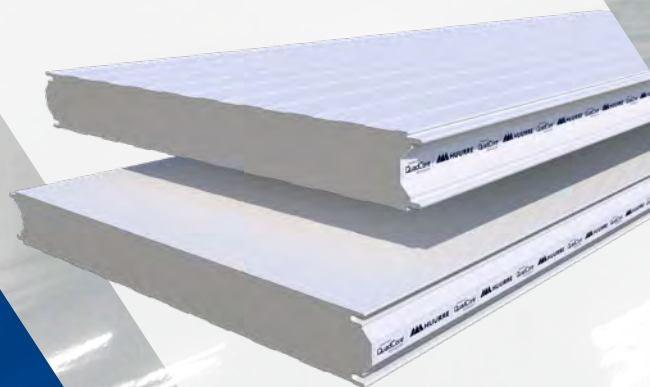


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TECHNOLOGY



HI-QuadCore 2.0 FK DUAL

**High-performance
insulating panel with
QuadCore 2.0 insulating
core for partitioning**



HI-QuadCore 2.0 FK DUAL



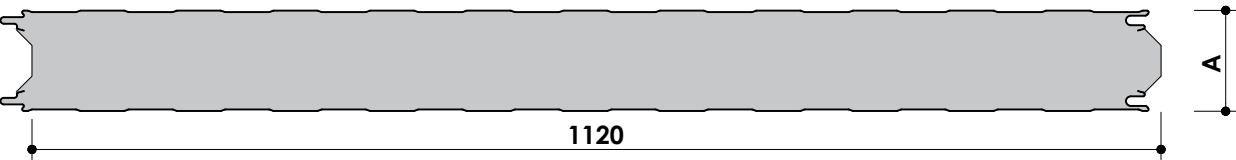
Description and applications

Insulating panel with new QuadCore 2.0 rigid insulation core, which provides high thermal insulation, high fire resistance and durability.

Certified panel for use both indoors and outdoors, designed for applications requiring a high degree of insulation and watertightness: food industry, cold storage rooms, laboratories, clean rooms, etc.

The HI-QuadCore 2.0 FK DUAL panel is suitable as a fire compartmentation element in case of fire in freezing and refrigeration facilities, logistics and food industry. The fire resistance achieved depends on the thickness of the panel.

Dimensions, mass and thermal properties



| | | | | | | |
|------------------------------------|---------------------------------------|---------------------------------|-------|-------|-------|---------|
| Useful width | 1.120 mm | | | | | |
| Manufacturing lenght | Standard | 2,0 a 13,5 m | | | | |
| | Special | 13,5 a 18 m (special transport) | | | | |
| Declared thermal conductivity | 0,019 W/mK (considering an aged core) | | | | | |
| Total thickness (A) | 80 | 100 | 150 | 200 | 230 | (mm) |
| Mass ¹ | 12,40 | 13,34 | 15,69 | 18,04 | 19,45 | (kg/m²) |
| Thermal transmittance ¹ | 0,24 | 0,19 | 0,13 | 0,09 | 0,08 | (W/m²K) |
| Thermal resistance | 4,33 | 5,38 | 8,01 | 10,64 | 12,22 | (m²K/W) |

NOTA: (1) For 0.5/0.5mm (int/ext) and 1,120 mm wide sheets. Please consult us for other options.

High-performance insulating panel with QuadCore 2.0 insulating core for partitioning

Fire safety

Reaction-to-fire classification

EUROCLASE B-s1,d0

B: Very limited contribution to fire and will not lead to flashover¹

s1: Reduced or no smoke generation

d0: No inflamed droplets / particles

(1) Best possible classification possible for an organic type material.
Reaction to fire determined according to UNE-EN 13501-1:2019.

Fire resistance EI⁽¹⁾ (min)

Fire resistance table, prepared in accordance with classification standard EN 13501-2:2023, with no need for additional sealing at the joint, unless specifically indicated (*). Consult the specific installation conditions for each solution.

| Panel thickness (mm) | Construction unit (panel orientation) | Fire resistance classification | Integrity (E) / thermal insulation (I) | Maximum span (m) |
|----------------------|---|--------------------------------|--|------------------|
| 80-230 | Wall (Panel in vertical orientation) | Ei 30 | 46/35 | 3 |
| 80-230 | | Ei 20 | 46/35 | 7,5 ¹ |
| 100-230 | | Ei 30 | 39/35 | 4 |
| 150-230 | | Ei 60 | 67/67 | 4 |
| 150-230 | | Ei 45 | 67/67 | 7,5 ¹ |
| 200-230 | | Ei 90 | 93/92 | 4 |
| 200-230 | | Ei 60 | 93/92 | 7,5 ¹ |
| 230 | | Ei 120* | 245/136 | 3 |
| 100 | Self-supporting roof | Ei 30 | 32 / 32 | 4 |
| 150 | | Ei 45 | 69 / 58 | 8 |

(1) With extension of the application of results in accordance with the EXAP EN 15254-5:2018 standard.

