

## **Thermal Insulation Solutions**

Domestic, Commercial, Educational and Healthcare

**Basements Floors Swimming Pools**  
**Inverted Roofs Car Park Decks**  
**UFH Cavity Closers**

# Why CELLECTA?

**CELLECTA** is proud to be the UK's leading innovator and manufacturer of high performing and environmentally friendly acoustic floor and wall treatments, underfloor heating systems, and technical insulation boards.

For over 25 years our products have been successfully installed in a myriad of residential, commercial, educational, healthcare, and industrial buildings.

**CELLECTA's** team of experienced technical consultants offer unrivalled customer support, supplying the very best advice on the most suitable products to satisfy current legislation. Our team can also offer RIBA Certified CPD's, arrange quick and efficient deliveries of our products and provide first class after sales service, including installation advice to ensure customer satisfaction.

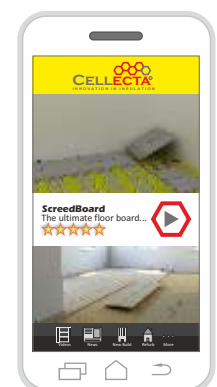


 **01634 29-66-77**

## **FREE** services offered by **CELLECTA**:

- ◊ Technical and installation advice
- ◊ Architectural drawings and NBS specs
- ◊ U-value and imposed load calculations
- ◊ Site surveys and take-off service
- ◊ Arrange acoustic testing
- ◊ Present RIBA certified CPDs

For on the go access to information, including installation videos & technical data, download the **CELLECTA app** for smart phones and tablet devices.



# Building Regulations and Standards

When carrying out building work, either on new build or refurbishment projects, all plans submitted for Building Control approval in England, Wales and Scotland are required to comply with each country's Regulations or Standards. Each document stipulates the levels of thermal insulation needed to be achieved (see tables below). The required U-value will depend on the location of the project (England, Wales or Scotland), type of building (dwelling or non-dwelling) and the application (floor, wall, roof).

This technical manual details a multitude of ways **CELLECTA's** high performance thermal insulation can help achieve low U-values and addresses areas of thermal bridging with low Y (Y) - value constructions. This ensures the building is energy efficient, reducing running costs, helping protect the environment for future generations.



## ENGLAND - Recommended U-values (W/m²K)



	DWELLINGS			BUILDINGS OTHER THAN DWELLINGS		
	NEW BUILD <b>L1A</b>	EXISTING BUILDINGS <b>L1B</b>		NEW BUILD <b>L1B</b>	EXISTING BUILDINGS <b>L2B</b>	
	Best starting point (fabric only)	Extension	Refurbishment	Best starting point (fabric only)	Extension	Refurbishment
FLOOR	0.11	0.22	0.25	0.18	0.22	0.25
WALL	0.16	0.28	0.30 / 0.55 <sup>(1)</sup>	0.22	0.28	0.30 / 0.55 <sup>(1)</sup>
PITCH ROOF (ceiling level)	0.11	0.16	0.16	0.14	0.16	0.16
PITCH ROOF (rafter level)	0.11	0.18	0.18	0.14	0.18	0.18
FLAT ROOF	0.11	0.18	0.18	0.14	0.18	0.18

<sup>(1)</sup> A U-value of 0.55W/m²K is used for cavity wall insulation and 0.30W/m²K for internal or external wall insulation.



## WALES - Recommended U-values (W/m²K)



	DWELLINGS			BUILDINGS OTHER THAN DWELLINGS			
	NEW BUILD <b>L1A</b>	EXISTING BUILDINGS <b>L1B</b>		NEW BUILD <b>L2A</b>	EXISTING BUILDINGS <b>L2B</b>		
	Best starting point (fabric only)	Extension	Refurbishment	Best starting point (fabric only)	Extension (domestic in character)	Extension (other buildings)	Refurb
FLOOR	0.11	0.18	0.25	0.18	0.18	0.18	0.25
WALL	0.16	0.21	0.30 / 0.55 <sup>(1)</sup>	0.22	0.21	0.21	0.30 / 0.55 <sup>(1)</sup>
PITCH ROOF (ceiling level)	0.11	0.15	0.16	0.14	0.15	0.15	0.16
PITCH ROOF (rafter level)	0.11	0.15	0.18	0.14	0.15	0.15	0.18
FLAT ROOF	0.11	0.15	0.18	0.14	0.15	0.15	0.18

<sup>(1)</sup> A U-value of 0.55W/m²K is used for cavity wall insulation and 0.30W/m²K for internal or external wall insulation.



## SCOTLAND- Recommended U-values (W/m²K)



	DOMESTIC				NON-DOMESTIC		
	NEW BUILD	EXISTING BUILDINGS			NEW BUILD	EXISTING BUILDINGS	
	Best starting point (fabric only)	Extension & Refurbishment <sup>(2)</sup>		Conversion of heated buildings	Best starting point (fabric only)	Refurb, extensions & conversion of unheated buildings	Conversion of heated buildings
FLOOR	0.13	A	B	0.18	0.15	0.20	0.25
WALL	0.15	0.17	0.22	0.22	0.18	0.25	0.30
PITCH ROOF (ceiling level)	0.10	0.11	0.15	0.14	0.14	0.15	0.25
PITCH ROOF (rafter level)	0.10	0.13	0.18	0.14	0.14	0.15	0.25
FLAT ROOF	0.10	0.13	0.18	0.14	0.14	0.15	0.25

<sup>(2)</sup> A is for extensions and where the existing dwelling's walls and roof U-values are worse than 0.70W/m²K in the walls and worse than 0.25W/m²K in the ceiling.  
B is for the other extensions, upgrading existing elements, non-exempt conservatories and conversions of unheated spaces.



**CELLECTA**'s offers a wide range of thermal insulation products specifically designed for each application. All products have excellent life-long thermal performance, high compressive strength, closed cell structure and very low water absorption. The boards are 100% recyclable, zero ozone depleting and have a global warming potential (GWP) of less than 5, making them one of the most environmentally friendly insulants available. They are ideal for a multitude of domestic, commercial, educational and healthcare projects.

## HEXATHERM®

### XPERI

Basement Wall Lining Insulation



**XPERI** boards have high resistance to water absorption, outstanding compressive strength, and interlocking edge detail, making them the ideal insulation for external applications such as basements and below ground retaining walls.

### XFLOOR

High Compressive Strength Floor Insulation



A high compressive strength, closed-cell structure and low water absorption make **XFLOOR** boards the ideal insulation for a variety of domestic, commercial, educational and healthcare flooring applications.

### XPOOL®

Swimming Pool Insulation



Designed specifically for swimming pool applications, **XPOOL®** insulation boards have a high resistance to water absorption and ultra high compressive strength, able to withstand long term imposed loads.

### XCHIP

Chipboard Thermal Laminate Floorboard



**XCHIP** combines the benefits of **HEXATHERM®** high performance thermal insulation with a P5 moisture resistant, tongue and groove chipboard to produce a high compressive strength, interlocking floor board.

### XCPL

High Impact Car Park Lining Thermal Laminate



**XCPL** combines the benefits of **HEXATHERM®** with a high impact facing to produce a board ideal for insulating the underside of car park decks and soffits.

### XROOF 300

Inverted Roof Insulation



Excellent life long thermal performance, combined with low water absorption and high compressive strength make **XROOF** boards the ideal insulation for inverted and green roof applications.

### XDRAIN

Inverted Roof Insulation with Integral Drainage Channels



**XDRAIN** inverted roof boards have a unique pattern of drainage channels on their underside, which speeds up the shedding of rainwater whatever their laid orientation, eliminating the need for a separation drainage mat, making them ideal for green roof applications.

### XMD

Inverted Roof Up-stand Insulation



**XMD** boards combine the benefits of a high performance **HEXATHERM®** extruded polystyrene with a high impact facing board to produce the ideal treatment to protect inverted roof vertical up-stands.

### XROOF 500

Car Park & Podium Deck Insulation



**XROOF 500's** extra high compressive strength makes it ideal for high load applications such as car park decks, plant rooms and podiums.



## TETRIS® X

Insulation Blocks for Pre-stressed Concrete Beam Ground Floors



## TETRIS® P



Available Q4 2020

## UNICLOSER® X

Rigid Insulated Cavity Closers



CELLECTA's proprietary cavity closers eliminate cold bridging around window and door openings. Two versions are available with either one or two rigid DPC profiles rigid DPC profiles. Both versions have textured facing able to accept wet plaster.

## Mojave® Dry Laid Underfloor Heating System Components

### ScreedBoard® 20

Highly Conductivity, Interlocking Overlay Board



ScreedBoard® 20 is an award winning 100%, recycled Calcium Sulphate floor board which is highly conductive enabling an underfloor heating system to be more responsive, reducing energy needs and lowering running costs.

### ULTRAplate

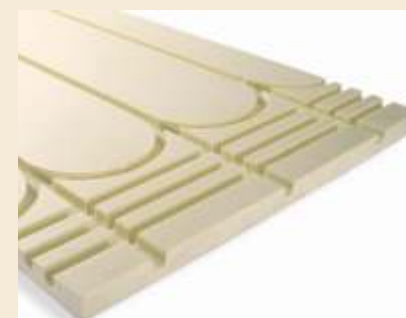
Aluminium Heat Diffuser Plates



ULTRAplates are highly conductive aluminium plates manufactured to suit each specific application, diameter of pipe and spacing required. When installed, they provide the ultimate responsive heat transfer performance.

### XFLO®

High Compressive Strength Routed UFH Insulation



XFLO® high compressive strength, extruded polystyrene UFH boards are manufactured to suit the specific pipe used and centres required to provide the desired thermal output. Ideal for both domestic & commercial applications.

### XFLO® FF

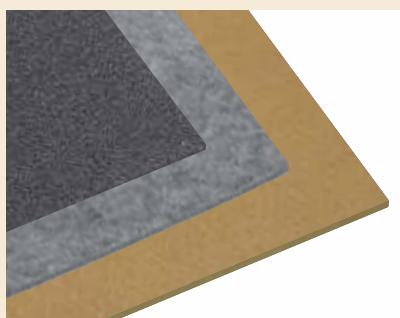
Foil Faced Routed UFH Insulation board



XFLO® FF UFH boards have a high compressive strength and aluminium foil facing for added thermal diffusion. The boards are manufactured to suit the specific pipe used and centres required and once covered with ScreedBoard® 20 provide a responsive heating solution.

### FIBREfon® & RUBBERfon®

High Performance Impact Sound Deadening Layers



For floors that required improved impact sound reduction, CELLECTA offers 3 high performance resilient layers:  
**RUBBERfon® 3** - Low profile, high load applications  
**FIBREfon® 8** - Timber & metal joist floor applications  
**FIBREfon® 10** - High load concrete floor applications

### YELOfon® ES5, ES10

Closed-Cell Perimeter Edge strips



To address thermal expansion and acoustic bridging CELLECTA offers a range of closed-cell polyethylene edge strips to suit the thickness of the floor detail.



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# RIBA Certified CPDs

To provide ongoing support to architects and specifiers, **CELLECTA** offers 4 RIBA certified seminars, presented by fully trained experienced technical consultants. Each CPD is designed to be engaging and thought provoking. Attendees will receive up-to-date technical information and legislative requirements. To book a CPD, either call **CELLECTA** 01634 29-66-77 or send an email to [technical@collecta.co.uk](mailto:technical@collecta.co.uk)

## BUILDING ACOUSTICS CPD FOR ARCHITECTS

- 🔧 Soundproofing & compliance with Part E and Section 5
- 🔧 Legislation made simple
- 🔧 Methods of compliance: PCT & Robust Details
- 🔧 New build, refurbishment and conversion
- 🔧 Solutions for floors, walls & ceiling



## FLOOR LEVELLING SOLUTIONS CPD FOR ARCHITECTS

- 🔧 Problems with uneven separating floors
- 🔧 Legislative requirements
- 🔧 Dry laid and screed solutions
- 🔧 Solutions for steel and concrete floors
- 🔧 Integration of an underfloor heating system



# RIBA Certified CPDs

## UNDERFLOOR HEATING CPD FOR ARCHITECTS

- ⬡ Understanding the different types of UFH
- ⬡ When to utilise a dry laid treatment over a wet screed: benefits and disadvantages of each
- ⬡ How to comply with Part E & L and Section 5 & 6
- ⬡ The future of floor designs



## INSULATED SUSPENDED GROUND FLOORS CPD FOR ARCHITECTS

- ⬡ What is a suspended ground floor
- ⬡ Types of insulated suspended ground floors: Benefits and advantage of each
- ⬡ How to comply with Part L and Section 6
- ⬡ On site practicalities



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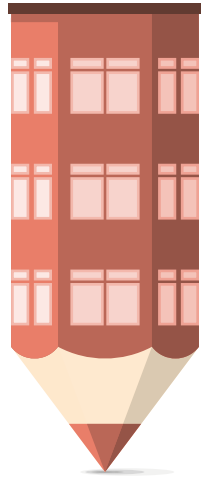
[technical@collecta.co.uk](mailto:technical@collecta.co.uk)

# Why would you specify anything else?



**HEXATHERM®**

High Compressive  
Strength Insulation  
Boards



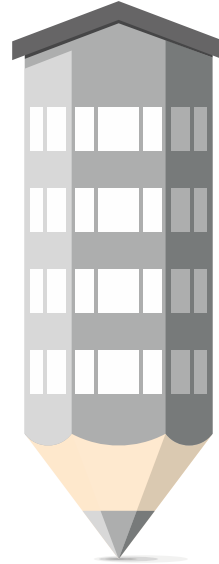
**Mojave®**

Dry Laid  
Rapid Response  
UFH System



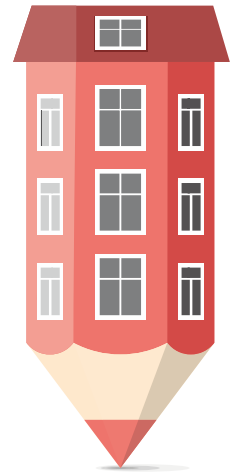
**YELOfon® HD10+**

UK's No.1  
Under screed  
Acoustic Layer



**ScreedBoard®**

UK's No.1 High Density,  
Interlocking Screed  
Replacement Floorboard



**DECKfon®**

Composite Acoustic  
Battens and Overlays

## Award Winning Solutions in Sound Reduction and Thermal Insulation

**HEXATHERM** high performance extruded polystyrene thermal insulation boards are the ideal choice for a multitude of domestic, commercial and industrial applications. Specific types are available for swimming pools, basements, floors, roofs and cavity closers applications. Unique physical properties include high compressive strength, very low water absorption and excellent long-term thermal performance.

**Mojave** is a quick and easy to install, dry laid underfloor heating system that delivers unrivalled thermal response times, and market leading acoustic performance. The system incorporates **CELLECTA's** renowned **ScreedBoard**, **XFLO**, and if required, proven resilient layer to ensure compliance with Part E of the Building Regulations. Numerous Mojave combinations are available to suit different floor types, height criteria and thermal output.

