.

The following samples were received for testing:-

- GA SA10 Plain Anodised Sheet (1000mm x 500mm x 1.0mm material thickness)
- GA AA21 Anolight Sheet (1000mm x standard supply width x 1.0mm material thickness)
- GA AA22 Anolight Sheet (1000mm x standard supply width x 1.0mm material thickness)
- GA AA35 Anolight Sheet (1000mm x standard supply width x 1.0mm material thickness)
- GA AACP20 Anolight Sheet (1000mm x standard supply width x 1.0mm material thickness)

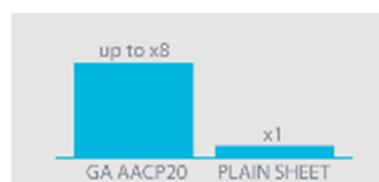
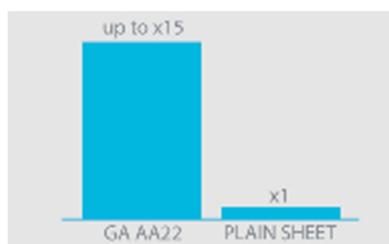
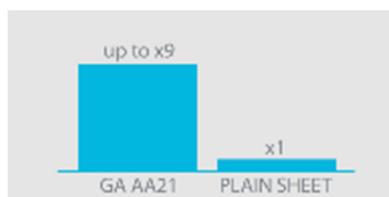
Test Method:

Each sample was simply supported at each end on timber battens which were clamped to steel support stanchions with a clear span of 850mm. To prevent the plain sheet from collapsing when minimal load was applied, a lead weight (weighing approximately 23kg) was placed on each end of the sample under test.

Once the sample was in the test rig a 150mm wide x 500mm long spreader board was placed centrally onto the sample and perpendicular to the sample’s major axis. A foam packer was placed between the sample and the spreader to eliminate point loading. Deflection was monitored at the centre of the span by means of a LVDT.

Load was applied by means of dead weights until either the sample collapsed or the maximum load (approximately 10.4kg or 102N) was achieved. Deflections were recorded at each load increment.

Test Results shown as a bar chart: Relative rigidity of corrugated sheets compared to plain flat sheet.



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The results for the relative rigidity test are also shown in the graph below.

Graph 1: Independent Test Results Aluminium Panels - Resistance to Deflection

