Introducing QuadCore™ Technology

It’s all in the gray cells – the smarter way to build for better fire, thermal, health & wellness and warranty.
It’s all in the gray cells...

QuadCore™ is Kingspan’s new hybrid insulation core technology with a unique formulation that creates microcells with unrivaled thermal performance, superior fire protection and unmatched health & wellness certification.
Introducing QuadCore™ Technology

Kingspan Insulated Panels

Unrivaled Thermal Performance

30-Year Thermal Warranty

Superior Fire Protection

Unmatched Health & Wellness Certification
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Unrivaled Thermal Performance

Certified to be the best.

The class-leading R-value of R-8.0 per inch means QuadCore™ Technology is certified as the most thermally efficient closed cell insulation core on the market.

11% better than high-quality PIR

Up to 60% better than PUR

Around twice the performance of rock mineral fibre

Thermal resistance comparison assumes same thickness of insulation material.

1  Thermal resistance comparison of each product is based against polyurethane at R-5.0.  
2  ASHRAE Book of Fundamentals 2013.  
3  Thermal resistance R-values quoted at 75°F.
Delivering Low Energy Buildings.

With an ‘envelope first’ design approach, the superior R-value of a QuadCore™ envelope also has the potential to reduce HVAC system sizing as well as energy usage and carbon emissions.
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Superior Fire Performance

Certified to the highest insurance and regulatory standards.

The hybrid nature of QuadCore™ Technology delivers a range of unique improvements in fire performance.

FM 4882 for smoke sensitive occupancies
Kingspan insulated metal panels (IMPs) featuring QuadCore™ Technology were the first closed-cell insulated panels in the world to achieve FM 4882 certification (the FM Global insurance standard for smoke sensitive occupancies).

Improved Fire Resistance Ratings
Lower smoke, higher ignition point, less heat released – these are all key fire performance attributes that make IMPs featuring QuadCore™ Technology far superior than conventional IMPs.

Images shown left are from an EN11925-3 comparative test using a roofer’s torch fire source. The lower smoke emissions of QuadCore™ can be clearly seen. See the video below for these independent tests and to see the extensive suite of independent tests that QuadCore™ is subjected to from around the world.

For a full list of Kingspan FM and other fire compliance certifications, please visit kingspanpanels.com
Full Scale Testing Compliance

Kingspan IMPs featuring QuadCore™ Technology have been tested to NFPA 285 and CAN/ULC-S102 for full compliance and peace of mind.

Up to 85% lower smoke developed index (ASTM E84)
Up to 44% higher ignition temperature (ASTM D1929)
20% less heat released (ASTM 1354)

Test set up – Kingspan insulated panels installed in a full scale NFPA 285 test.
During the test a fire source simulates fire coming out of a window opening.
End of test showing the insulated panel system does not contribute to fire spread.
Unmatched Health & Wellness Certification

It’s about the human environment, not just the built environment.

QuadCore™ Technology is paving the way as the only insulated metal panel core in North America to achieve a trusted range of health & wellness certifications*.

Certified Low VOCs
QuadCore™ Technology is independently certified to the highest levels for low VOC emissions, ensuring that it is not harmful to building occupants and does not adversely impact indoor environment quality (IEQ). Plus, certification ensures compliance with California’s CDPH Standard Method Section 01350 and can provide credits to a number of building rating systems.

Rating Credits:
- LEED: Low emitting materials.
- WELL: Feature 04 (VOCs).

Material Transparency & Disclosure
QuadCore™ Technology is certified not to contain any Banned List chemicals above the relevant thresholds. Following an ABC-X assessment, it is also certified not to contain chemicals known or suspected to cause cancer, birth defects, genetic damage, or reproductive harm (CMRs).

Rating Credits:
- LEED: (MR) Building product disclosure and optimization.
- Living Building Challenge: Contributes to the LBC Materials Petal.
- WELL: Mind Feature 97, Material Transparency.

*Correct at date of publishing.
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Red List Free

The Red List contains the 20 worst-in-class materials prevalent in the building industry - commonly-used chemicals which pollute the environment, and bio-accumulate up the food chain until they reach toxic concentrations, harming those who consume them. The Red List Free classification means that none of the chemical ingredients present in QuadCore™ Technology are included on the Red List at levels greater than or equal to 100 ppm.

Rating Credits:
- Living Building Challenge: Contributes to the LBC Materials Petal.
- WELL: Feature 25 (HFR-free).

EPD analysis is currently underway and will be available in due course. Please contact Kingspan for the latest information.
30-Year Thermal Warranty

The industry’s longest thermal performance warranty.

The inimitable science behind QuadCore™ Technology and comprehensive independent third-party testing has delivered the industry an unparalleled 30-year thermal performance warranty.
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For the product offering in other markets please contact your local sales representative or visit www.kingspanpanels.com

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