



Quad-Deck

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Building made faster, smarter and stronger

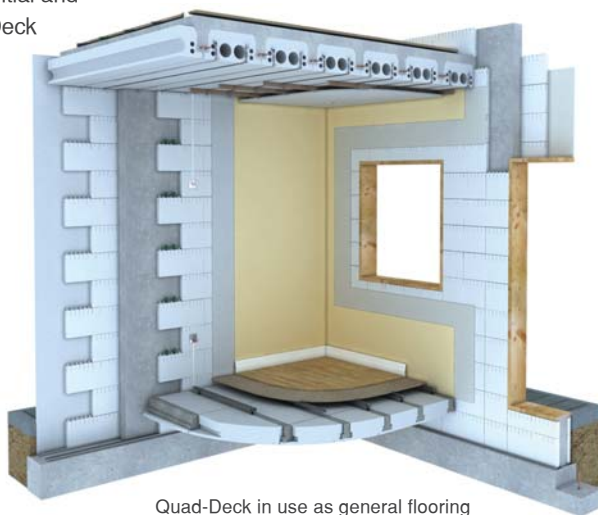
Quad-Deck is a versatile concrete forming system that makes light work of constructing suspended floors and deck roofs.

System

An easy to handle, energy efficient system ideal for use in both residential and commercial builds, Quad-Deck is quick to install and offers the strength of reinforced concrete with reduced material and labour costs.

Each panel is made of Expanded Polystyrene (EPS) with two integrated steel beams moulded inside to create formwork for the support of concrete, reinforcement and construction loads.

A self-supporting joist and deck forming system, Quad-Deck is a fraction of the weight of other precast floor systems and uses approximately 40% less concrete than flat suspended slabs. Ready to install panels are delivered on site, and can be easily unloaded and handled into position without the need for specialist lifting equipment.



Quad-Deck in use as general flooring and working with ICF Structural Frame

Why use Quad-Deck?

The Quad-Deck system is fast and flexible. It comes in easy to handle, lightweight forms that typically require less shoring than traditional concrete formwork systems and can reduce structural requirements for foundations and walls.

Buildings constructed with Quad-Deck provide long term durability and sustainability; heating and cooling costs are reduced due to the thermal mass properties of the material, making it a good option for passive solar designs. Under floor heating and living green roofs are also well supported by the Quad-Deck system.

A concrete home or building promotes improved indoor air quality, keeping out allergens such as dust and pollen, and prohibits the growth of mould or mildew. It also offers inherent sound proofing, absorbing internal and external noise to provide a quieter home or work environment.

Features

1 - Energy Efficiency

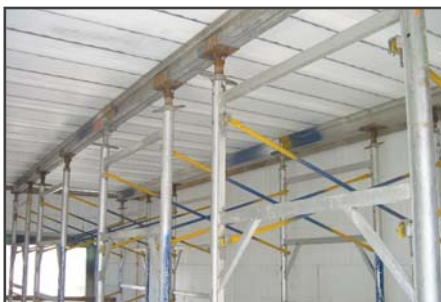
The long term energy saving benefits of the Quad-Deck system are very significant with U-Values from 0.35 to 0.17, less HVAC (heating, ventilation and air conditioning) requirements and more consistent indoor temperatures. The thermal mass of the concrete combined with the EPS insulation locks in warmth in the winter and cools during summer.

2 - Form options

Forms are available in seven different thicknesses - from 178 to 343mm, creating concrete beam depths of between 127 to 267mm. Quad-Deck can be used to achieve clear spans of approximately nine and a half metres with low live loads and regular construction methods. For longer spans, other secondary structural support may be required.

3 - Structural Integrity

The structural integrity of the Quad-Deck system is such that when combined with reinforced concrete walls, it can withstand hurricane force winds, fire and flooding. It has been fire rated for up to four hours, having been tested to EU standards. The manufacture of Quad-Deck does not generate HFC or CFC gases and in terms of sustainability, concrete based buildings have the potential to last for centuries and can be fully recycled.



