

NEXCORE

THE NEXT GENERATION IN CONCRETE PANEL SYSTEMS

Product and Installation Guide

AUG 2026 | VERSION 3.1

Our Mission

Our mission is to redefine what concrete panel systems can achieve for the Australian building industry.

We have engineered NEXCORE from the ground up to create a true next-generation solution that responds directly to the needs of modern construction. Featuring higher performance, safer materials, and smarter design.

NEXCORE is built to deliver meaningful advancements across every layer of the product. It is stronger, lighter, and silica free, supporting safer handling and compliance with evolving industry standards. The integration of patent-pending fibreglass rods provides enhanced structural integrity, while the panel's formulation and design deliver high thermal performance and improved acoustic insulation, supporting the comfort, efficiency, and longevity of Australian homes.

Our goal was simple: to set a new benchmark for engineered concrete panels, a system that is modern, reliable, and built for the future of Australian construction.







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NEXCORE

THE NEXT GENERATION IN CONCRETE PANEL SYSTEMS

Our mission is to redefine what concrete panel systems can achieve for the Australian building industry.

HIGH THERMAL EFFICIENCY

Significant contribution to BASIX/NatHERS star ratings.

STRONG ACOUSTIC INSULATION

Reduces impact and airborne noise transfer.

SILICA-FREE CONSTRUCTION

Safer handling with reduced health risks.

LIGHTWEIGHT PANEL DESIGN

Lightweight panel, without compromising strength.

SHIPLAP EDGE PROFILE

Shiplap on all sides, for easier installation.

PATENT-PENDING FIBREGLASS RODS

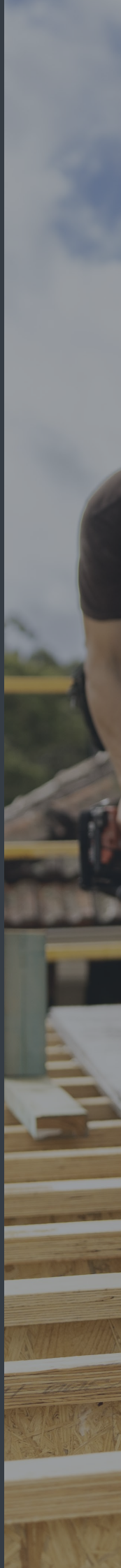
Embedded rods improve strength and crack resistance.

WEATHER RESISTANT

Performs reliably in exposed conditions.

ENGINEERED FOR AUSTRALIA

Designed in Australia, for Australian builds.





NEXCORE Specifications

NEXCORE is a solid precast concrete flooring panel suitable for both internal and external applications in residential buildings. It is water resistant and has a high thermal mass, making it the perfect choice for a solid, energy efficient flooring panel.

Width (mm)	Length (mm)	Thickness (mm)	Maximum support spacing (mm)	Mass (kg)	Panels per pack
600	1800	35	600	39.0	15

Panel Tolerances:
Length = ± 4mm
Width = ± 2mm
Thickness = ± 1.5mm

Notes:

1. All edges have a shiplap profile.
2. Mass is based on equilibrium moisture content at density of 1050kg/m3.

NEXCORE Technical Specification

Application	Maximum dead load (kg/m²)	Maximum live load	Maximum support spacing (mm)	Minimum sheet length	Minimum sheet width (mm)
General Residential	115	1.5kPa/1.8kN	600	2 joist spacings	200
Heavy Residential	190	2.0kPa/1.8kN	450		

NEXCORE are concrete flooring panels reinforced with fibreglass mesh and rods. Other properties of NEXCORE include:

- Unaffected by termites.
- Non-combustible (NCC V1 Section C2D10, AS 1530.1).
- High thermal mass. Thermal conductivity = 0.261 W/mK and Specific heat capacity = 1.159 J/gK. To be represented as a layer of the NatHERS library material Fibre Reinforced Concrete.
- Crystalline Silica free (<1%).

