Test Results
Wall Cladding Panels (for interiors) Type WC4 with Pressure Engagement System

Test Methods:

Wind load tests were carried out on GA's Invisibly Fixed Framed Panels with Pressure Engagement System. The items tested consisted of a 900mm square perforated aluminium panel and the Invisibly Fixed Framed Panels with the Pressure Engagement System.

The panel under test was fixed to a timber frame on all four edges by means of the Pressure Engagement System. An air bag, connected to pressure control system via a manifold, was placed between the panel and reaction frame for the positive wind load, and between the rear of the panel and reaction frame for the negative wind load. Horizontal deflection at the centre of the panel was recorded by means of a cable transducer connected to a datalogger. Pressure was monitored by means of a digital manometer connected to the air inlet manifold.

Test Report No. 08772 issued by CERAM Research Limited (now known as Lucideon)

Table 1 (abridged version): **Positive Wind Load -Pressure Engagement System**

Load kPa	Deflection (mm)
0.00	0.00
1.01	15.30
2.00	23.17
3.01	29.07
5.01	38.23
6.94	44.48
9.05	51.60
11.00	57.59
12.99	63.67
15.00	70.51

Failure Load 15.00 kPa

Note: A pressure of 15.00 kPa equates to a wind speed of 156ms-1 (350mph)

Pressure was increased steadily in increments, with the deflection readings recorded at each increment, until failure occurred. The failure mode for the positive wind load tests was by detachment of the infill panel from the frame.

N.B. GA's Pressure Engagement System was originally called GA Posi-Grip Instant Access System. The Ceram Report refers to the original name for the System. The product and fixing method remains the same, and the results are therefore valid.

The negative wind-load test results (Table 2) are on the next page >

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Table 2 (abridged version): **Negative Wind Load-Pressure Engagement System**

Load kPa	Deflection (mm)
0.00	0.00
0.10	5.32
0.22	8.40
0.33	11.93
0.41	13.84
0.61	17.14
0.81	19.59
1.01	22.00
1.22	23.79
1.42	26.46

Failure Load 1.48 kPa

Note: A pressure of 1.48 kPa equates to a windspeed of 49ms-1 (110mph)

Pressure was increased steadily in increments, with the deflection readings recorded at each increment, until failure occurred. The failure mode for the negative wind load tests was by detachment of the pins from the plastic grommets.

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