



Product Used

Spaceloft™ 9251

Aerogel Interior Wall Insulation Reduces U-Values by 44% and Lowers Energy Use and Carbon Emissions

Aerogel solution is thin and quickly installed in UK apartment interiors

Fabrication Partner

The Proctor Group
(www.spacetherm.com)

Challenges

- Provide insulation for UK government program to upgrade insulation in public housing apartment units.
- The insulation needed to improve the units' U-values to save energy and reduce carbon emissions.
- The insulation also needed to be thin to minimize encroachment on living space in small rooms.
- Other requirements included water resistance, noise abatement, breathability, and easy installation.

Aerogel Solution

- The Proctor Group developed a double layer of **Spaceloft™ 9251** laminated to a building facing board.
- The insulation panel met the functional requirements with a total thickness of only 30 mm.
- Panels were easy to install, simply screwed onto the existing wall with no framing needed.

Benefits

- The Spaceloft 9251 solution cost-effectively met all energy targets. (Details on back.)
- The Spaceloft 9251 solution was three times thinner than the nearest installed competitive solution due to framing requirements.
- Installation was 50% faster than the nearest competitive solution.
- Overall, the Spaceloft 9251 was the best space/cost solution.

U-Value and Energy Savings From Installation of Spaceloft 9251*

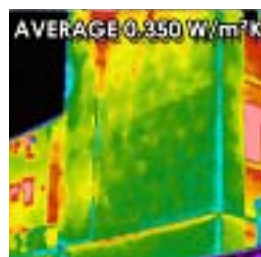
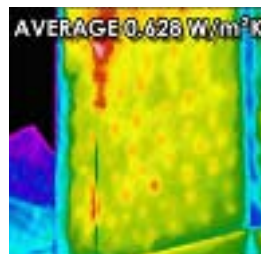
- **U-value reduction:** 0.28 W/m²k, (0.63 - 0.35 W/m²K), a 44% reduction
- **Energy reduction:** 900 kWhr/yr
- **Carbon emission reduction:** 400 kg/yr



Panels of Spaceloft 9251 laminated to building facing board were easily attached to apartment walls and around windows and other fixtures (above).

The result was dramatically reduced heat loss. Infrared photos at right show the outside of a wall without aerogel insulation (top) losing nearly twice as much heat as the wall with aerogel insulation (bottom).

Heat loss appears as red, orange, and yellow.



*Calculations performed using the SAP-approved software package Northgate Maxim 5.