Storage and Handling

NEXCORE panels must be stacked flat on bearers spaced at maximum 600mm centres.

Material should be stored indoors or otherwise protected from the weather. Care is required during handling to prevent damage to the moulded shiplap profile. It is recommended that the panel be carried on edge. Ensure panels are not excessively damp before installing or finishing.

Being a cementitious panel, NEXCORE may contain minor surface cracking and crazing. This does not affect the structural performance of the panel. The panel contains glass fibre reinforcement as well as reinforcing rods to minimise the occurrence of these cracks.

NEXCORE panels should be loaded onto the floor framing above loadbearing walls if possible and distributed evenly around the floor area. If using meyJOIST the product manual has information about application of construction loads.

Cutting and drilling

NEXCORE panels can be cut and drilled using standard tools used for concrete or masonry.

Any tools used should be connected to a dust extraction system and suitable personal protective equipment should be worn (gloves, goggles and respiratory equipment). For more information refer to the NEXCORE safety data sheet (SDS).

Fasteners, adhesives & sealants

Fasteners used for securing NEXCORE panels should have a durability classification to match the final intended situation.

To ensure a rigid connection to framing members, screws are recommended for fixing NEXCORE panels:

• **Timber Joists** – 10g x 65mm long Type 17 Countersunk Rib Head screw such as Simpson Strong-Tie DSVT212S (QuikDrive collated or loose).
• **Metal Joists** – 10g x 55mm long Metal Winged Tip Countersunk Self-embedding head screw such as Simpson Strong-Tie CBSDHG214SA Quikdrive screw.

Fixing of wall frames (bottom plates) to NEXCORE should be done in accordance with the intent of AS 1684 or the NASH standard. Timber framing requires 10g screws with minimum 35mm embedment into the timber joists. Meyer Timber recommends 125mm long screws, either SDWS/TYKT or 14g Type 17 Bugle Head screws in this application. For non-loadbearing, non-bracing walls 3.05 diameter x 65mm long framing nails at 300crs may be used.

A construction adhesive compatible with cementitious flooring and the joist material is required when laying the panels and on all shiplap edges. If required, a sealant is needed on fasteners and joins to create a waterproof platform. MEYFLEX by Meyer Timber performs both of these functions. Fulaflex 620 by HB Fuller is a suitable alternative, or separate products may be used to fulfil each requirement.

Framing

NEXCORE can be secured to either timber or steel framing.

Timber floor framing (seasoned solid joists or I-joists) must be a minimum of 42mm in width and sized in accordance with AS 1684, AS 1720, or manufacturers design software or span tables. Steel framing must be in accordance with NASH standard, and have a minimum of 50mm in width and 0.75mm BMT (base metal thickness). Framing should also be specified to match the intended use with regards to durability, corrosion and termite resistance.

Adjacent framing members should be in the same plane to prevent undue stresses. A suggested tolerance is to within 1.5mm/m. Framing can be inclined if required to create a fall, particularly on external decks and balconies.

Installation

STEP 1: Panel layout and orientation.

NEXCORE panels are to be installed across the floor joists with a staggered (brick) pattern. The panels must span a minimum of 2 joist spacings and panel width should be at least 200mm. The panel ends on the outer perimeter require minimum 42mm end bearing and perimeter long panel edges require minimum 17mm edge bearing. Within the floor area, the short edge of the panel must be fully supported with minimum 20mm bearing or alternatively blocked as per Figure 4. Panel starting position should be chosen to minimise cutting of panels and floor framing members should be located to match panel ends if blocking is not being used. For large areas of flooring, control joints are required at maximum 7.2m centres. See Figure 3 for control joint detail. Panel orientation is with the smooth side facing up.

STEP 2: Installing first panel.

Before laying the first panel a 10mm continuous bead of construction adhesive must be applied along every joist and on the shiplap. For ease of further installation, the first panel should have the internal long edge shiplap on the bottom. Once placed into position the panel must be secured in position with fasteners as noted in this guide. Fastener layout to be as per Figure 1. Fasteners at butt joins are not mandatory but may be included if the joist width is over 60mm.