**YELOfon HD10+** is the ultimate acoustic resilient layer for under screed applications. The acclaimed high density, polyethylene carries 3 of its own Robust Details: E-FC-5, 17 & 18. Unlike rubber, it's easy to carry, lay and cut to size. The system delivers unrivalled proven acoustic performance, with over 12.5 million m<sup>2</sup> successfully installed.

**ScreedBoard** is an multi award winning, 100% recycled screed replacement board, ideal for a multitude of new build and refurbishment applications. The board's low thermal resistance enables an underfloor heating system to respond far quicker than a traditional screed or chipboard covering. In addition, its high density provides outstanding acoustic performance, with the ScreedBoard 28 carrying three proprietary Robust Details: E-FS-3, E-FT-5 and 6, as well as being fully FFT4 compliant.

**DECKfon** range of high performance soundproofing products are designed for a number of specific applications. **DECKfon** Battens are suitable for both new build concrete and timber floors and **DECKfon** acoustic overlay floorboards (17T, 26T & 30T) are ideal treatments for refurbishment and conversion projects

To see the complete range of products go to [www.cellecta.co.uk](http://www.cellecta.co.uk)

**CELLECTA®**  
INNOVATION IN INSULATION





# Basements, Floors and Swimming Pools

## Introduction

HEXATHERM® insulation boards are the ideal insulant for a multitude of flooring and basement applications due to their high compressive strength and closed-cell structure. A variety of grades are available to suit different loading conditions and applications from 250 to 700kPa. All grades have excellent life-long thermal performance and very low water absorption, allowing them to be installed above or below the damp proof membrane. Boards are 100% recyclable, with a <5 GWP.

## Key Benefits of HEXATHERM® Floor Insulation

- ❖ BM TRADA Q-Mark third party accredited
- ❖ ISO 9001 and 14001 certified
- ❖ High compressive strength - able to withstand long-term static loads: 250 - 700kPa
- ❖ Excellent life long thermal performance
- ❖ Very low water absorption: <0.7% by vol
- ❖ Environmentally friendly - 100% recyclable



ISO 14001: 2004  
BUREAU VERITAS  
Certification



BE 009119-1



LUCID=ON



New supermarket, Poole: XFLOOR 300 - 60mm



Campus Building, Nottingham University: XFLOOR 300 - 90mm



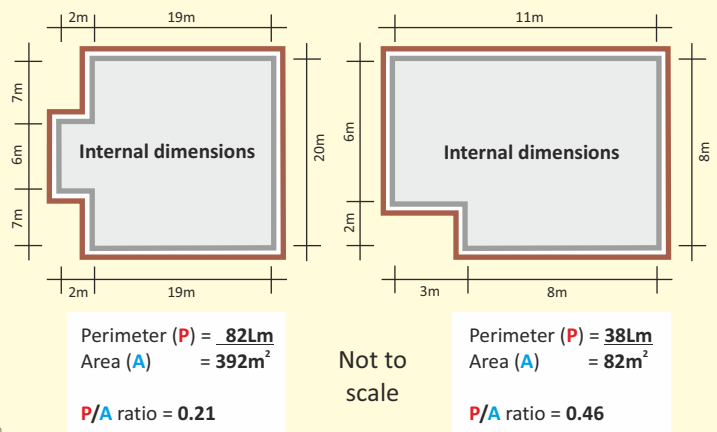
Sixth Form Block, Solihull: XFLOOR 300 - 75 & 100mm

## Calculating the Thickness of Floor Insulation Required

To comply with Building Regulations, each floor's thermal performance needs to be assessed individually in accordance with EN ISO 13370: 2017. CELLECTA offers a free U-value calculation service; simply call 01634 29-66-77 with your specific construction details.

### Information required

- 1) Type of building: Domestic, commercial, industrial or other (specify)
- 2) Internal dimension of the external perimeter (P) in linear metres
- 3) Internal area (A) in m<sup>2</sup>
- 4) Floor type: solid, suspended, or beam and block
- 5) Position of insulation
- 6) Type of block used (beam and block floors only)
- 7) Thickness and type of floor finish: Screed, concrete, timber or ScreedBoard®



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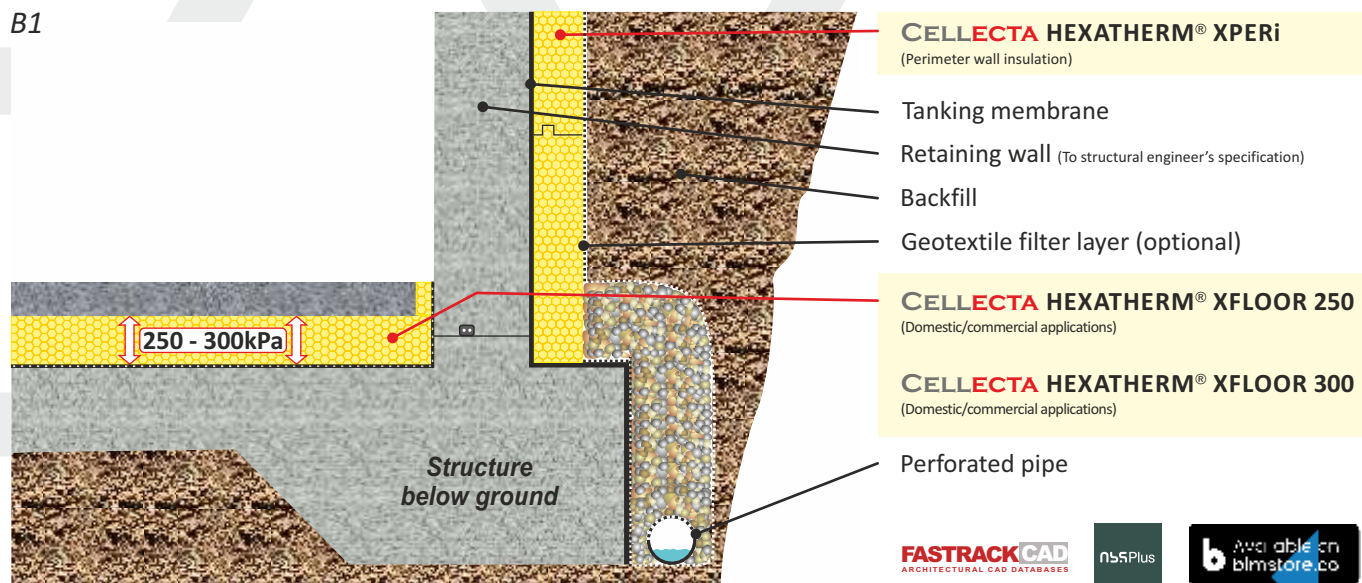
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CELLECTA HEXATHERM® XPERi insulation installed externally against basement wall  
CELLECTA HEXATHERM® XFLOOR insulation installed below floating screed

B1



## Product Information

**XPERi**

**XFLOOR**

**HEXATHERM®** extruded polystyrene thermal insulation boards have a closed cell structure that provides unrivalled resistance to water absorption and high compressive strength, making them ideal for insulating basement applications.

## Product Benefits

- Very low water absorption
- High compressive strength  $\geq 250\text{kPa}$
- Excellent life-long thermal performance
- Closed cell structure

## Physical Properties

		<b>XFLOOR</b>		
		<b>XPERi</b>	<b>250</b>	<b>300</b>
Thermal conductivity EN 12667 (W/mK)	$\leq 80\text{mm}$	0.033	0.033	0.033
	$\geq 81\text{mm}$	0.034	-	0.034
Strength at 10% compression EN 826 (kPa)	$\leq 30\text{mm}$	250	250	-
	$\geq 40\text{mm}$	300	-	300
Strength at 2% compression EN 1606 (kPa)	$\leq 30\text{mm}$	80	80	-
	$\geq 40\text{mm}$	125	-	125
Long term water absorption by immersion EN 12087 (%)		0.7	0.7	0.7
Temperature range (°C)		-50/+75	-50/+75	-50/+75
Board size (mm)		600 x 2500	600 x 2500	600 x 2500
Thickness' (mm) (other sizes manufactured to order)	-	-	20 25	-
	30 40	-	30 -	- 40
	50 60	-	-	50 60
	- 80	-	-	75 80
	100 120	-	-	100 120
	140 160	-	-	140 160
Edge profile		T&G	Square	Square

## Typical Thickness of Insulation Required

The method of calculating the U-value of a basements is more complex than other applications. To determine the thickness of insulation required contact **CELLECTA** for assistance.

T. 01634 29-66-77

E. technical@cellecta.co.uk

## Third Party Accreditation and Approvals



BE 009119-1



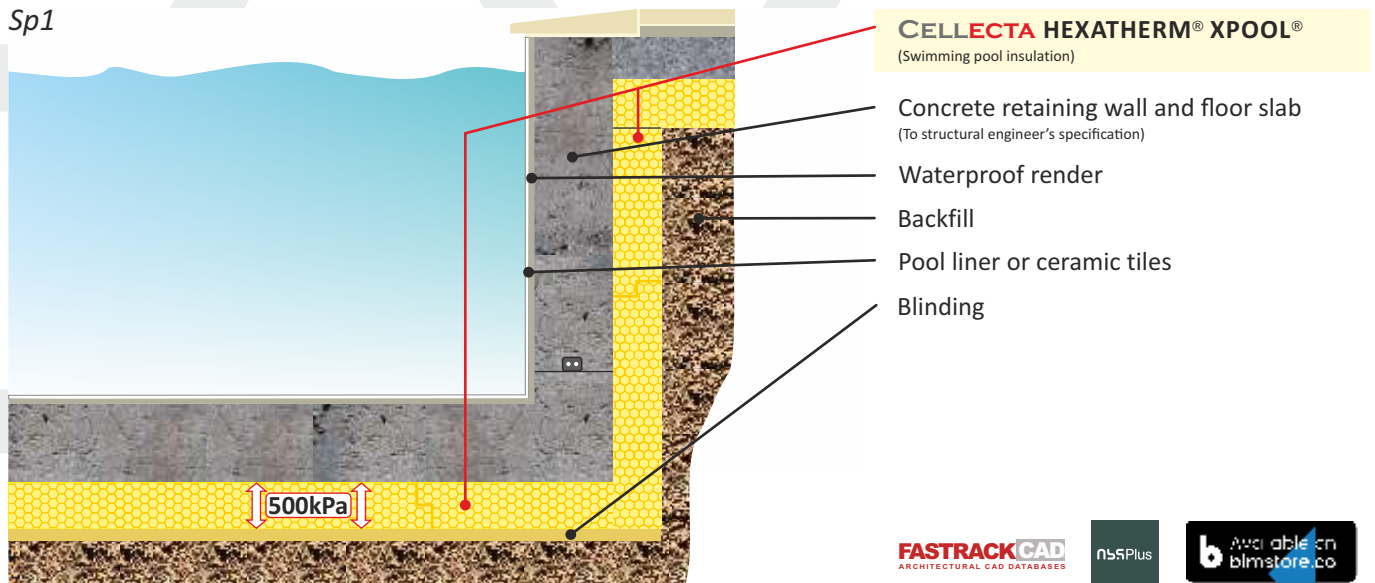
## Environmental Credentials



Kings College, Wimbledon: XPERi -160mm & XFLOOR 250 - 30mm



Sp1



## Product Information

### XPOOL®

**HEXATHERM® XPOOL®** is designed specifically for swimming pool applications. The boards have an ultra-high resistance to compression, which are able to withstand high, long-term static loads, have extremely low water absorption and outstanding thermal performance, providing long term energy savings.

## Product Benefits

- Ultra high compressive strength - 500kPa
- Excellent life-long thermal performance
- Very low water absorption
- Closed cell structure

## Physical Properties

	<b>XPOOL®</b>
Thermal conductivity EN 12667 (W/mK)	0.035
Strength at 10% compression EN 826 (kPa)	500
Strength at 2% compression EN 1606 (kPa)	180
Long term water absorption by immersion EN 12087 (%)	0.7%
Temperature range (°C)	-50/+75
Board size (mm)	600 x 1250
Thickness' (mm) (other sizes manufactured to order)	- - - - 50 60 75 80 100 120 140 160
Edge profile	 Shiplap

## Typical Thickness of Insulation Required

P/A ratio	HEXATHERM® XPOOL® (mm)					
0.7	90	100	120	140	160	
0.6	80	100	120	140	160	
0.5	75	100	120	140	160	
0.4	75	90	100	120	140	
0.3	60	80	90	120	140	
	0.25	0.22	0.20	0.18	0.16	

**Notes.**  
U-values calculated using an average pool depth of 1.5m  
Thickness based on insulating both swimming pool walls and floor

**U-value (W/m²K)**  
Calculated in accordance with ISO 13370

## Third Party Accreditation and Approvals



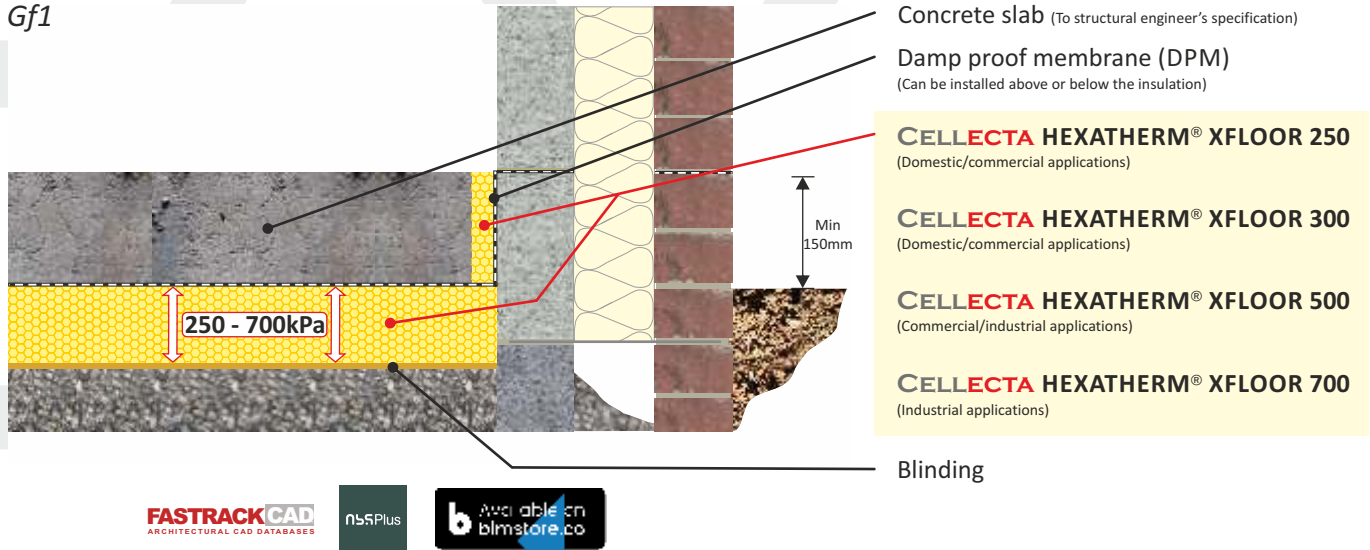
## Environmental Credentials



Private dwelling, Bournemouth: XPOOL - 100mm



Gf1



## Product Information

### XFLOOR

**HEXATHERM® XFLOOR** extruded polystyrene thermal insulation boards have a closed cell structure that provides unrivalled resistance to water absorption. Four grades are available to suit different loading conditions, making them ideal for a multitude of domestic, commercial and industrial flooring applications.

