

Insulated Panel Systems
North America



Introducing QuadCore® Technology

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



POWERED BY
QuadCore®
TECHNOLOGY



It's all in the gray cells...

QuadCore® is Kingspan's new hybrid insulation core technology with a unique formulation that creates microcells with exceptional thermal performance, superior fire protection and unmatched health & wellness certification.

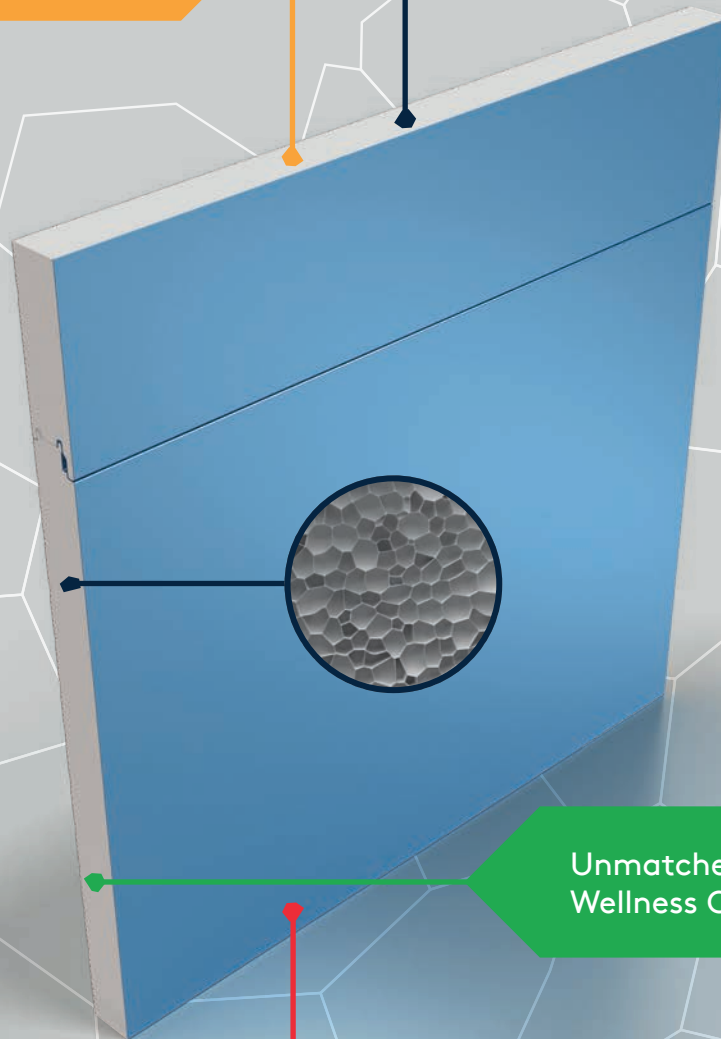




Exceptional Thermal
Performance



30-Year Thermal
Warranty



Unmatched Health &
Wellness Certification



Superior Fire
Protection

POWERED BY
QuadCore®
TECHNOLOGY

Exceptional Thermal Performance



Certified to be the best.

The highly efficient R-value of R-8.0 per inch means QuadCore® Technology is certified as one of the most thermally efficient closed cell insulation cores on the market.

11%

better than
high-quality PIR

Up to 60%

better than PUR

Around twice

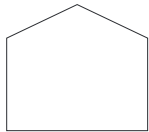
the performance of
rock mineral fiber

Thermal resistance comparison assumes same thickness of insulation material.

UP TO

60%

BETTER
THERMAL
RESISTANCE¹

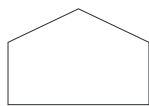


Kingspan
QuadCore®
Panels
R-8.0 per inch³

UP TO

44%

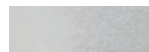
BETTER
THERMAL
RESISTANCE¹



Kingspan
PIR Panels
R-7.2 per inch³

Reference
Point
Polyurethane
R-5.0 – R-7.1
per inch²

EPS
R-3.8 – R-4.3
per inch²



UP TO
24%
LESS
THERMAL
RESISTANCE¹

Rock Mineral
fiber
R-3.6 – R-4.3
per inch²



UP TO
28%
LESS
THERMAL
RESISTANCE¹

Glass fiber
R-3.2 – R-4.3
per inch²



UP TO
36%
LESS
THERMAL
RESISTANCE¹

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 exceptional R-value of a QuadCore® envelope also has the potential to reduce HVAC system sizing as well as energy usage and carbon emissions.