STEP 3: Install next panels.

Continue installing panels along the run as noted in Step 2. Ensure the short edge shiplap has a bead of external grade polyurethane sealant such as Meyer Timber MEYFLEX. Gaps 5mm and over require installation of a backing rod in addition to the flexible sealant. If short edges are unsupported the blocking must be installed before proceeding to the next panel.

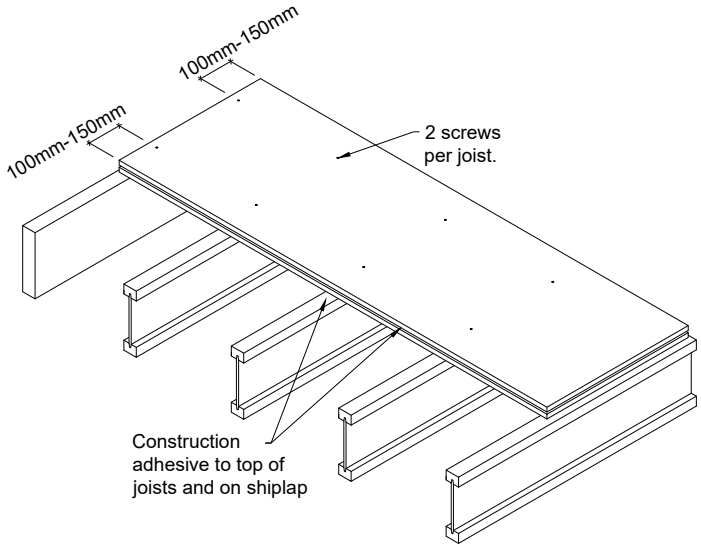


Figure 1: First Panel Installation and fastener locations

STEP 4: Fix next runs of panels.

The 2nd run requires a shorter starting panel when laying in the recommended brick pattern. Continue in this fashion until the entire area has been covered. It is suggested to provide a light gauge steel angle trim (min. 30 x 30 x 1.0 mm) to the leading edge of panels at exposed edges like the top of stairs.

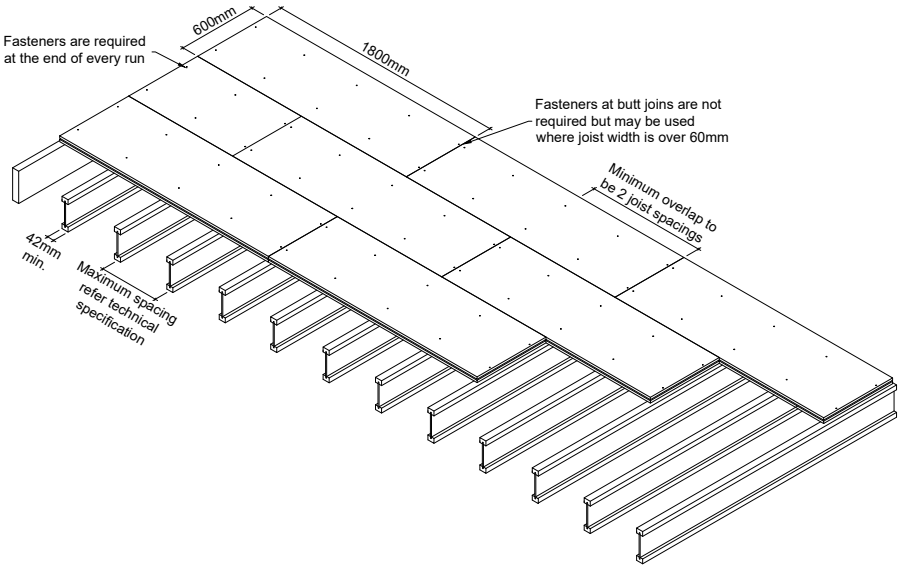
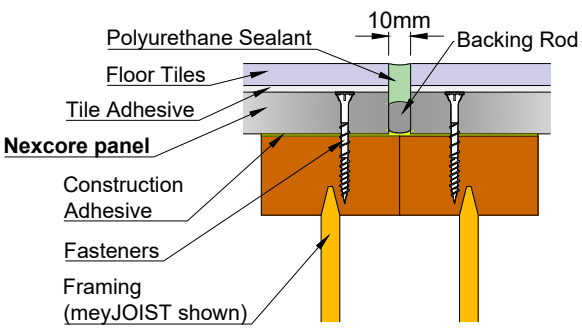
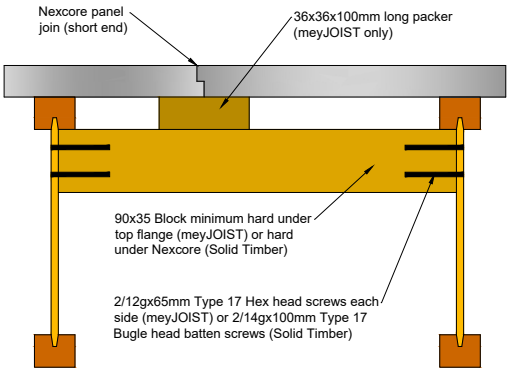