### Product Benefits

- Excellent life-long thermal performance
- Range of compressive strengths 250 - 700kPa
- Very low water absorption
- Closed cell structure

### Physical Properties

	<b>XFLOOR</b>			
	250	300	500	700
Thermal conductivity EN 12667 (W/mK)	≤80mm 0.033	≥81mm 0.033	0.035	0.034
Strength at 10% compression EN 826 (kPa)	250	300	500	700
Strength at 2% compression EN 1606 (kPa)	80	125	180	250
Long term water absorption by immersion EN 12087 (%)	0.7	0.7	0.7	0.7
Temperature range (°C)	-50/+75	-50/+75	-50/+75	-50/+75
Board size (mm)	600 x 2500	600 x 2500	600 x 1250	600 x 1250
Thickness' (mm) (other sizes manufactured to order)	20 25 30 -	- - 40 -	- - 50 60 75 80	- - 50 60 75 80 100 120 140 160
Edge profile	Square	Square	Shiplap	Shiplap

## Typical Thickness of Insulation Required

P/A ratio	HEXATHERM® XFLOOR 300 (mm)							
0.7	90	110	120	140	160	190	230	280
0.6	80	110	120	140	160	190	230	280
0.5	75	100	110	130	150	180	220	270
0.4	75	90	100	120	140	170	210	260
0.3	60	75	90	110	130	150	200	250
	0.25	0.22	0.20	0.18	0.16	0.14	0.12	0.10

U-value (W/m²K)

Calculated in accordance with ISO 13370

## Third Party Accreditation and Approvals



## Environmental Credentials

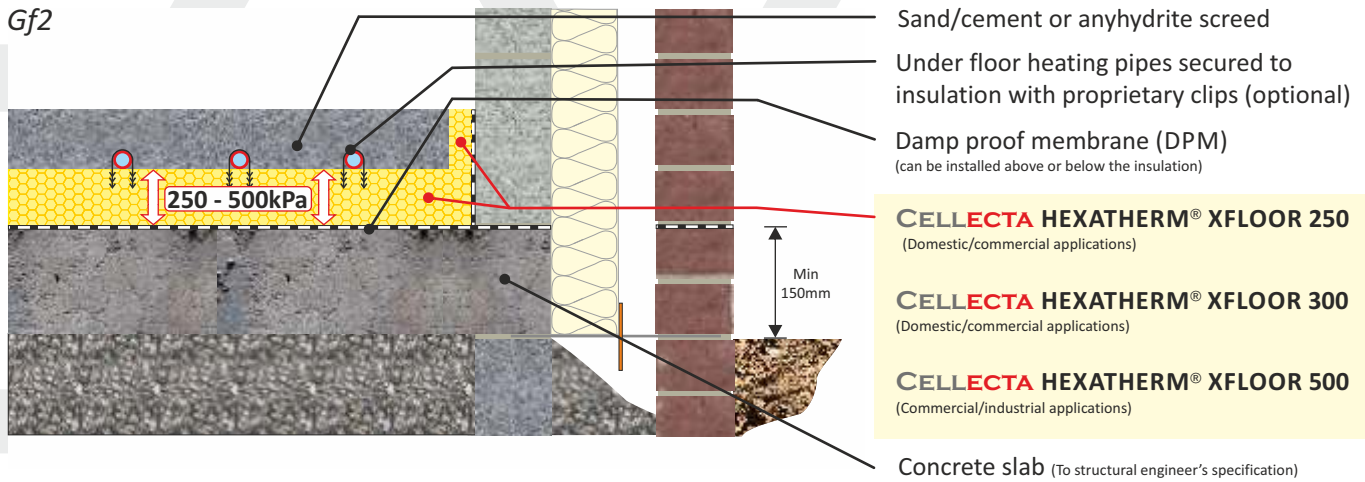


New Offices, Farnborough Airfield: XFLOOR 500 - 75mm

# Ground Bearing Concrete Floor Slab

**CELLECTA HEXATHERM® XFLOOR insulation installed below floating screed**  
Screed incorporating optional underfloor heating system

Gf2



**FASTRACK CAD**  
ARCHITECTURAL CAD DATABASES

**n55Plus**

**b** available on  
blmstore.co

## Product Information

### XFLOOR

**XFLOOR** extruded polystyrene thermal insulation boards have a closed cell structure that provides unrivalled resistance to water absorption. Three grades are available to suit different loading conditions, making them ideal for a multitude of domestic, commercial, educational and healthcare flooring applications

#### Product Benefits

- Excellent life-long thermal performance
- Range of compressive strengths 250 - 500kPa
- Very low water absorption
- Closed cell structure

#### Physical Properties

	<b>XFLOOR</b>		
	<b>250</b>	<b>300</b>	<b>500</b>
Thermal conductivity EN 12667 (W/mK)	≤80mm 0.033 ≥81mm -	0.033 0.034	0.035
Strength at 10% compression EN 826 (kPa)	250	300	500
Strength at 2% compression EN 1606 (kPa)	80	125	180
Long term water absorption by immersion EN 12087 (%)	0.7	0.7	0.7
Temperature range (°C)	-50/+75	-50/+75	-50/+75
Board size (mm)	600 x 2500	600 x 2500	600 x 1250
Thickness' (mm) (other sizes manufactured to order)	20 25 30 - - - - - - - - -	- - - 40 50 60 75 80 100 120 140 160	- - - - 50 60 75 80 100 120 140 160
Edge profile	Square	Square	Shiplap

## Typical Thickness of Insulation Required

P/A ratio	HEXATHERM® XFLOOR 300 (mm)							
0.7	90	110	125	140	175	190	230	280
0.6	90	110	120	140	160	190	230	280
0.5	75	100	110	130	150	180	220	270
0.4	75	90	100	120	140	170	210	260
0.3	60	75	90	110	130	150	200	250
	0.25	0.22	0.20	0.18	0.16	0.14	0.12	0.10

**U-value (W/m²K)**

Calculated in accordance with ISO 13370

## Third Party Accreditation and Approvals



## Environmental Credentials

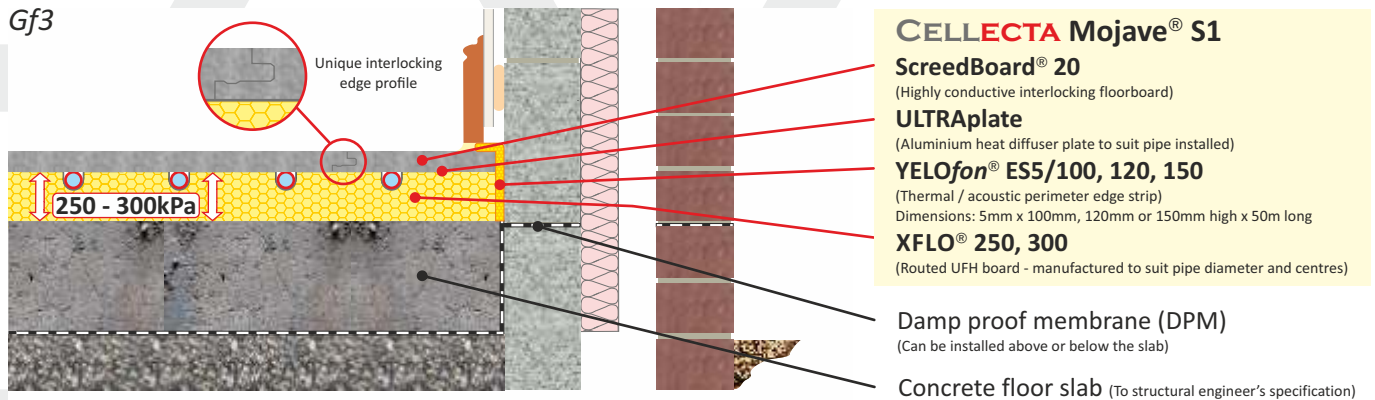


Student accommodation, Egham: XFLOOR 500 - 100mm

# Ground Bearing Concrete Floor Slab

CELLECTA ScreedBoard® 20 installed on CELLECTA XFLO® underfloor heating insulation boards  
Dry laid system

Gf3



**FASTRACK CAD**  
ARCHITECTURAL CAD DATABASES

**nsPlus**

**b** available on  
blmstore.co

## Product Information

**XFLO®**

**HEXATHERM® XFLO** extruded polystyrene underfloor heating boards are manufactured to suit the specific pipe and centres required to provide the desired thermal output. The boards high compressive strength enables it to withstand the riggers of commercial, educational and domestic applications when used in conjunction with **ScreedBoard® 20**.

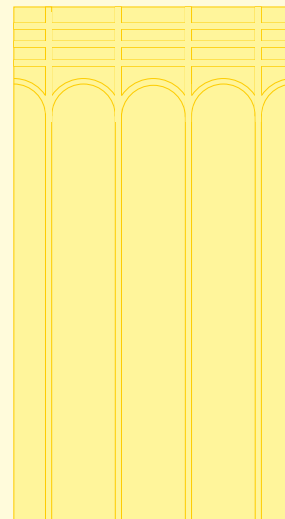
### Product Benefits

- High compressive strength: 250 & 300kPa
- Third party accredited output performance
- Made to suite specific pipe size used (10-25mm)
- Excellent life-long thermal performance

### Physical Properties

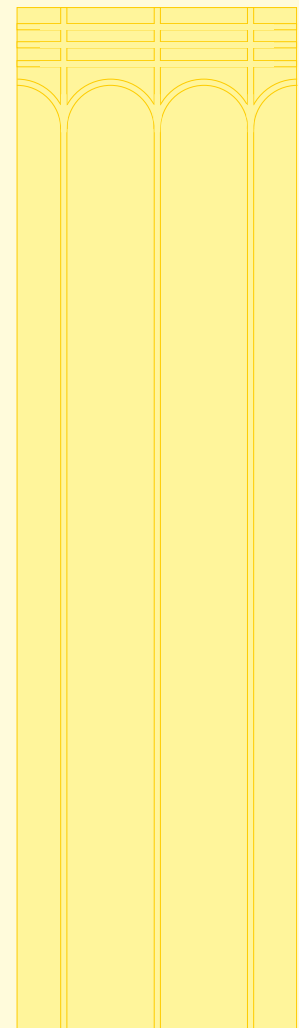
		<b>XFLO®</b>	
		<b>250</b>	<b>300</b>
Product description	-	High strength underfloor heating board	
Strength at 10% compression	kPa	250	300
Thermal conductivity	W/mK	0.033	0.033
Temperature range	°C	-50/+75	-50/+75
Route sizes available (to suit pipe diameter)	mm	10, 12, 14, 15, 16, 18, 20	10, 12, 14, 15, 16, 18, 20
Pipe centres	mm	150, 200, 300	150, 200, 300
Board sizes	Short Long	600 x 1250 600 x 2500	600 x 1250 600 x 2500
Thickness' (other sizes manufactured to order)	mm	20, 25, 30, 35	40, 50, 60, 75

Short board (150C shown)



Other pattern designs manufactured to order

Long board (200C shown)



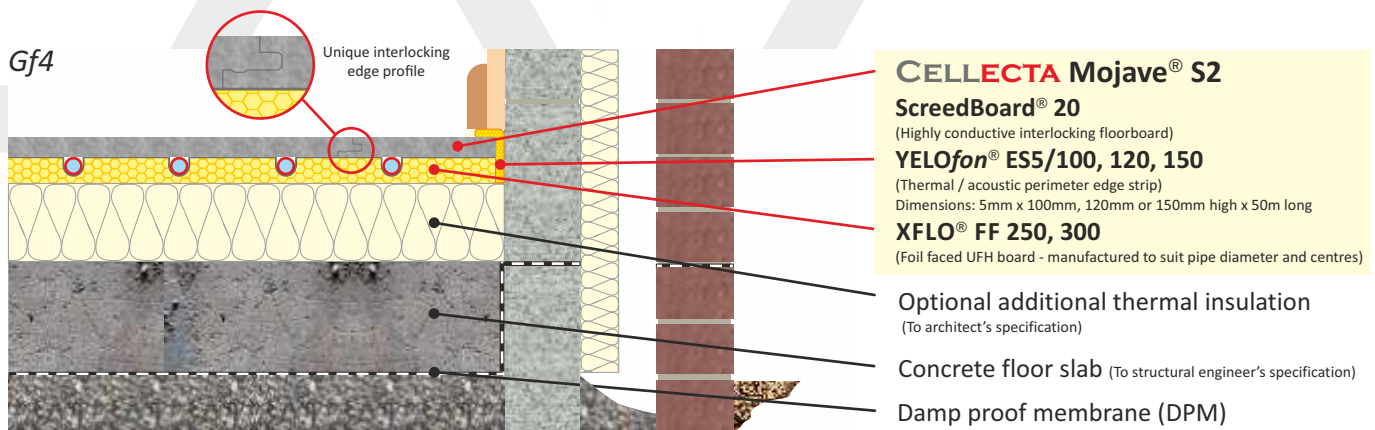
Other pattern designs manufactured to order

Pattern details			
Pipe centers (mm)	150	200	300
Route to suit pipe (mm)	10-25	10-25	10-25
Number of long parallel channels	4	3	2
Number of short parallel return channels	3	3	3



# Ground Bearing Concrete Floor Slab

CELLECTA ScreedBoard® 20 installed on CELLECTA XFLO® underfloor heating insulation boards  
Dry system



FASTRACKCAD  
ARCHITECTURAL CAD DATABASES

NSPlus

Available on  
blmstore.co

## Product Information

### ScreedBoard® 20<sup>(1)</sup>

ScreedBoard® is an award winning 100% recycled reinforced Calcium Sulphate flooring board with a unique interlocking edge profile and high thermal conductivity which enables an underfloor heating system to respond quicker, reducing energy needs, and lowering running costs.