Superior Fire Performance

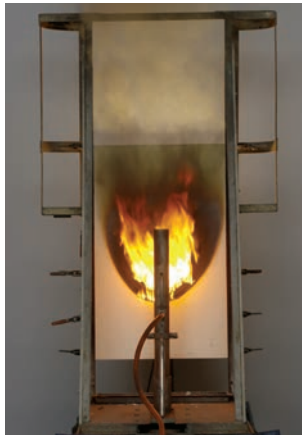


Certified to the highest insurance and regulatory standards.

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).



Non-insurer approved PIR



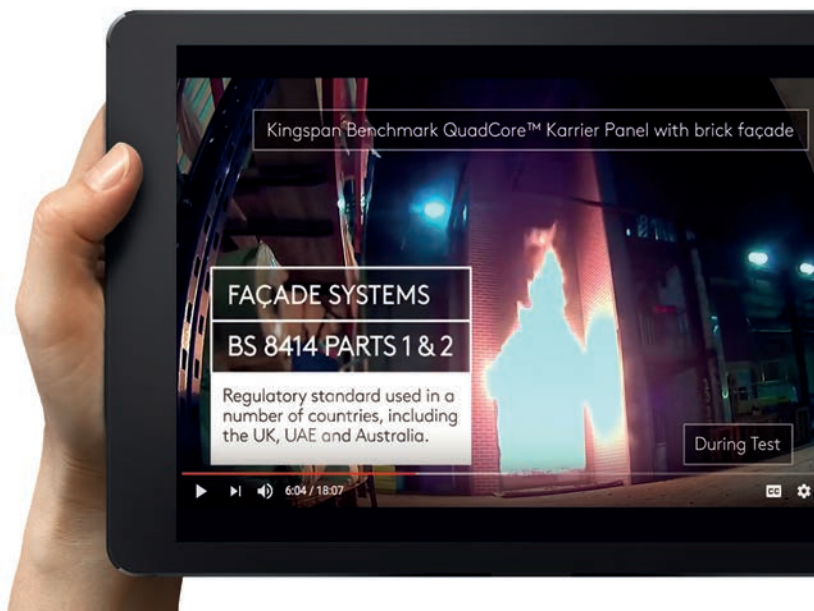
QuadCore® Technology

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

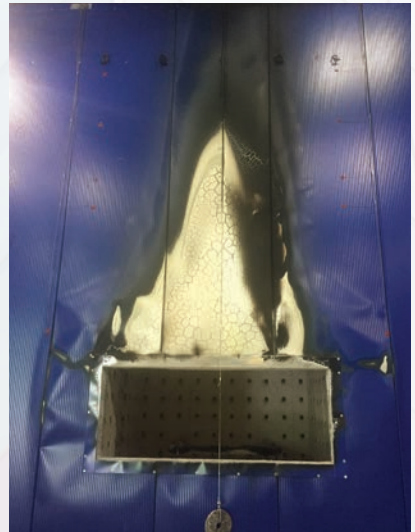
NFPA 285 and CAN/ULS-S102 compliant systems featuring QuadCore® Technology are available for peace of mind.



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.

Up to 85%
lower smoke developed
index (ASTM E84)

Than industry averages

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 v4 and v4.1: All BD+C and O+M.
- WELL: Feature 04 (VOCs).



Material Transparency & Disclosure

QuadCore® Technology has achieved a C2C Certified Material Health Certificate™ Silver classification and is certified not to contain any Banned List chemicals above the relevant thresholds, including halogenated flame retardants (HFRs). 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). With this certification, products powered by QuadCore® Technology can be considered to be Red List Free.

Rating Credits:

- LEED v4 and v4.1: All BD+C and O+M.
- Living Building Challenge: Contributes to the LBC

Materials Petal.