Figure 2: NEXCORE panel general configuration



NOTES:
- A single wide joist is a suitable alternative (63mm min.)
- Control joints must be expressed through mortar beds.

Figure 3: Control Joint



NOTES:
- Off joist blocks to be located at each end of join (maximum 100mm in from end) and then a 300 centres maximum.

Figure 4: Off joist short end join detail

STEP 5: Sealing the floor.

Where waterproofing membranes are being installed, check that all screw heads have been embedded slightly below the finished surface. All joins and tops of screw heads must be fully sealed with an external grade polyurethane sealant to create a waterproof platform.

Note the manufacturers recommendations on sealant curing time before applying final finishes. If there is a delay in applying final finishes and waterproofing systems, the panels should be protected from damage or possibility of exposure to water ponding.

Finishing

Depending on the intended final application, waterproofing membranes and/or tile screeds may be required. There are many different waterproofing systems that are suitable for use over the top of concrete floors; the designer/specifier should consult with the system provider to assess the appropriateness of the proposed solution.

Waterproofing of NEXCORE floors for wet areas shall be done in accordance with the NCC (National Construction Code) and AS 3740 using membranes compatible with concrete. Provide a bond breaker tape over sealant joints in the floor and at wall junctions.

Waterproofing of NEXCORE floors in external areas shall be done using membranes complying with AS 4654 Part 1 that are compatible with concrete, and installed in accordance with AS 4654 Part 2. Provide a bond breaker tape over sealant joints in the floor and at wall junctions. Control joints in the floor shall be expressed through floor tile systems.

NEXCORE panels have a thickness tolerance. If installing final floor finishes such as carpet or direct stick flooring, the panels may be sanded with 24grit or 40grit paper using an upright drum sander. Maximum sanding tolerance to be 5mm reduction in thickness.

BASIX/NatHERS

NEXCORE delivers high thermal mass, with a thermal conductivity of 0.261 W/mK and specific heat capacity of 1.159 J/gK. For NatHERS assessments, NEXCORE should be represented as a layer using the NatHERS library material **Fibre Reinforced Concrete.** These properties contribute positively to a building's overall thermal performance rating, supporting compliance with BASIX and NatHERS requirements across Australia.

Specification

This product and installation guide does not cover all scenarios and is intended to be used in conjunction with other documents to develop a complete solution. It is the responsibility of the specifier to ensure the details in this guide are suitable for the final intended application and that any areas which are not included in this guide are suitably addressed. All design, specification and construction using NEXCORE must comply with the relevant sections of the NCC (National Construction Code) as well as other applicable regulations and standards.

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