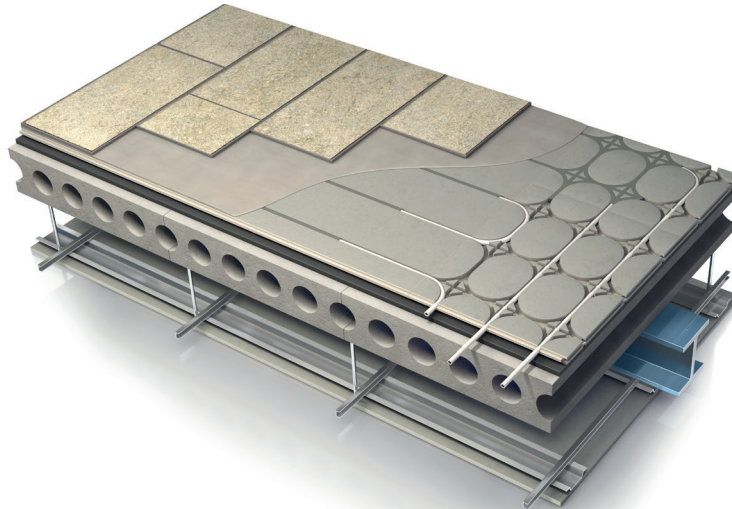


APC14 – 14mm Fastflo™ in pre-routed AcoustiPanel™14 with 5mm rubber acoustic resilient layer over a concrete separating floor – 31mm height build-up



AcoustiPanel™14

This tailor-made acoustic underfloor heating system offers:

- Underfloor heating and acoustic performance in a single solution, which is fitted above the structural floor deck
- Fast heat transfer and high performance heat output of up to 96W/m²
- High acoustic performance that can assist in achieving Part E compliance standards
- Ultra-smooth, low deflection surface, ideal for high quality floor finishes including large format tiles
- Just 31mm height build up – less than typical acoustic batten solutions
- Independently tested acoustic and deflection load performance
- A low weight solution compared to liquid screed or a typical sand and cement screed UFH system
- Full design performance indemnity
- Can achieve up to 3 BREEAM credits when correctly installed as part of an acoustic floor cassette
- Sustainable product made with minimum 60% recycled gypsum board, and with the IsoRubber layer constructed of minimum 90% waste rubber

A straightforward installation

- Fully tailored design incorporating bespoke, interlocking tongue and groove panels for optimal heating and pipework layouts
- Installed directly over structural concrete separating floor
- Quick drying self-levelling skim reduces impact on project schedule – dries overnight, floor finishes can be fitted after just 8 days
- A single manifold serves up to 100m², for a quick installation that uses less material
- Robust, step-by-step Nu-Heat installation manual, including complete mechanical, electrical and layout drawings

ACOUSTIPANEL™14 WITH 5mm RUBBER RESILIENT LAYER ON A CONCRETE SUB-FLOOR**Supplied by Nu-Heat**

3–4mm skim coat

23mm T&G AcoustiPanel™14

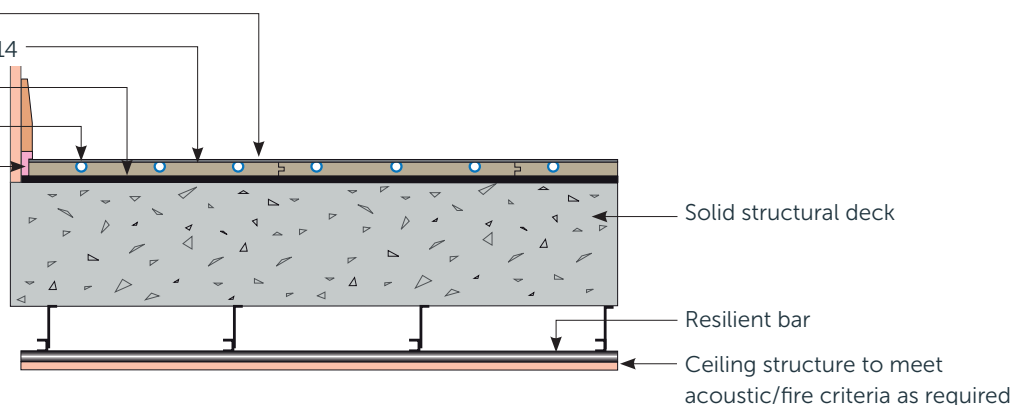
5mm acoustic rubber

14mm Fastflo™ tubing

Flanking/isolation strip

Not illustrated

- Castellated panel
- QuickSet self-levelling compound

Supplied by others**DESCRIPTION**

AcoustiPanel™14 from Nu-Heat is a unique single floor deck solution, which combines efficient underfloor heating with effective airborne and impact noise reduction.

Produced in partnership with Knauf and Thermal Economics, the product comprises a pre-routed gypsum board over a high performance IsoRubber-UFH-NH base, into which Nu-Heat's 14mm Fastflo™ tube is neatly installed.