- WELL: Mind Feature 97, Material Transparency.

C2C Certified Material Health Certificate™ is a trademark of the Cradle to Cradle Products Innovation Institute.

*Correct at date of publishing.



Environmental Product Declaration (EPD)

The third-party verified EPD for QuadCore® Technology tells the life cycle story in a single, written report, focusing on information about the product's environmental impacts, such as global warming potential (GWP), smog creation, ozone depletion potential (ODP), and water pollution.

Rating Credits:

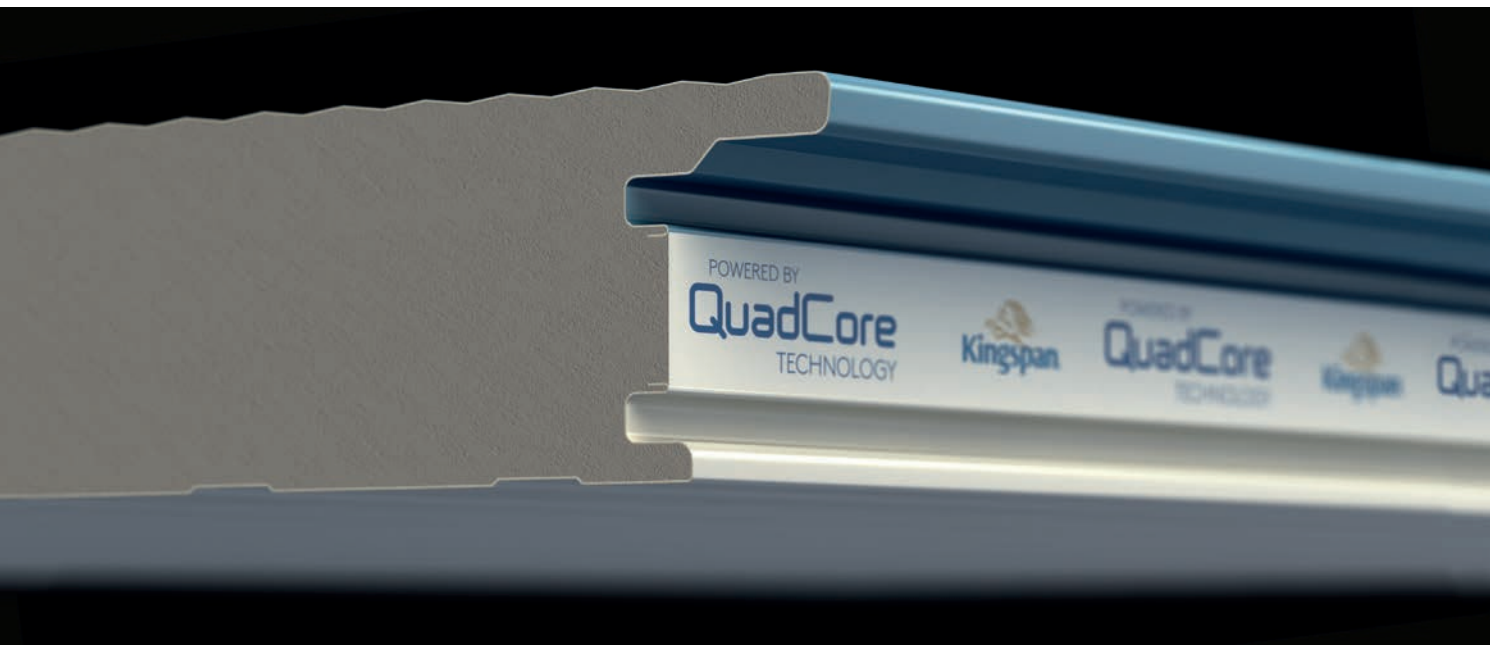
- LEED v4 and v4.1: All BD+C and O+M.

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.





USA

DeLand, FL
877-638-3266

Modesto, CA
800-377-5110

Columbus, OH
888-332-5862

info.NA@kingspanpanels.com
www.kingspanpanels.us

Canada

Caledon, ON
866-442-3594

Langley, BC
877-937-6562

info.NA@kingspanpanels.com
www.kingspanpanels.ca

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