#### Product Benefits

- Dry product, no drying out time
- Low thermal resistance, provides quicker response time than chipboard, timber boarding or a traditional screed
- Unique interlocking edge detail - boards clip together
- Fire Class A1 - Non-combustable (EN 13501-1)

#### Physical Properties

	ScreedBoard® 20
Thermal resistance (m <sup>2</sup> K/W)	0.05
Weight per m <sup>2</sup> /per board (kg)	25 / 18.00
Board size (mm)	20 x 600 x 1200
Edge profile	Interlocking

#### Floor Covering Compatibility

Floor tiles (ceramic, marble, porcelain, stone, slate etc.)	✓
Wood (engineered, laminate and solid)	✓
Vinyl roll, luxury vinyl (LVT, inc. Amitco, Karndean, Polyfloor etc.)	✓*
Carpet / carpet tiles	✓

#### Environmental Credentials



## Product Information

### XFLO® FF

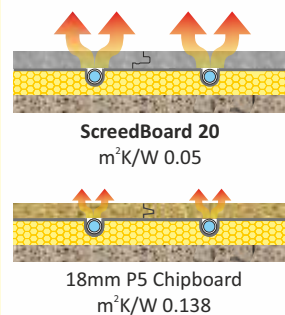
XFLO® FF under floor heating insulation boards have a high compressive strength and aluminium foil facing for added thermal diffusion. The boards are manufactured to suit the pipe diameter and spacing required and once covered with ScreedBoard® 20 provide a responsive heating solution for a multitude of project types.

#### Product Benefits

- High compressive strength 250 or 300kPa
- Third party accredited
- Made to suite specific pipe size used (10-25mm)
- Excellent life-long thermal performance

#### Response Time Comparison

ScreedBoard 20 is **3 times more thermally conductive** than 18mm chipboard, allowing boilers, ground water heat pumps and heat recovery systems to work more efficiently.



#### Physical Properties

		250	300
Product description	-	Foil faced, high strength underfloor heating board	
Strength at 10% compression	kPa	250	300
Thermal conductivity	W/mK	0.033	0.033
Temperature range	°C	-50/+75	-50/+75
Route sizes available (to suit pipe diameter)	mm	10, 12, 14, 15, 16, 18, 20	10, 12, 14, 15, 16, 18, 20
Pipe centres	mm	150, 200, 300	150, 200, 300
Board size	mm	600 x 2500	600 x 2500
Thickness* (other sizes manufactured to order)	mm	20, 25, 30, 35	40, 50, 60, 75

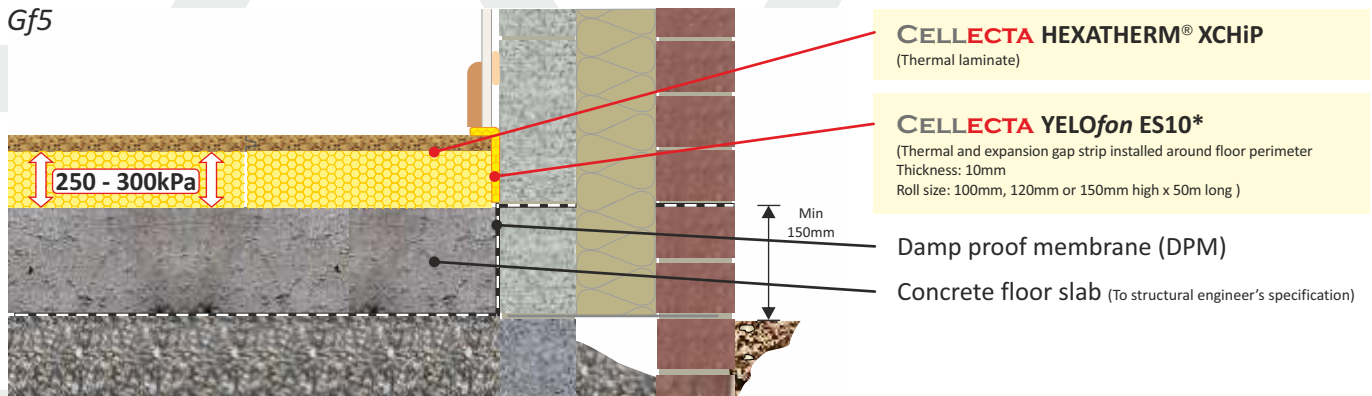
#### Third Party Accreditation and Approvals

\* Laid in accordance with vinyl manufacturer's recommendations

# Ground Bearing Concrete Floor Slab

CELLECTA HEXATHERM® XCHIP chipboard/thermal laminate floor board  
In-situ concrete floor slab

Gf5



FASTRACK CAD  
ARCHITECTURAL CAD DATABASES

nsPlus

Available on  
blmstore.co

## Product Information

### XCHIP

CELLECTA XCHIP combines the benefits of HEXATHERM® high performance thermal insulation with a P5 moisture resistant, tongue and groove chipboard to produce a high compressive strength, interlocking floor board.

## Product Benefits

- Excellent life-long thermal performance
- High compressive strength  $\geq 250\text{kPa}$
- Interlocking, moisture resistant chipboard facing
- Quick to install

## Physical Properties

		XCHIP
Thermal conductivity	$\leq 80\text{mm}$	0.033
EN 12667 (W/mK)	$\geq 81\text{mm}$	0.034
Strength at 10% compression	$\leq 30\text{mm}$	250
EN 826 (kPa)	$\geq 40\text{mm}$	300
Strength at 2% compression	$\leq 30\text{mm}$	80
EN 1606 (kPa)	$\geq 40\text{mm}$	125
Long term water absorption by immersion		0.7
EN 12087 (%)		
Temperature range (°C)		-50/+75
Board size (mm)		600 x 2400
Overall thickness' including 18mm P5 chipboard facing (mm)		38 43 48 58 68 78 93 98 118 138 138 178
(other sizes manufactured to order)		
Edge profile		T&G

\*Not applicable under Q-mark Certification

## Typical Thickness of Insulation Required

P/A ratio	HEXATHERM® XCHIP (mm)							
0.7	90	110	120	140	160	190	230	280
0.6	80	110	120	140	160	190	230	280
0.5	75	100	110	130	150	180	220	270
0.4	70	90	100	120	140	170	210	260
0.3	60	75	90	110	130	150	200	250
	0.25	0.22	0.20	0.18	0.16	0.14	0.12	0.10

U-value (W/m²K)

Calculated in accordance with ISO 13370

## Third Party Accreditation and Approvals



BE 009119-1



## Environmental Credentials







## PROJECT

New apartments,  
Southampton

## APPLICATION

Dry UFH system

## PROJECT SIZE

21,000m<sup>2</sup>

## PRODUCT INSTALLED

ScreedBoard® 20  
XFLO® - 35mm

## PROJECT

St Georges School,  
Broadstairs, Kent

## APPLICATION

Screeded floors

## PROJECT SIZE

1200m<sup>2</sup>

## PRODUCTS INSTALLED

XFLOOR 250 - 25mm  
XFLOOR 300 - 75mm



## PROJECT

New dwellings,  
Wentworth, Surrey

## APPLICATIONS

Basement  
Swimming pool  
Ground floor

## PROJECT SIZE

1200m<sup>2</sup>

## PRODUCTS INSTALLED

XPERi - 40mm  
XFLOOR - 140mm  
XPOOL® - 80mm

## PROJECT

New reception,  
Southampton Hospital

## APPLICATION

Dry UFH system

## PROJECT SIZE

700m<sup>2</sup>

## PRODUCT INSTALLED

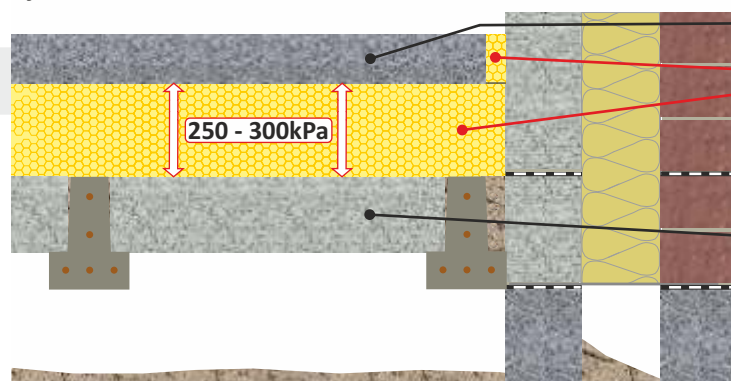
ScreedBoard® 20  
XFLO® - 60mm



# Suspended Beam and Concrete Block Ground Floor

CELLECTA HEXATHERM® XFLOOR insulation installed below floating screed  
Suspended pre-stressed concrete beam and block floor

Gf6



Sand/cement or anhydrite screed

**CELLECTA HEXATHERM® XFLOOR 250**  
(Domestic/commercial applications)

**CELLECTA HEXATHERM® XFLOOR 300**  
(Domestic/commercial applications)

Pre-stressed concrete beam and concrete block flooring  
(To structural engineers' specification)

**FASTRACK CAD**  
ARCHITECTURAL CAD DATABASES

**NS Plus**

**b** available on **blmstore.co**

## Product Information



### XFLOOR

**XFLOOR** extruded polystyrene thermal insulation boards are designed specifically for domestic, commercial and industrial flooring applications where a high resistance to compression and water absorption is required.

## Product Benefits

- Excellent life-long thermal performance
- High compressive strength
- Very low water absorption
- Closed cell structure

## Physical Properties

	<b>XFLOOR</b>	
	<b>250</b>	<b>300</b>
Thermal conductivity EN 12667 (W/mK)	≤80mm 0.033 ≥81mm -	0.033 0.034
Strength at 10% compression EN 826 (kPa)	250	300
Strength at 2% compression EN 1606 (kPa)	80	125
Long term water absorption by immersion EN 12087 (%)	0.7	0.7
Temperature range (°C)	-50/+75	-50/+75
Board size (mm)	600 x 2500	600 x 2500
Thickness' (mm) (other sizes manufactured to order)	20 25 30 - - - - - - - - -	- - - 40 50 60 75 80 100 120 140 160
Edge profile	 Square	 Square

## Typical Thickness of Insulation Required

P/A ratio	HEXATHERM® XFLOOR 300 (mm)							
0.7	75	100	120	130	150	180	220	270
0.6	70	90	100	130	150	175	210	270
0.5	70	90	100	120	140	170	210	260
0.4	60	80	100	110	130	160	200	250
0.3	50	70	80	100	120	160	190	240
	0.25	0.22	0.20	0.18	0.16	0.14	0.12	0.10

U-value (W/m²K)

Calculated in accordance with ISO 13370

## Third Party Accreditation and Approvals



2015



BE 009119-1

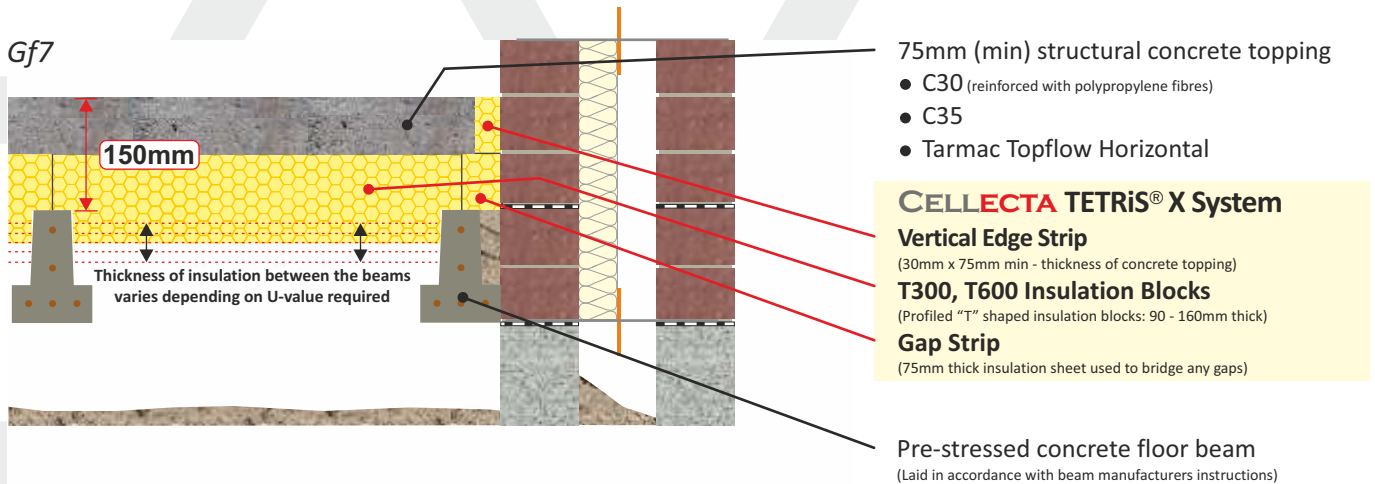


## Environmental Credentials



# Suspended Beam and Insulation Block Ground Floor

CELLECTA TETRIS® X insulation block system installed on & between pre-stressed concrete beams  
Structural concrete topping finish



## Product Information

### TETRIS® X

TETRIS® X high compressive strength extruded polystyrene insulation block replace the concrete blocks in a beam and floor system. The unique "T" profiled block sit on and fits between standard pre-stressed concrete floor beams. The insulation block is then covered with a concrete topping to provide a structural floor with outstanding thermal performance with zero cold bridging.