Tables of energy loss through the enclosure

The following table shows the energy losses through the cladding (W/m2), depending on the thickness of the panel and the temperature gradient between the two sides of the panel.

| Panel thickness (mm) | | 80 | 100 | 150 | 200 | 230 |
|---|----|-------|-------|-------|------|------|
| U (W/m² °C) | | 0,25 | 0,20 | 0,13 | 0,10 | 0,08 |
| Temperature gradient between the two enclosure faces (°C) | 10 | 2,37 | 1,90 | 1,26 | 0,90 | 0,83 |
| | 15 | 3,56 | 2,85 | 1,89 | 1,35 | 1,25 |
| | 20 | 4,74 | 3,80 | 2,52 | 1,80 | 1,66 |
| | 25 | 5,93 | 4,75 | 3,15 | 2,25 | 2,08 |
| | 30 | 7,11 | 5,70 | 3,78 | 2,70 | 2,49 |
| | 35 | 8,30 | 6,65 | 4,41 | 3,15 | 2,91 |
| | 40 | 9,48 | 7,60 | 5,04 | 3,60 | 3,32 |
| | 45 | 10,67 | 8,55 | 5,67 | 4,05 | 3,74 |
| | 50 | 11,85 | 9,50 | 6,30 | 4,50 | 4,15 |
| | 55 | 13,04 | 10,45 | 6,93 | 4,95 | 4,57 |
| | 60 | 14,22 | 11,40 | 7,56 | 5,40 | 4,98 |
| | 65 | 15,41 | 12,35 | 8,19 | 5,85 | 5,40 |
| | 70 | 16,59 | 13,30 | 8,82 | 6,30 | 5,81 |
| | 75 | 17,78 | 14,25 | 9,45 | 6,75 | 6,23 |
| | 80 | 18,96 | 15,20 | 10,08 | 7,20 | 6,64 |

NOTE: In blue colour, maximum recommended losses through the enclosure in negative chambers (max. 6 W/m²)
In yellow colour, maximum recommended losses through the enclosure in positive chambers (max. 8 W/m²)

Insulating core QuadCore®

QuadCore® is the new self-formulated hybrid insulating core technology, manufactured by HUURRE. The QuadCore® technology, together with HUURRE's expertise and know-how, helps enhance fire protection in buildings and facilities, while also improving energy efficiency and delivering a positive impact on the environment.

The secret lies in the Grey Matter

Thanks to its grey microcell structure, the QuadCore® core offers outstanding performance in thermal insulation, mechanical strength, and durability.

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Thinner, lighter, better.

The superior thermal performance of QuadCore® allows for a slimmer envelope, providing greater interior space, improved construction efficiency, and a lower environmental impact.



Declared thermal conductivity of Huurre products considering the aged core.

DUAL, integrity + insulation

DUAL means compartmentation. DUAL means resistance.

DUAL is the new brand from Kingspan Insulated Panels, bringing together insulated panels with a high level of certified fire resistance.

DUAL offers a wide variety of systems, with different thicknesses and installation conditions.



**NOT ALL
INSULATION
IS THE SAME...**

"Not all insulation is the same" is our training campaign on the different types of insulation and their behavior in the event of fire. If you are interested, please ask us for more information about the upcoming training sessions.

Fire resistance and reaction to fire

The two key parameters for determining the safety of a panel in the event of a fire are its reaction to fire and its fire resistance.

The reaction characterizes the panel's response when exposed to fire (combustibility, flammability, gas emission, and dripping). This is important in the early stages of a fire because it determines how the panel contributes to the development of the fire.

El 90. Certified fire resistance of up to 90 minutes without the need for joint sealing (thickness equal to or greater than 200 mm). Please refer to the installation instructions.

When the fire is fully developed, the fire resistance of the panel is critical, as it must maintain its function as a partition, fighting against the fire and preventing its spread.

DUAL panels have an excellent reaction to fire, so they do not contribute to its spread, and very high resistance, limiting fire propagation and offering maximum protection to the building and its occupants.

Please refer to the fire resistance ratings in the table. If you have any further questions, do not hesitate to contact us.

QuadCore 2.0 core benefits



High thermal efficiency

The QuadCore 2.0 insulation core has a high thermal performance, with an aged thermal conductivity of only 0.019W/mK.



High environmental sustainability

The use of Huurre's range of HI-QuadCore 2.0 panels can enable reduce operational energy loss and reduces associated transport emissions.



High thermal efficiency

The QuadCore 2.0 core has a higher fire performance, providing a better protection in case of fire.



High durability

By not absorbing moisture, the performance of the panel does not diminish over time, providing high durability.



We are here to help. Contact us:

Assistance with planning and specifications:



Product
selection



Detailed accessory
specifications



Construction
details



Assistance with
calculating
mechanical strength
and panel failure
modes



Technical
specification
documents



BIM objects



Technical
installation training

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