High thermal conductivity and a stable, ultra-smooth floor finish are achieved thanks to a combination of tongue and groove panels topped with a self-levelling skim, making the floor finish perfect for large format tiles and other high quality floor coverings.

AcoustiPanel™14 can contribute towards exceeding Part E compliance standards, when installed as part of an acoustic floor cassette. This makes the solution suitable for new-build and renovation apartment projects, where a simple to install, efficient and discreet underfloor heating is required as part of an acoustically robust system.

FLOOR HEATING TUBE

A room or heating zone will use one, or more, coils of 14mm Fastflo™ pipe, providing an even spread of warmth across the floor. The flexibility of Fastflo™ also aids installation.

INSULATION

Sufficient insulation should be present to meet the requirements of Part L of the Building Regulations.

UNDERFLOOR HEATING EFFICIENCY

Setting the room thermostat 1–2 °C lower achieves the same comfort levels as with an equivalent radiator system because the heat is mostly radiant, meaning air convection currents are minimised and heat loss by natural ventilation reduced. AcoustiPanel™14 is a perfect partner for modern gas, oil and LPG condensing boilers, it can also be used with a heat pump in new-build projects.

FLOOR STRUCTURE

Individual AcoustiPanels™ with a glued tongue-and-groove are laid over a 5mm IsoRubber-UFH-NH resilient layer and structural floor deck. Once all floor heating pipe is installed, panels are grouted and a 3–4mm skim coat of the self-levelling compound is applied. Any areas of castellated panel (if specified) are also covered with self-levelling compound. The skim coat can be walked on after 4 hours/overnight and coverings can be fitted after just 8 days.

Virtually any covering can be applied over AcoustiPanel™14, but using less thermally resistive coverings ensures greater heat output and faster warm up times.

WARRANTIES/INSURANCE

Manufacturer's warranty: all UFH tube supplied by Nu-Heat is covered by a 50-year warranty, the first 10 years of which are insurance-backed.

Product liability: Nu-Heat maintains product liability insurance to £5 million.

Professional indemnity: As Nu-Heat's design service is integral to the operational effectiveness of the UFH system, the company holds professional indemnity insurance of £5 million to cover all aspects of our consultation and design services.

www.nu-heat.co.uk/floorspecs

When correctly installed as part of an acoustic floor cassette AcoustiPanel™14 can provide up to 3 BREEAM credits.



TECHNICAL SPECIFICATION

Panel dimensions:	600 x 600 x 23mm
Area:	0.36m ² per board
Density:	1160kg/m ³ min.
Manufactured to:	BS EN 15283-2:2008
Material (routed panel):	23mm gypsum fibreboard
Resilient layer:	5mm IsoRubber-UFH-NH
Routing:	ø14mm @ 100/150/200mm centres
Skim coat:	3–4mm N410 gypsum self-levelling compound
Additional mass:	
Straight/double/triple end returns	36.2 kg/m ²
100mm circles	38.0 kg/m ²
150/200mm multi-turns	41.9 kg/m ²
Castellated panel	44.9 kg/m ²

Acoustic data for AcustiPanel™ on a suspended timber floor

The combination of Nu-Heat's AcustiPanel™ and 5mm Isorubber-UFH-NH has been shown through UKAS accredited laboratory testing to be effective in reducing Airborne and Impact Sound Transmission through suspended timber floors and can assist in achieving Part E compliance.

If you require the full test report, please contact your Nu-Heat Account Manager.

AcustiPanel™14 laboratory test results	Airborne R _w (C;C _{tr})	Base floor improvement R _w +C _{tr}	Impact L _{n,w}	Base floor improvement
Base floor	55dB (-3;-7)		65dB	
Routed panel	63dB (-1;-6)	+9dB	56dB	+9dB

Loading data* EN 1991-1: Point load: 5kN

Load	Average deflection under load	
	Standard AP14	AP14 on 20mm insulation @200kPa
1 kN	0.35mm	0.47
2 kN	0.60mm	0.81
3 kN	0.81mm	1.10
4 kN	1.00mm	1.35
5 kN	1.18mm	1.59

Tests were carried out under laboratory conditions at the Knauf Test Centre in Germany; results achieved on site may vary.

Heat output (m² K/W)

Water temperature	R=0.05 (tile)	R=0.1 (timber, glued)	R=0.2 (carpet/underlay)
45 °C flow (40 °C ave.)	74 W/m ²	56 W/m ²	36 W/m ²
55 °C flow (50 °C ave.)	100 W/m ² *	75 W/m ² *	54 W/m ²

Nominal value; output values vary depending on specific floor finish.

*Limited by floor covering surface temperature limit.

Acoustic performance data is taken from tests carried out at the UKAS accredited Sound Research Laboratories, Sudbury, in accordance with the relevant BS EN ISO standards. Point load performance data is taken from tests carried out at Knauf, Germany in accordance with the relevant BS EN ISO standards. Laboratory performances stated are specific to the above system only, inclusive of all elements shown and correct installation and should be used for guidance only.