## Product Benefits

- U-values as low as 0.11 W/m<sup>2</sup>K achievable
- A+ Green Guide rated system
- Quicker and easier to install than a beam & block floor
- Fixes the floor height above the beams (150 or 225mm)
- Supplied in plot specific quantities
- Underfloor heating easily incorporated
- 100% recyclable

## Physical Properties

TETRIS® X				
	T600	T300	Gap Strip	Flat Panel
Thermal conductivity EN 12667 (W/mK)	≤75mm 0.034	≥90mm 0.034	0.033	0.033
Compressive strength at 10% BS EN 826 (kPa)	>300	>300	>300	>300
Compressive strength at 2% BS EN 1606 (kPa)	125	125	125	125
Sheet/strip size (mm)	600 x 2500	300 x 2500	50 - 600 x 2500	600 x 2500
Over all thickness' (mm) (other sizes manufactured to order)	- 90 100 120 140 160	- 90 100 120 140 160	- 75 - - - - - -	- 75 - - - - - -
Edge profile	15 - 85mm Rebated <sup>(1)</sup>	75mm Rebated <sup>(1)</sup>	Square	Square

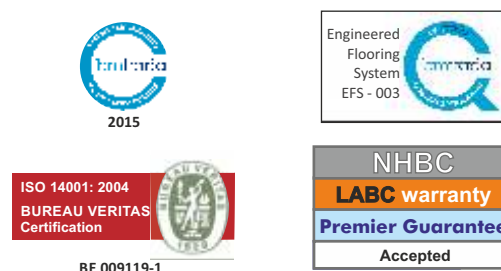
(1) Rebated to suit specific beam used

## Typical Thickness of Insulation Required

P/A ratio	TETRIS® X (mm)								
0.7	100	90	120	90	90	90	100	140	
0.6	90	90	120	140	90	90	100	140	
0.5	90	90	120	140	90	90	100	140	
0.4	90	90	90	120	160	90	90	100	
0.3	90	90	90	120	140	90	90	90	
	0.25	0.22	0.20	0.18	0.16	0.15	0.14	0.13	

U-value (W/m<sup>2</sup>K)  
Calculated in accordance with ISO 13370

## Third Party Accreditation and Approvals



## Environmental Credentials



01634 29-66-77



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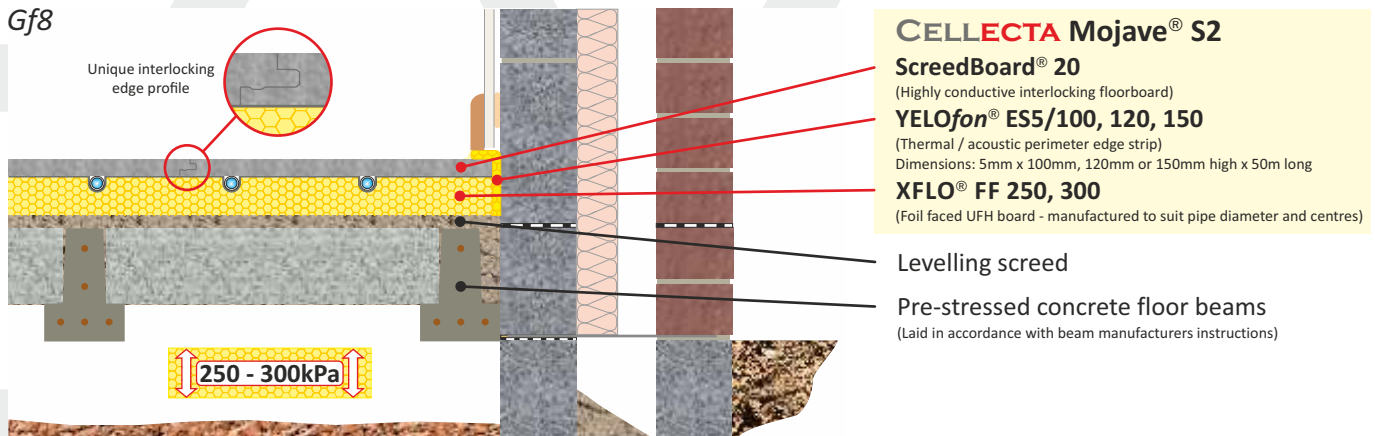
technical@cellecta.co.uk



# Suspended Beam and Concrete Block Ground Floor

CELLECTA Mojave® underfloor heating system laid on level beam and block floor  
Dry laid

Gf8



## CELLECTA Mojave® S2

### ScreedBoard® 20

(Highly conductive interlocking floorboard)

### YELOfon® ES5/100, 120, 150

(Thermal / acoustic perimeter edge strip)

Dimensions: 5mm x 100mm, 120mm or 150mm high x 50m long

### XFLOR® FF 250, 300

(Foil faced UFH board - manufactured to suit pipe diameter and centres)

Levelling screed

Pre-stressed concrete floor beams

(Laid in accordance with beam manufacturers instructions)

## Product Information

### ScreedBoard® 20<sup>(1)</sup>

ScreedBoard® is an award winning 100% recycled reinforced Calcium Sulphate flooring board with a unique interlocking edge profile and high thermal conductivity which enables an underfloor heating system to respond quicker, reducing energy needs, and lowering running costs.

#### Product Benefits

- ⬡ Dry product, no drying out time
- ⬡ Low thermal resistance, provides quicker response time than chipboard, timber boarding or a traditional screed
- ⬡ Unique interlocking edge detail - boards clip together
- ⬡ Fire Class A1 - Non-combustable (EN 13501-1)

#### Physical Properties

	ScreedBoard® 20
Thermal resistance (m <sup>2</sup> K/W)	0.05
Weight per m <sup>2</sup> /per board (kg)	25 / 18.00
Board size (mm)	20 x 600 x 1200
Edge profile	Interlocking

#### Floor Covering Compatibility

Floor tiles (ceramic, marble, porcelain, stone, slate etc.)	✓
Wood (engineered, laminate and solid)	✓
Vinyl roll, luxury vinyl (LVT, inc. Amitco, Karndean, Polyfloor etc.)	✓*
Carpet / carpet tiles	✓

#### Environmental Credentials



## Product Information

### XFLOR® FF

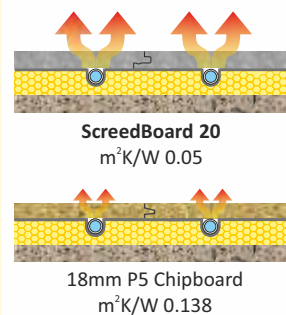
XFLOR® FF under floor heating insulation boards have a high compressive strength and aluminium foil facing for added thermal diffusion. The boards are manufactured to suit the pipe diameter and spacing required and once covered with ScreedBoard® 20 provide a responsive heating solution for a multitude of project types.

#### Product Benefits

- ⬡ High compressive strength 250 or 300kPa
- ⬡ Third party accredited
- ⬡ Made to suite specific pipe size used (10-25mm)
- ⬡ Excellent life-long thermal performance

#### Response Time Comparison

ScreedBoard 20 is **3 times more thermally conductive** than 18mm chipboard, allowing boilers, ground water heat pumps and heat recovery systems to work more efficiently.



#### Physical Properties

		XFLOR® FF	
		250	300
Product description	-	Foil faced, high strength underfloor heating board	
Strength at 10% compression	kPa	250	300
Thermal conductivity	W/mK	0.033	0.033
Temperature range	°C	-50/+75	-50/+75
Route sizes available (to suit pipe diameter)	mm	10, 12, 14, 15, 16, 18, 20	10, 12, 14, 15, 16, 18, 20
Pipe centres	mm	150, 200, 300	150, 200, 300
Board size	mm	600 x 2500	600 x 2500
Thickness* (other sizes manufactured to order)	mm	20, 25, 30, 35	40, 50, 60, 75

#### Third Party Accreditation and Approvals

\* Laid in accordance with vinyl manufacturer's recommendations



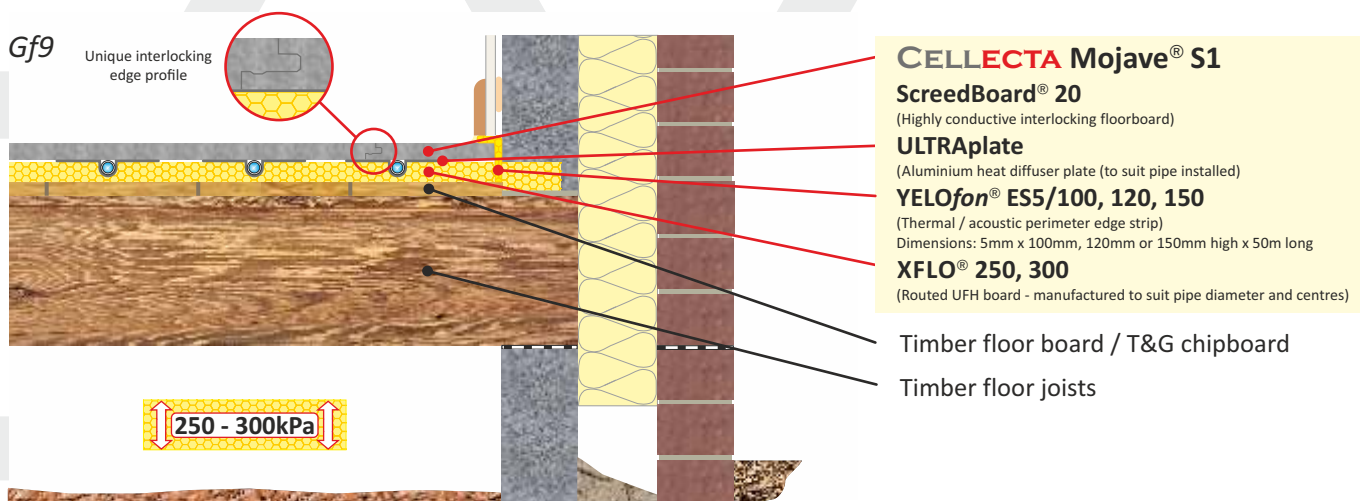
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## Product Information

### ScreedBoard® 20<sup>(1)</sup>

ScreedBoard® is an award winning 100% recycled reinforced Calcium Sulphate flooring board with a unique interlocking edge profile and high thermal conductivity which enables an underfloor heating system to respond quicker, reducing energy needs, and lowering running costs.

#### Product Benefits

- Dry product, no drying out time
- Low thermal resistance, provides quicker response time than chipboard, timber boarding or a traditional screed
- Unique interlocking edge detail - boards clip together
- Fire Class A1 - Non-combustable (EN 13501-1)

#### Physical Properties

	ScreedBoard® 20
Thermal resistance (m <sup>2</sup> K/W)	0.05
Weight per m <sup>2</sup> /per board (kg)	25 / 18.00
Board size (mm)	20 x 600 x 1200
Edge profile	Interlocking

#### Floor Covering Compatibility

Floor tiles (ceramic, marble, porcelain, stone, slate etc.)	✓
Wood (engineered, laminate and solid)	✓
Vinyl roll, luxury vinyl (LVT, inc. Amitco, Karndean, Polyfloor etc.)	✓*
Carpet / carpet tiles	✓

#### Environmental Credentials



## Product Information



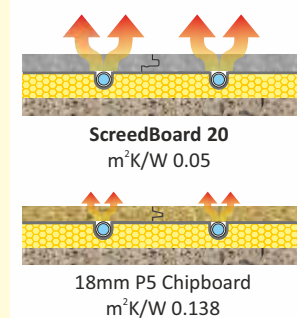
XFLOR® boards are made from high compressive strength extruded polystyrene able to withstand the rigours of the installation process as well as the long term loads imposed in residential and commercial applications. The boards are manufactured to suit the pipe diameter and spacing required to achieve the desired thermal output.

#### Product Benefits

- High compressive strength 250 or 300kPa
- Third party accredited
- Made to suite specific pipe size used (10-25mm)
- Excellent life-long thermal performance

#### Response Time Comparison

ScreedBoard is **3 times more thermally conductive** than 18mm chipboard, allowing boilers, ground water heat pumps and heat recovery systems to work more efficiently.



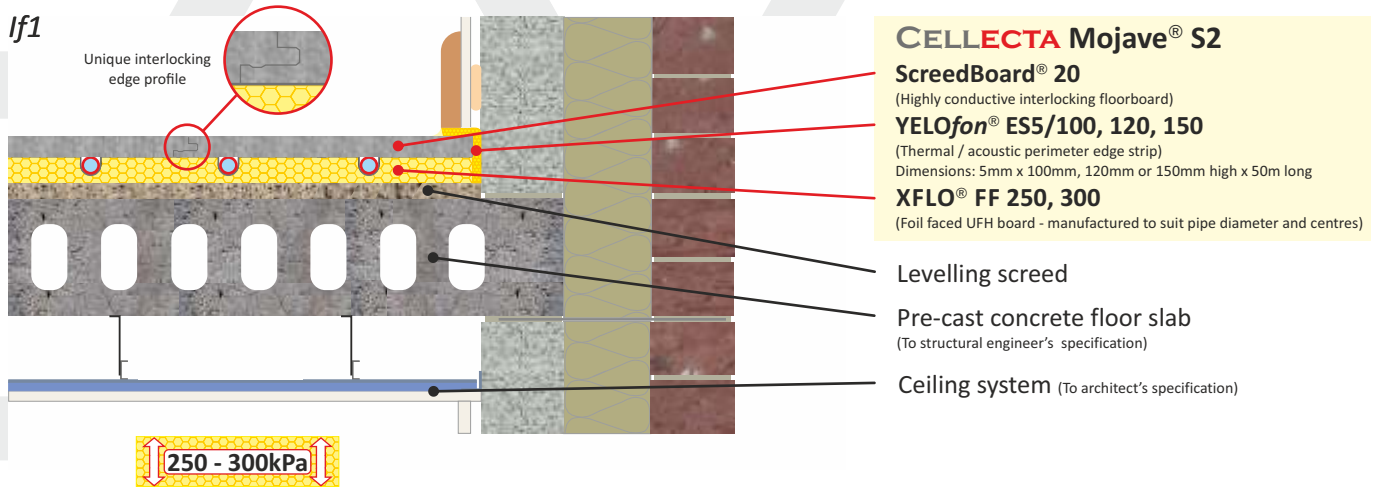
#### Physical Properties

		XFLOR®	
		250	300
Product description	-	High strength underfloor heating board	
Strength at 10% compression	kPa	250	300
Thermal conductivity	W/mK	0.033	0.033
Temperature range	°C	-50/+75	-50/+75
Route sizes available (to suit pipe diameter)	mm	10, 12, 14, 15, 16, 18, 20	10, 12, 14, 15, 16, 18, 20
Pipe centres	mm	150, 200, 300	150, 200, 300
Board size	mm	600 x 2500	600 x 2500
Thickness* (other sizes manufactured to order)	mm	20, 25, 30, 35	40, 50, 60, 75

#### Third Party Accreditation and Approvals



\* Laid in accordance with vinyl manufacturer's recommendations



## CELLECTA Mojave® S2

### ScreedBoard® 20

(Highly conductive interlocking floorboard)

### YELOfon® ES5/100, 120, 150

(Thermal / acoustic perimeter edge strip)

Dimensions: 5mm x 100mm, 120mm or 150mm high x 50m long

### XFLO® FF 250, 300

(Foil faced UFH board - manufactured to suit pipe diameter and centres)

Levelling screed

Pre-cast concrete floor slab

(To structural engineer's specification)

Ceiling system (To architect's specification)

## Product Information

### ScreedBoard® 20<sup>(1)</sup>

ScreedBoard® is an award winning 100% recycled reinforced Calcium Sulphate flooring board with a unique interlocking edge profile and high thermal conductivity which enables an underfloor heating system to respond quicker, reducing energy needs, and lowering running costs.

#### Product Benefits

- Dry product, no drying out time
- Low thermal resistance, provides quicker response time than chipboard, timber boarding or a traditional screed
- Unique interlocking edge detail - boards clip together
- Fire Class A1 - Non-combustable (EN 13501-1)

#### Physical Properties

	ScreedBoard® 20
Thermal resistance (m <sup>2</sup> K/W)	0.05
Weight per m <sup>2</sup> /per board (kg)	25 / 18.00
Board size (mm)	20 x 600 x 1200
Edge profile	Interlocking

#### Floor Covering Compatibility

Floor tiles (ceramic, marble, porcelain, stone, slate etc.)	✓
Wood (engineered, laminate and solid)	✓
Vinyl roll, luxury vinyl (LVT, inc. Amitco, Karndean, Polyfloor etc.)	✓*
Carpet / carpet tiles	✓

#### Environmental Credentials



## Product Information

### XFLO® FF

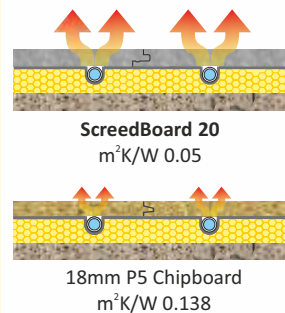
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#### Product Benefits

- High compressive strength 250 or 300kPa
- Third party accredited
- Made to suite specific pipe size used (10-25mm)
- Excellent life-long thermal performance

#### Response Time Comparison

ScreedBoard 20 is **3 times more thermally conductive** than 18mm chipboard, allowing boilers, ground water heat pumps and heat recovery systems to work more efficiently.