Floors are supported for concrete pouring and curing



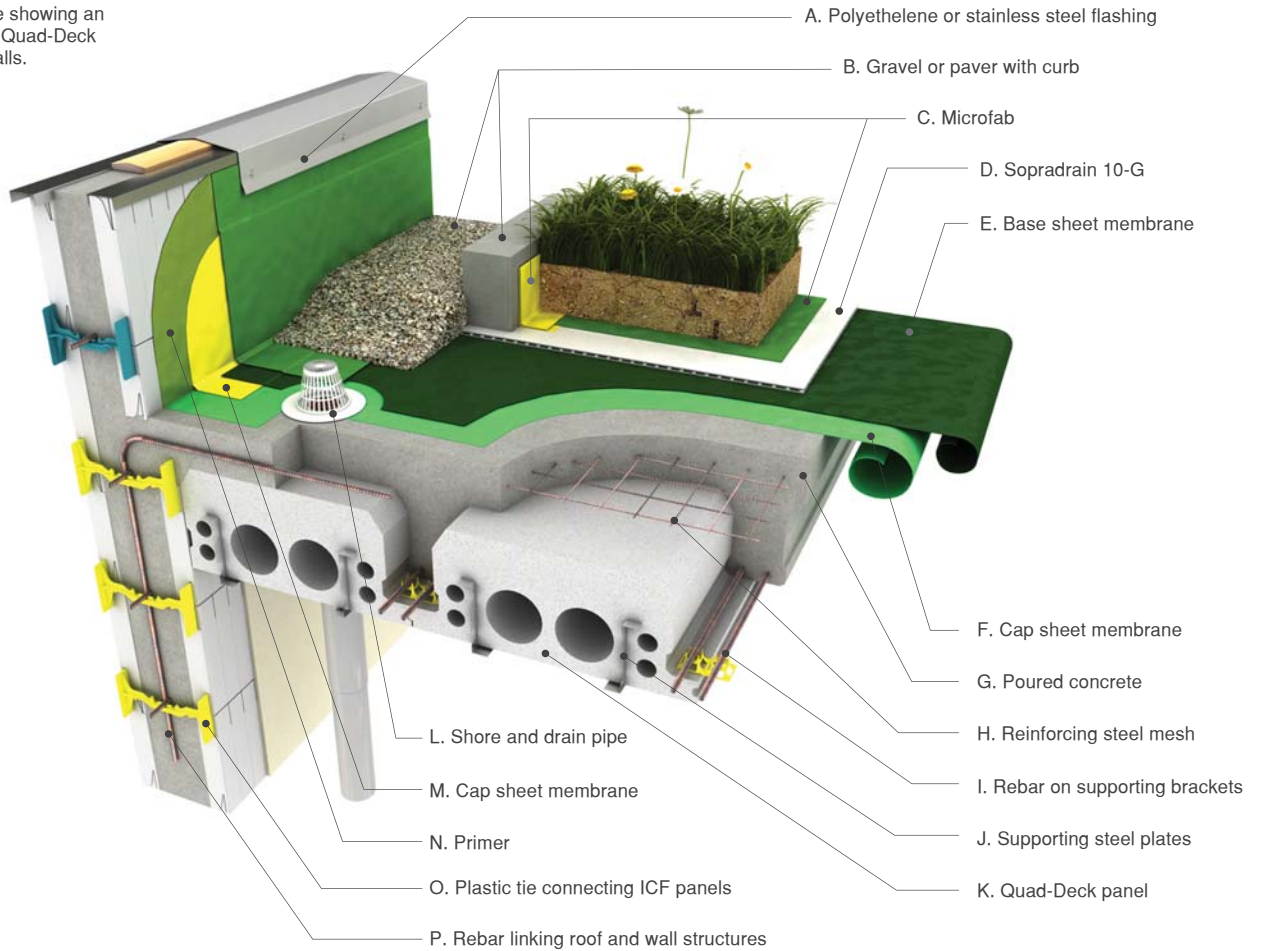
Horizontal and vertical structures are stitched with right angled rebar



Cutting into Quad-Deck panels is quick and easy with a hot wire

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Illustrated sample showing an enviro roof using Quad-Deck and ICF panel walls.



Benefits

4 - Fast & Flexible

- Delivered to site ready to install
- Easy to handle, lightweight forms
- Less propping required
- No forms to be stripped
- Up to 9.5m free spans
- Forms available in thicknesses of 178mm to 343mm
- Slab thickness from 45mm to 152mm

5 - Lightweight

- Lighter structure - uses less concrete and steel compared to traditional concrete slab
- Reduces floor mass dead load by up to 40%
- Reduces structural requirements for foundations and walls

6 - Durable & Sustainable

- Long term building durability - lifecycle measured in centuries
- Minimal site waste
- Lower total resource consumption
- Less steel and concrete needed

Read more at:

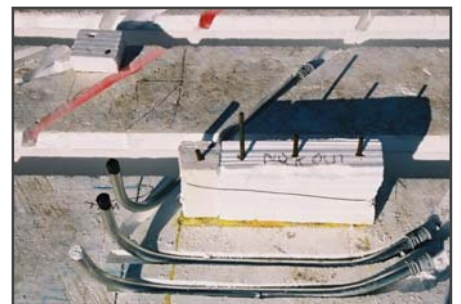
www.charconcs.com/quad-deck



Slots are removed for cross beams



Drain and service pipe work can be easily placed through the panels



Electrical and plumbing works are placed into Quad-Deck with capped ends ready for later use

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