

Case Study

CONSISTENT ACOUSTIC PERFORMANCE FOR HIGH-DENSITY RESIDENTIAL DEVELOPMENTS

January 2026



Project name

Marsiling Peak I & II

Products used

Knauf Insulation Internal Partition Folded Batt 50mm x 16kg/m³

Building type

Public Housing Apartment

Application

Internal Walls

Building / Installer

Housing & Development Board (HDB)

Main Contractor

Sanchoon Builders Pte Ltd

Build on us.



Declare.





The Marsiling Peak I & II development in Woodlands is part of Singapore's ongoing public housing programme by the Housing & Development Board (HDB), aimed at creating comfortable, efficient, and sustainable living environments for residents. As a large-scale, high-density residential project, it required an internal wall insulation system that could enhance consistent acoustic comfort while meeting strict installation standards and supporting efficient site operations. With tight construction timelines and a significant volume of partition walls, the contractor sought an insulation solution that could improve installation productivity, minimise off-cut waste, and contribute meaningfully to the project's sustainability goals

What was the challenge?

A key challenge in a project of this scale was maintaining installation efficiency while ensuring consistent acoustic performance across the development. The high-density residential layout of Marsiling Peak I & II required each partition to reliably achieve a minimum STC 45 acoustic rating. This placed additional emphasis on the accuracy, uniformity, and quality control of insulation placement across all units. Ensuring consistent cavity coverage and acoustic performance under such demanding site conditions represented a significant operational and technical challenge for the project team.

What was the solution?

The Knauf Insulation Internal Partition Folded Batt 50mm x 16kg/m³ was specified for the acoustic wall insulation as part of the Knauf internal wall system. Pre-cut to meet standard wall heights in Singapore, the Partition Folded Batt is designed to fit directly into the metal stud cavity as a single batt, eliminating the need for measuring or trimming on site. As part of the integrated Knauf Internal Partition wall system, the insulation works in tandem with Knauf Gypsum components, giving contractors a coordinated solution supported by clear technical documentation and on-site guidance. This approach streamlines installation, reduces off-cut waste, and contributes to more consistent, cleaner work sites. The compression-packed, folded format further improves logistics by simplifying transport and handling across multiple floors. When installed together with Knauf Gypsum 19mm ImpactStop Board (HD), the friction-fit batt maintains continuous cavity coverage, supporting the acoustic requirements of the project, including the minimum STC 45 performance target.

Why Knauf Insulation?

Specified as part of the integrated Knauf partition wall system, the selection of Knauf Insulation glasswool allowed the project contractor to take advantage of the benefits offered by ECOSE® Technology. A sustainable, plant-based binder free of added formaldehyde, products featuring ECOSE® are low in Volatile Organic Compounds (VOCs), low-carbon, and free from chemicals found on the DECLARE 'Red List'. With ECOSE® contractors can be confident they are selecting products that deliver the proven sustainable performance required to meet their sustainability goals. All Knauf Insulation glasswool products are backed by product-specific Environmental Product Declarations (EPDs), demonstrating the product's environmental performance and impact across its entire lifecycle, and are globally certified with Eurofins Indoor Air Quality Gold Standard and GreenTag Level A Certification. Further consolidating our commitment



to a more sustainable built-environment, Knauf Insulation is a proud member of the Singapore Green Building Council.

This project highlights how integrated insulation systems can play a meaningful role in supporting sustainable construction practices by minimising material wastage, improving logical efficiency, and enabling more controlled, repeatable installation across large-scale HDB developments.

About Knauf Insulation Internal Partition Folded Batts

The Knauf Insulation Partition Folded Batt range includes a selection of densities and R-values to provide builders, designers, and architects the opportunity to choose the best acoustic and thermal performance for their project. The folded batt makes installation easier, faster, and more efficient, as it fits the most common framing cavity with no extra measurements required.

- > **Sound absorbing**
- > **Non-combustible**
- > **Compression packed:** reduced carbon footprint with fewer deliveries
- > **Superior Handling:** consistent quality materials that cut easily and install fast
- > **No added formaldehyde** or phenol
- > **Odourless**
- > **High thermal performance:** year round comfort



ECOSE® Technology

A unique plant-based binder which contains no added formaldehyde or phenol. It is made from natural raw materials that are rapidly renewable, and makes our insulation soft to touch and easy to handle.



Declare & Red List Free

Knauf Insulation's glasswool, free from Red List materials and certified for excellent air quality, features up to 80% recycled content and ECOSE® Technology, offering safer, eco-friendly building solutions.



DriTherm® Technology

A silicone treatment that is added during manufacture to upgrade the moisture resistance of the glasswool insulation.



For more information about Knauf Insulation insulation products, visit:
www.knauf.com