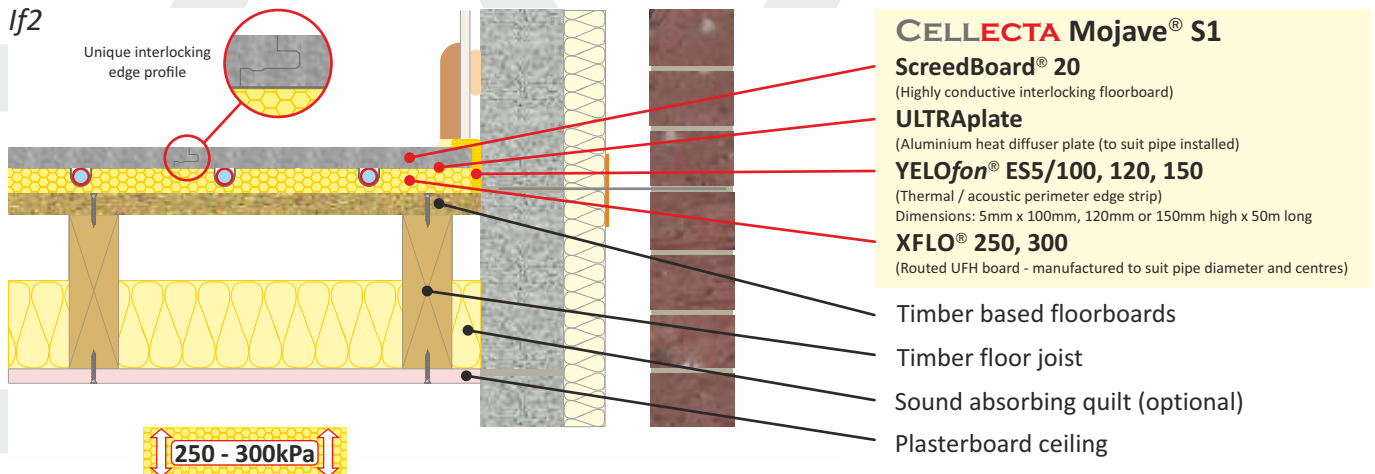
#### Physical Properties

		250	300
Product description	-	Foil faced, high strength underfloor heating board	
Strength at 10% compression	kPa	250	300
Thermal conductivity	W/mK	0.033	0.033
Temperature range	°C	-50/+75	-50/+75
Route sizes available (to suit pipe diameter)	mm	10, 12, 14, 15, 16, 18, 20	10, 12, 14, 15, 16, 18, 20
Pipe centres	mm	150, 200, 300	150, 200, 300
Board size	mm	600 x 2500	600 x 2500
Thickness' (other sizes manufactured to order)	mm	20, 25, 30, 35	40, 50, 60, 75

#### Third Party Accreditation and Approvals

\* Laid in accordance with vinyl manufacturer's recommendations





## Product Information

### ScreedBoard® 20<sup>(1)</sup>

ScreedBoard® is an award winning 100% recycled reinforced Calcium Sulphate flooring board with a unique interlocking edge profile and high thermal conductivity which enables an underfloor heating system to respond quicker, reducing energy needs, and lowering running costs.

#### Product Benefits

- Dry product, no drying out time
- Low thermal resistance, provides quicker response time than chipboard, timber boarding or a traditional screed
- Unique interlocking edge detail - boards clip together
- Fire Class A1 - Non-combustable (EN 13501-1)

#### Physical Properties

	<b>ScreedBoard® 20</b>
Thermal resistance (m <sup>2</sup> K/W)	0.05
Weight per m <sup>2</sup> /per board (kg)	25 / 18.00
Board size (mm)	20 x 600 x 1200
Edge profile	Interlocking

#### Floor Covering Compatibility

Floor tiles (ceramic, marble, porcelain, stone, slate etc.)	✓
Wood (engineered, laminate and solid)	✓
Vinyl roll, luxury vinyl (LVT, inc. Amitco, Karndean, Polyfloor etc.)	✓*
Carpet / carpet tiles	✓

#### Environmental Credentials



## Product Information

### XFLO®

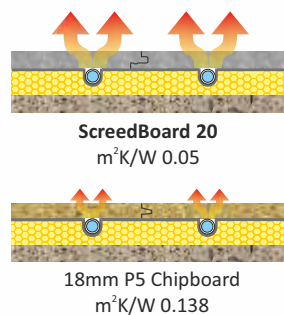
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#### Product Benefits

- High compressive strength 250 or 300kPa
- Third party accredited
- Made to suite specific pipe size used (10-25mm)
- Excellent life-long thermal performance

#### Response Time Comparison

ScreedBoard is **3 times more thermally conductive** than 18mm chipboard, allowing boilers, ground water heat pumps and heat recovery systems to work more efficiently.



#### Physical Properties

		<b>250</b>	<b>300</b>
Product description	-	High strength underfloor heating board	
Strength at 10% compression	kPa	250	300
Thermal conductivity	W/mK	0.033	0.033
Temperature range	°C	-50/+75	-50/+75
Route sizes available (to suit pipe diameter)	mm	10, 12, 14, 15, 16, 18, 20	10, 12, 14, 15, 16, 18, 20
Pipe centres	mm	150, 200, 300	150, 200, 300
Board size	mm	600 x 2500	600 x 2500
Thickness* (other sizes manufactured to order)	mm	20, 25, 30, 35	40, 50, 60, 75

#### Third Party Accreditation and Approvals



\* Laid in accordance with vinyl manufacturer's recommendations

**Sf1**

Unique interlocking edge profile

**CELLECTA Mojave® S1**

**ScredBoard® 20**  
(Highly conductive interlocking floorboard)

**ULTRAplate**  
(Aluminium heat diffuser plate to suit pipe installed)

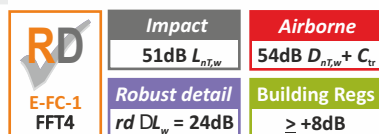
**YELOfon® ES5/100, 120, 150**  
(Thermal / acoustic perimeter edge strip)  
Dimensions: 5mm x 100mm, 120mm or 150mm high x 50m long

**XFLO® 250, 300**  
(Routed UFH board - manufactured to suit pipe diameter and centres)

**FIBREFON® 10**  
(High performance acoustic sheet)  
Dimensions: 10mm x 600mm x 1200mm

**Pre-cast concrete floor slab & levelling screed**  
(To structural engineer's / Robust detail specification)


**Ceiling system** (To architect's / Robust detail specification)



## Product Benefits

- High compressive strength: 250 & 300kPa
- Third party accredited output performance
- Made to suite specific pipe size used (10-25mm)
- Excellent life-long thermal performance

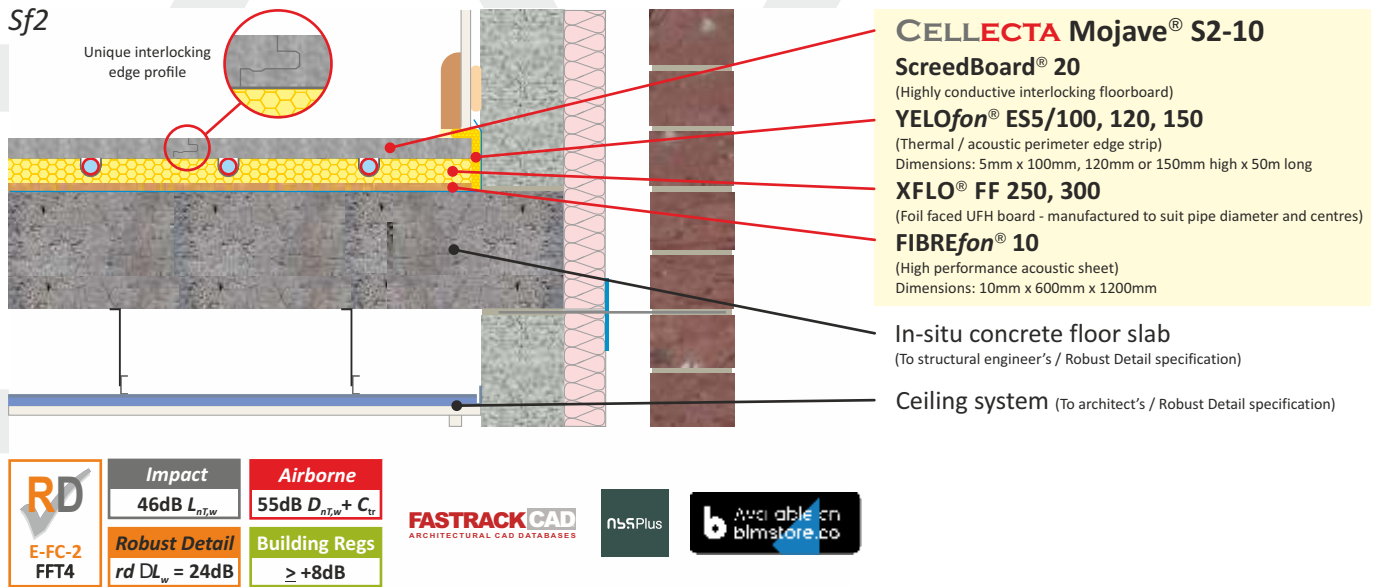
## Physical Properties

			
		<b>250</b>	<b>300</b>
Product description	-	High strength underfloor heating board	
Strength at 10% compression	kPa	250	300
Thermal conductivity	W/mK	0.033	0.033
Temperature range	°C	-50/+75	-50/+75
Route sizes available (to suit pipe diameter)	mm	10, 12, 14, 15, 16, 18, 20	10, 12, 14, 15, 16, 18, 20
Pipe centres	mm	150, 200, 300	150, 200, 300
Board sizes      Short Long	mm	600 x 1250 600 x 2500	600 x 1250 600 x 2500
Thickness' (other sizes manufactured to order)	mm	20, 25, 30, 35	40, 50, 60, 75

Other pattern designs manufactured to order

Other pattern designs manufactured to order

CELLECTA ScreedBoard® 20 installed on CELLECTA XFLO® underfloor insulation heating boards  
CELLECTA FIBREfon 10 resilient layer installed below UFH  
Building Regulations Part E Solution



## Product Information

### ScreedBoard® 20<sup>(1)</sup>

ScreedBoard® is an award winning high density, 100% recycled reinforced Calcium Sulphate flooring board with outstanding acoustic properties. Its high thermal conductivity allows an UFH system to be more responsive, reducing energy needs and lowering running costs.

#### Product Benefits

- Robust detail acoustic treatment (E-FC-2 & FFT4)
- Low thermal resistance, provides quicker response time than chipboard, timber boarding or a traditional screed
- Dry product, no drying out time
- Fire Class A1<sup>(1)</sup> - Non-combustable (EN 13501-1)

#### Physical Properties

	ScreedBoard® 20
Thermal resistance (m <sup>2</sup> K/W)	0.05
Weight per m <sup>2</sup> / per board (kg)	25 / 18.00
Board size (mm)	20 x 600 x 1200
Edge profile	Interlocking

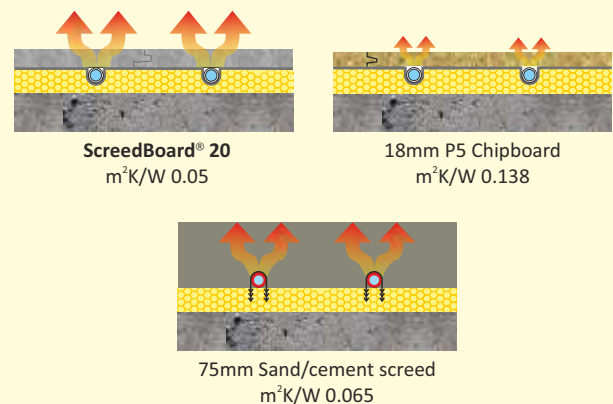
#### Floor Covering Compatibility

Floor tiles (ceramic, marble, porcelain, stone, slate etc.)	✓
Wood (engineered, laminate and solid)	✓
Vinyl roll, luxury vinyl (LVT, inc. Amitco, Karndean, Polyfloor etc.)	✓*
Carpet / carpet tiles	✓

\* Laid in accordance with vinyl manufacturer's recommendations

## Response Time Comparison

ScreedBoard® 20 has a low thermal resistance when compared to the other commonly used floor finishes, allowing boilers, ground water heat pumps and heat recovery systems to work at maximum efficiency.



