

Case Study

Transforming IMU Campus with High-Performance Acoustic Insulation

October 2024



Project name

International Medical University (IMU)
Learning, Innovation and Technology Block (LIT)

Project Location

Bukit Jalil Technology Park, Bukit Jalil, Malaysia

Project type

Refurbishment of a four-storey institution campus

Project Insulated Wall Area

Approximately 1,800m²

Specified/Architect

Kirk AUD Sdn Bhd
KZF Architects Sdn Bhd

Main Contractor

Superb Impression Creation Sdn Bhd

Build on us.





IMU, a premier private learning institution located in one of Malaysia's Technology Parks, is undergoing a substantial upgrade to meet the dynamic educational needs of its students. When completed, this four-storey campus will feature state-of-the-art facilities, including lecture halls, meeting rooms, social spaces, a library, conference rooms, and offices. The goal of this project is to enhance the learning environment by significantly improving the acoustic performance and energy efficiency of the campus buildings. Central to this upgrade was the specification of the Knauf partition wall system with Knauf Insulation glasswool as the mineral wool infill, providing a comprehensive solution for superior sound absorption, thermal comfort, and non-combustibility, essential for an optimal educational setting.

For institutions like IMU, where energy costs are substantial, implementing energy-efficient solutions is essential for achieving high performance. The transition from conventional glasswool products to Knauf Insulation glasswool was aimed at delivering superior standard of sound absorption and thermal efficiency, while reducing energy consumption, leading to considerable cost savings and promoting a more sustainable campus environment.

What was the challenge?

The IMU Campus Refurbishment project sought to upgrade the acoustic performance of its campus buildings while maintaining energy efficiency and reducing installation complexity. A critical challenge was to complete the refurbishment within a tight timeframe and budget while achieving high Sound Transmission Class (STC) ratings to ensure an optimal learning environment for up to 1,000 students. Addressing the issues with conventional glass mineral wool insulation, such as excessive dust, itchiness during installation, and the cumbersome process of pin fixing and securing, was essential.

What was the solution?

Knauf Insulation Glasswool was selected for its superior performance and ease of installation. Unlike conventional products, Knauf Insulation Glasswool is uniquely designed without the need for additional fixing and significantly simplifying the installation process. Its advanced compression packaging allows up to ten times more insulation per pack, reducing transportation and handling requirements.



The product's softness, low dust, and easy cutting enhance efficiency. The unfaced roll product, with 600mm width, fits seamlessly into metal frame cavities, minimizing extra cutting and adapting well to wall heights from 3.9 to 5.5 meters. This makes installation faster and more efficient, even with noggings for high walls.

Why Knauf Insulation?

The IMU Campus Refurbishment project specified the Knauf partition wall system, incorporating Knauf Insulation as the glasswool infill, achieving wall system performance with STC ratings of 35 – 48 dB. This comprehensive 'one company solution' includes Knauf Sheetrock Standardcore, Knauf Sheetrock Impactstop with Rondo metal framing, and Knauf Insulation Partition Roll, 16kg/m³ density, 50mm thickness, and 600 x 15000mm.

Knauf Insulation Glasswool delivers outstanding acoustic performance and thermal efficiency, essential for the comfort of educational environments with high indoor occupancy. It optimizes energy use for air-conditioning, enhancing overall comfort while contributing to significant energy savings.

Made from up to 80% recycled glass and featuring ECOSE® Technology—a sustainable, plant-based binder free of added formaldehyde—Knauf Insulation Glasswool meets the highest standards for health and environmental safety. Certified as “Red List Free” by DECLARE, Eurofins Indoor Air Quality with Gold standard, and achieving Global GreenTag™ Level A certification, it underscores Knauf Insulation’s commitment to sustainability, transparency, and performance.



“Knauf Insulation is way less itchy compared to what we used to install. It’s super-soft and easy to handle. It makes the installation process much faster and simpler.”

– Superb Impression Creation Sdn Bhd



About Knauf Insulation Partition Roll

Knauf Insulation Partition Roll with ECOSE® Technology will absorb the transfer of unwanted sound from outside to inside the building. In addition to sound absorption, it will improve the thermal comfort and energy efficiency of the building in which it has been installed thus keeping it cool in summer and warm in winter.

Knauf Insulation Partition Roll range includes a selection of densities and R-values to provide builders, designers, and installers the opportunity to choose the best acoustic and thermal performance for their project.

Benefits of Knauf Insulation Partition Roll:

- › TwinTech® – smooth finish on both sides
- › DriTherm® Technology for excellent water resistance
- › Sound absorbing
- › High thermal performance – year round comfort
- › Saves energy – lower energy bills
- › Non-combustible
- › No added formaldehyde or phenol
- › Odourless
- › Naturally brown – no artificial colours added
- › Superior Handling
- › Compression packed – more product per pack, more product per delivery, reduce carbon footprint



ECOSE® Technology

A unique bio-based binder which contains no added formaldehyde or phenol. It is made from natural raw materials that are rapidly renewable, is 70% less energy intensive to manufacture than traditional binders, and makes our insulation soft to touch and easy to handle.



TwinTech® Technology

An advancement in insulation manufacture – the dual forming technique enables thicker products for evolving building code requirements and ensures there is a smooth finish on both sides of the insulation for optimal product handling and appearance.



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

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