## Third Party Accreditation and Approvals



## Environmental Credentials

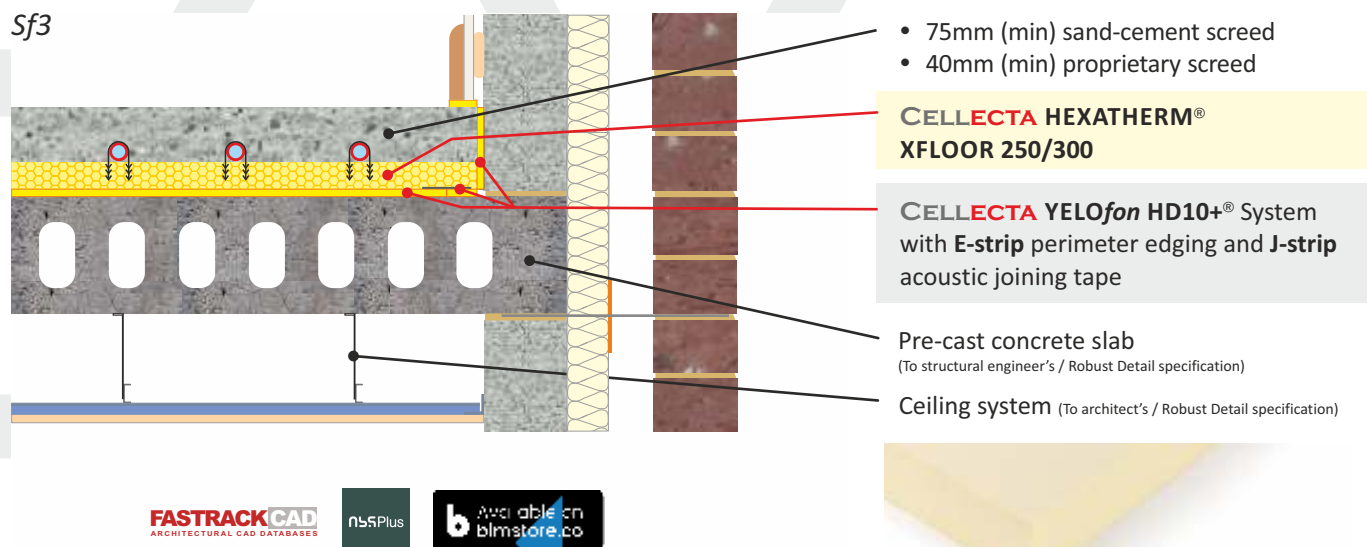


# Pre-cast Floor Plank Separating Floor

CELLECTA HEXATHERM® XFLOOR laid on YELOfon® HD10+ resilient layer and covered with screed

Incorporating underfloor heating system

Building Regulations Part E Solution



## Product Information

### XFLOOR

- High compressive strength
- Excellent life-long thermal performance
- Very low water absorption
- Closed cell structure

### Physical Properties

	<b>XFLOOR</b>	
	250	300
Thermal conductivity EN 12667 (W/mK)	≤80mm ≥81mm	0.033 - 0.034
Temperature range (°C)	-50/+75	-50/+75
Thickness* (mm) (other sizes manufactured to order)	20 25 30 35	40 50 60 75 80 100 120 140 160

## Acoustic Performance

<b>RD</b> E-FC-5,17 & 18 Treatment	<b>Impact<sup>(1)</sup></b> 54dB $L_{nT,w}$	<b>Airborne<sup>(1)</sup></b> 52dB $D_{nT,w} + C_{tr}$	<b>Building Regs</b> ≥ +5dB
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## Third Party Accreditation and Approvals



## Physical Properties

### YELOfon® HD10+ System

- High performance resilient layer
- Lightweight, easy to cut & install rolls
- Over 12,500,000m<sup>2</sup> successfully installed
- Part E Robust Detail (E-FC-5, 17 & 18)
- Suitable for all types of concrete floors & screeds

### Physical Properties

	<b>YELOfon® HD10+ System</b>
Typical acoustic performance	Airborne: 52 - 55dB Impact: 54 - 47dB
Roll dimension	<b>HD10+:</b> 10mm x 1500mm x 33.33m <b>E-strip:</b> 7mm x 200mm x 33.33m <b>J-strip:</b> 2.5mm x 75mm x 40m (x 2)
Weight	20.83kg per System pack

## Environmental Credentials

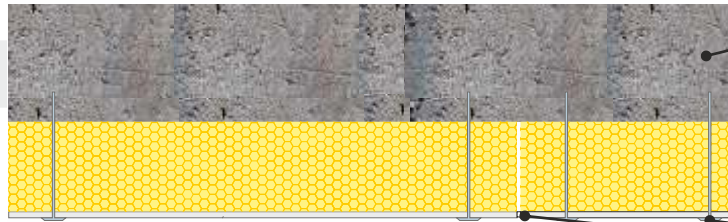


New apartments, Dorchester: XFLOOR 250 - 25mm YELOfon HD10+

(1) Robust detail mean performance values.



S/I



In-situ concrete slab  
(To structural engineer's specification)

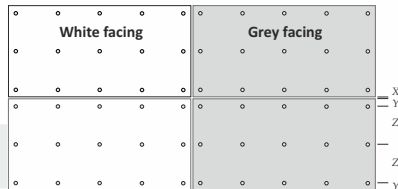
**CELLECTA HEXATHERM® XCPL**

(High impact faced thermal laminate)  
Option 1: Grey - 6mm cementitious board  
Option 2: White - 6mm Glasroc multiboard

Stainless steel fixing anchors

Intumescent mastic sealant

Fixing layout

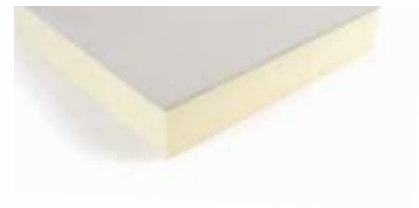


X - 3 - 6mm expansion gap between boards  
Y - Fixings set in at 50mm (min) from board edge  
Z - Fixings set at 600mm maximum centres

**FASTRACK CAD**  
ARCHITECTURAL CAD DATABASES

**n55Plus**

**b** Available on  
blmstore.co



## Product Information

**XCPL**

**HEXATHERM® XCPL** combines the benefits of a high performance extruded polystyrene with a Class O facing board to produce a composite thermal board to suit car park and soffit lining applications.

## Product Benefits

- Smooth high impact Class O facing
- Excellent life-long thermal performance
- Choice of two facing colours: White & Grey
- Easy to install

## Physical Properties

		<b>XCPL</b>
Thermal conductivity	≤80mm	0.033
EN 12667 (W/mK)	≥81mm	0.034
Strength at 10% compression	≤30mm	250
EN 826 (kPa)	≥40mm	300
Strength at 2% compression	≤30mm	80
EN 1606 (kPa)	≥40mm	125
Long term water absorption by immersion		0.7
EN 12087 (%)		
Temperature range (°C)		-50/+75
Board size (mm)		1200 x 2400
Thickness' available - including 6mm high impact class O facing (other sizes manufactured to order)		26 31 36 46 56 66 81 86 106 126 146 166
Edge profile		Square

Note. Refer to Part B and Section 2 fire safety regulations.

## Typical Thickness of Insulation Required

Thickness of concrete slab (mm)	HEXATHERM® XCPL (mm)				
<b>200</b>	120	140	160	170	190
<b>150</b>	120	140	160	170	190
	0.25	0.22	0.20	0.18	0.16
	U-value (W/m²K)				
	Calculated in accordance with ISO 13370				

## Third Party Accreditation and Approvals



## Environmental Credentials



# Inverted Flat Roofs

## Introduction

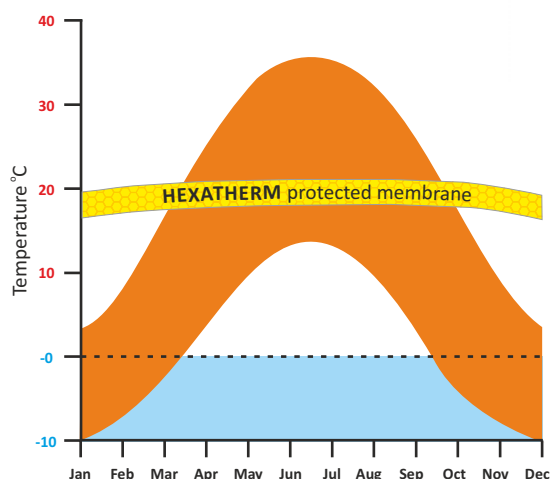
Unlike conventional warm and cold roof constructions, **HEXATHERM®** inverted roof insulation protects the waterproof membrane from a number of stresses: freeze-thaw action, solar radiation, damage caused by interstitial condensation, ultra-violet degradation and mechanical damage caused by foot traffic during construction and maintenance. Consequently, the life expectancy of the membrane is greatly increased.

## Key Benefits of HEXATHERM® Inverted Roof Insulation

- ⬢ Excellent life-long thermal performance
- ⬢ Very low water absorption
- ⬢ High compressive strength - able to withstand long-term static loads
- ⬢ **Environmentally friendly - 100% recyclable**

## Thermal Shock Protection

The graph below illustrates two temperature variations: the orange area shows a typical unprotected warm roof membrane; the yellow shows a membrane protected with **HEXATHERM®** inverted insulation boards.



## Loading Requirements

The roof structure must be strong enough to withstand the maximum expected loads with a suitable factor of safety. Inverted roofs are subject to three main loads: dead, wind and imposed, refer to EN 1991-1-3 2003 + A1: 2015, EN 1991-1-4 2005 + A1: 2010 and EN 1991-1-7 2006 + A1: 2014 for further guidance. The insulation must be covered with either ballast or paving slabs to protect it from ultra-violet degradation and to prevent wind up-lift, or floating. To calculate the weight of ballast required refer to BRE Digest 295. For severe exposure zones or tall buildings, specialist advice should be sought. BRE Digest 311 Wind scour of gravel ballast on roofs, should be used when a calculation is required for a specific building project.

## Filter Layer

Damage to the membrane may occur if fines are washed between the insulation boards. To prevent this, the insulation should be covered with either a suitable water permeable non-woven polyester filter layer or **HEXATEX** thermal improvement membrane, which will also improve the thermal efficiency of the insulation boards.

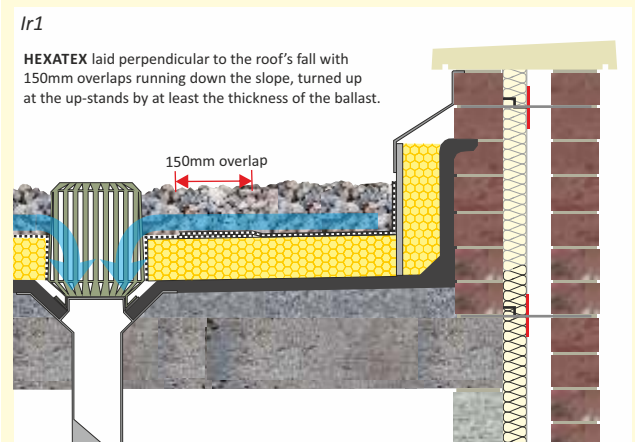


Bermondsey Spa, London XROOF 300 - 240mm

## HEXATEX Thermal Improvement Membrane

The thickness of insulation used on an inverted roof must be increased by 20% to allow for the intermittent cooling effect of rainwater on the waterproof membrane.

On roofs with a fall of 1:60 - 1:80 the cooling effect can be dramatically reduced by replacing the non-woven filter layer between the insulation and the ballast with **HEXATEX** vapour permeable, thermal improvement membrane.



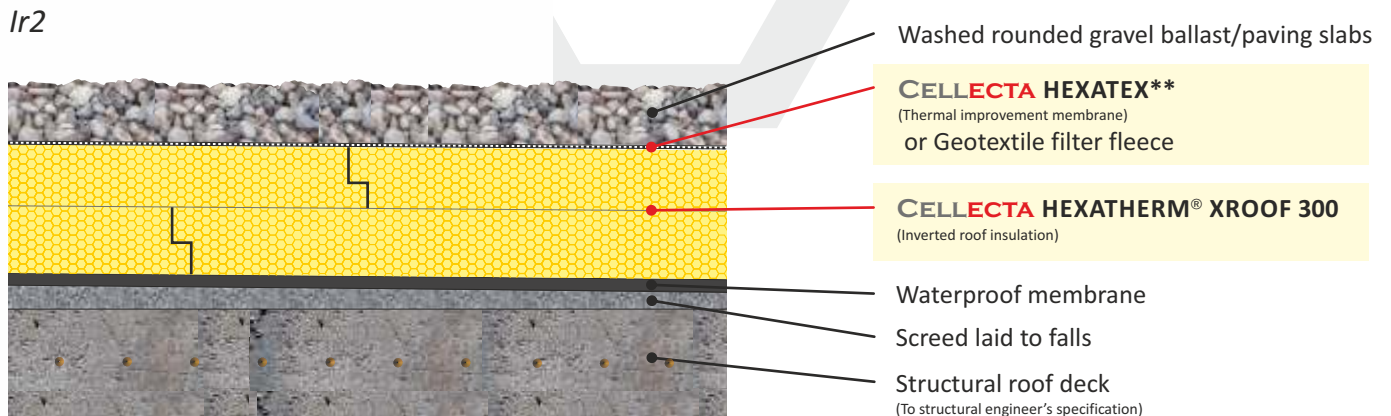
## HEXATEX Physical Specifications

- Thickness: 0.4 mm
- Roll size: 1.5m x 50m
- Weight: 112g/m<sup>2</sup>
- Water vapour resistance (BS 3177): 0.21 MNs/g
- Water column: > 2.00m
- Tensile strength longitudinal (BS 2782-3): 221 N/50mm
- Tensile strength transverse (BS 2782-3): 177 N/50mm
- Fire rating (CE): E
- Temperature range: -40°C to + 80°C
- UV stability: 2 months



# Ballasted Inverted Flat Roof

CELLECTA HEXATHERM® 300 insulation ballasted with washed rounded gravel/paving slabs  
1:60-1:80 Falls



**FASTRACKCAD**  
ARCHITECTURAL CAD DATABASES



## Product Information

### XROOF 300

**HEXATHERM® XROOF 300** extruded polystyrene thermal insulation boards are designed specifically for inverted roof applications where a high resistance to compression, closed cell structure and very low water absorption is essential.

## Product Benefits

- Excellent life-long thermal performance
- High compressive strength >300kPa
- Very low water absorption
- Ship lap edge profile

## Physical Properties

	<b>XROOF</b>
	<b>300</b>
Thermal conductivity EN 12667 (W/mK)	≤80mm 0.033 ≥81mm 0.034
Strength at 10% compression EN 826 (kPa)	300
Strength at 2% compression EN 1606 (kPa)	125
Long term water absorption by immersion EN 12087 (%)	0.7
Temperature range (°C)	-50/+75
Board size (mm)	600 x 1250
Thickness* (mm) (other sizes manufactured to order)	- - - - 75 80 100 120 140 160
Edge profile	Shiplap

\*\*Not applicable under Q-mark Certification

## Typical Thickness of Insulation Required

	Thickness of insulation required for a 200mm concrete deck					
<b>HEXATHERM XROOF 300<sup>(A)</sup></b>	160	190*	220*	290*	350*	460*
<b>HEXATHERM XROOF 300<sup>(B)</sup></b>	140	160	180*	200*	230*	270*
<b>+ HEXATEX<sup>(C)</sup></b>						
Notes.	0.25	0.20	0.18	0.16	0.14	0.12

Thickness calculated in accordance with EN ISO 6946 & ETAG 301-2010

(A) Based on 0.03 fx & 1.7mm/day average rainfall

(B) Based on 0.001 fx & 1.7mm/day average rainfall

(C) Supplied in rolls 1.5 x 50m

\* Multiple layers of **XROOF 300**

**U-value (W/m<sup>2</sup>K)**  
Calculated in accordance  
with ISO 6946: 1997

## Third Party Accreditation and Approvals



BE 009119-1



## Environmental Credentials



Baltimore Wharf, Limehouse: **XROOF 300L** - 100mm



01634 29-66-77



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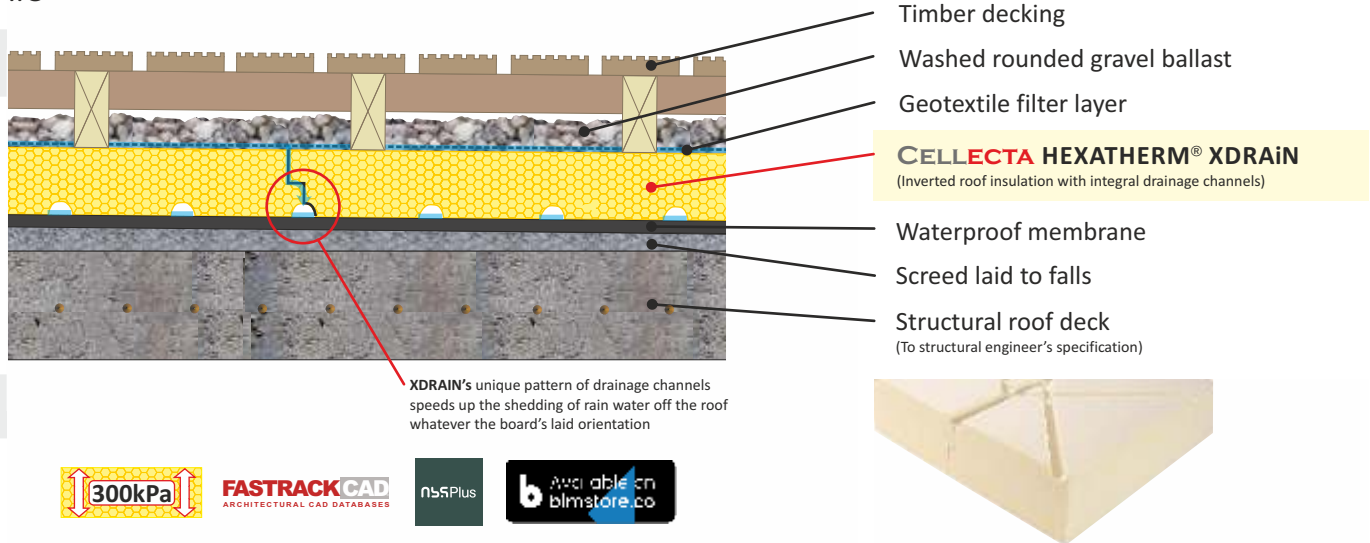


technical@cellecta.co.uk

# Inverted Flat Roof

**CELLECTA HEXATHERM® XDRAIN insulation ballasted with timber decking and washed rounded gravel**  
**Insulation with integral drainage channels**  
**1:60-1:80 Falls**

Ir3



## Product Information



### XDRAIN

**HEXATHERM® XDRAIN** extruded polystyrene inverted roof boards have a unique pattern of drainage channels on their underside, which speeds up the shedding of rainwater whatever their laid orientation, eliminating the need for a separation drainage mat, making them ideal for green roof applications.

### Product Benefits

- Excellent life-long thermal performance
- Integral multi-directional drainage channels
- Very low water absorption
- High compressive strength  $\geq 300$  kPa

### Physical Properties

		<b>XR00F</b>	
		<b>XDRAIN</b>	<b>300</b>
Thermal conductivity EN 12667 (W/mK)	$\leq 80$ mm $\geq 81$ mm	0.033 0.034	0.033 0.034
Strength at 10% compression EN 826 (kPa)		300	300
Strength at 2% compression EN 1606 (kPa)		125	125
Long term water absorption by immersion EN 12087 (%)		0.7	0.7
Temperature range (°C)		-50/+75	-50/+75
Board size (mm)		600 x 1250	600 x 1250
Thickness' (mm) (other sizes manufactured to order)		- - 50 60 75 80 100 120 140 160	- - 50 60 75 80 100 120 140 160
Edge profile		 Shiplap	 Shiplap

## Typical Thickness of Insulation Required

HEXATHERM XDRAIN	Thickness of insulation required for a 200mm concrete deck				
	160	190*	210*	240	290
Notes. Thickness calculated in accordance with EN ISO 6946 & ETAG 301-2010 Based on 0.03 fx, 1.7mm/day average rainfall * Additional layer of XR00F 300 required	0.25	0.22	0.20	0.18	0.16
	U-value (W/m²K) Calculated in accordance with ISO 6946: 1997				

## Third Party Accreditation and Approvals



## Environmental Credentials

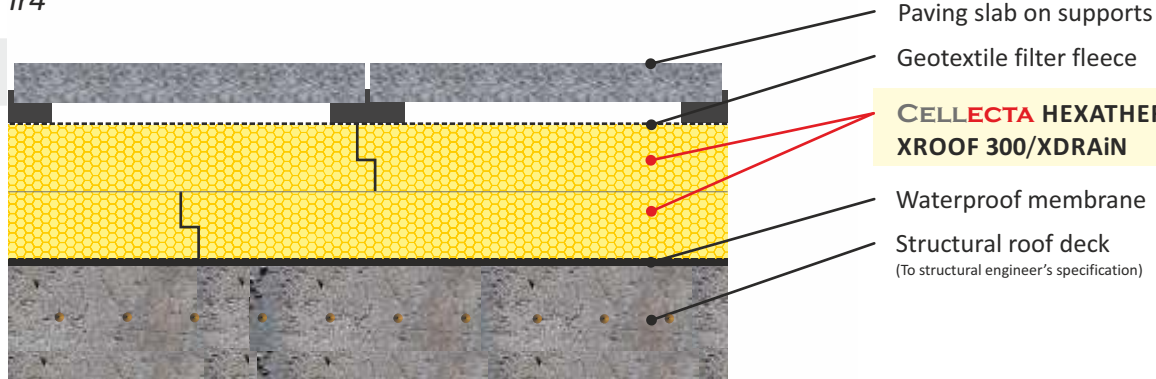


Offices, Banbury: XDRAIN - 40mm

# Inverted Flat Roof

CELLECTA HEXATHERM® XROOF 300/XDRAIN insulation ballasted with washed paving slabs  
0° Fall

Ir4



Paving slab on supports

Geotextile filter fleece

**CELLECTA HEXATHERM®  
XROOF 300/XDRAIN**

Waterproof membrane

Structural roof deck  
(To structural engineer's specification)

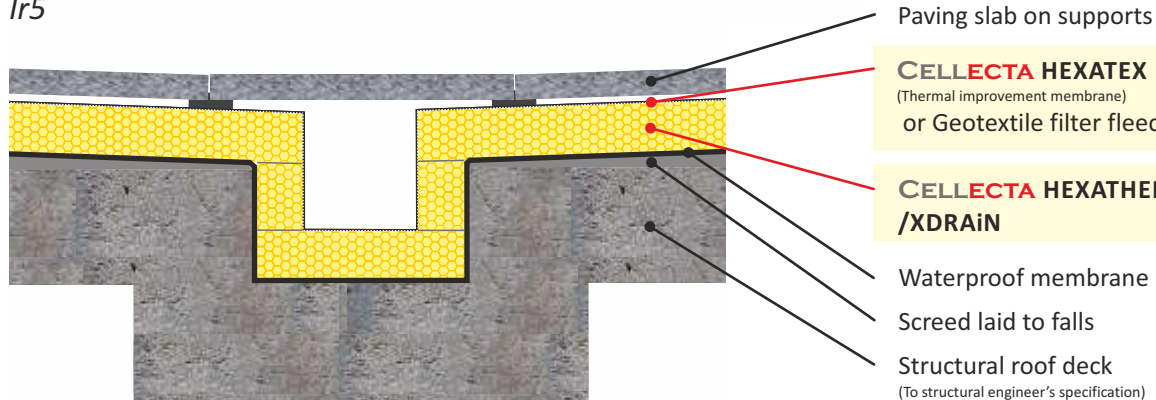


**FASTRACKCAD**  
ARCHITECTURAL CAD DATABASES



Drainage gully lining  
Insulation ballasted with paving slabs  
1:60-1:80 Falls

Ir5



Paving slab on supports

**CELLECTA HEXATEX**  
(Thermal improvement membrane)  
or Geotextile filter fleece

**CELLECTA HEXATHERM® XROOF 300  
/XDRAIN**

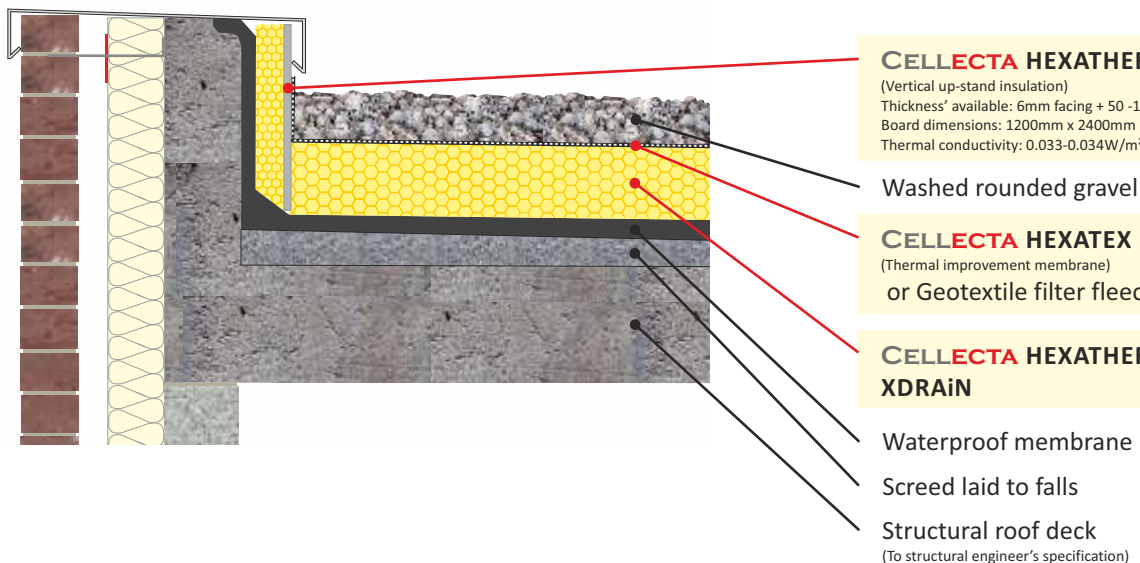
Waterproof membrane

Screed laid to falls

Structural roof deck  
(To structural engineer's specification)

Ir6

**CELLECTA HEXATHERM® XMD vertical up-stand insulation board**  
Insulation ballasted with washed rounded gravel  
Suitable for roofs with and without falls



**CELLECTA HEXATHERM® XMD**  
(Vertical up-stand insulation)  
Thickness' available: 6mm facing + 50 -160mm insulation  
Board dimensions: 1200mm x 2400mm  
Thermal conductivity: 0.033-0.034W/m²K

Washed rounded gravel ballast

**CELLECTA HEXATEX**  
(Thermal improvement membrane)  
or Geotextile filter fleece

**CELLECTA HEXATHERM® XROOF 300/  
XDRAIN**

Waterproof membrane

Screed laid to falls

Structural roof deck  
(To structural engineer's specification)



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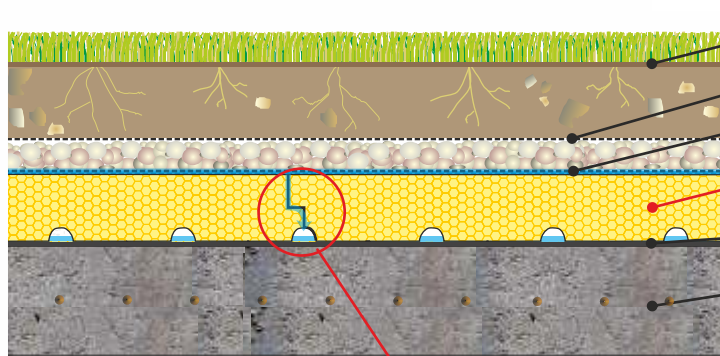


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Gr1



XDRAIN's unique pattern of drainage channels speeds up the shedding of rain water off the roof whatever the board's laid orientation

Planting layer

Geotextile filter layer

Gravel filter layer

**CELLECTA HEXATHERM® XDRAIN**  
(inverted roof insulation with integral drainage channels)

Waterproof membrane

Structural roof deck  
(To structural engineer's specification)



## Product Information

### XDRAIN

**HEXATHERM® XDRAIN** extruded polystyrene inverted roof boards have a unique pattern of drainage channels on their underside, which speeds up the shedding of rainwater whatever their laid orientation, eliminating the need for a separation drainage mat, making them ideal for green roof applications.

### Product Benefits

- Excellent life-long thermal performance
- Integral multi-directional drainage channels
- Very low water absorption
- High compressive strength  $\geq 300\text{kPa}$

### Physical Properties

		<b>XR0OF</b>	
		<b>XDRAIN</b>	<b>300</b>
Thermal conductivity EN 12667 (W/mK)	$\leq 80\text{mm}$ $\geq 81\text{mm}$	0.033 0.034	0.033 0.034
Strength at 10% compression EN 826 (kPa)		300	300
Strength at 2% compression EN 1606 (kPa)		125	125
Long term water absorption by immersion EN 12087 (%)		0.7	0.7
Temperature range (°C)		-50/+75	-50/+75
Board size (mm)		600 x 1250	600 x 1250
Thickness' (mm) (other sizes manufactured to order)		- - 50 60 75 80 100 120 140 160	- - 50 60 75 80 100 120 140 160
Edge profile		Shiplap	Shiplap

## Typical Thickness of Insulation Required

	Thickness of insulation required for a 200mm concrete deck				
HEXATHERM XDRAIN	160	190*	210*	240*	290*
Notes.	0.25	0.22	0.20	0.18	0.16

Thickness calculated in accordance with EN ISO 6946 & ETAG 301-2010  
Based on 0.03 fx, 1.7mm/day average rainfall  
\* Multiple layers of XR0OF 300 required

**U-value (W/m²K)**  
Calculated in accordance with ISO 6946: 1997

## Third Party Accreditation and Approvals



BE 009119-1



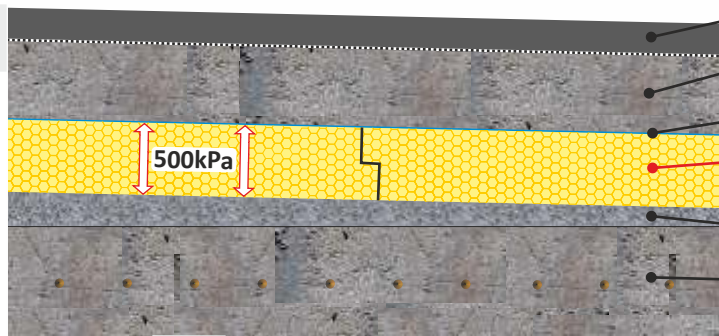
## Environmental Credentials





CELLECTA HEXATHERM® XROOF 500 insulation placed below reinforced concrete and paving grade waterproofing

Cp1



Paving grade waterproofing

Reinforced concrete  
(To structural engineer's specification)

Separating layer

**CELLECTA HEXATHERM® XROOF 500**  
(Extra high compressive strength insulation)

Screed to falls

Structural roof deck



**FASTRACKCAD**  
ARCHITECTURAL CAD DATABASES



## Product Information

### XROOF 500L

HEXATHERM® XROOF 500 extruded polystyrene thermal insulation boards have excellent thermal characteristics and extra high compressive strength make them ideal for high load applications such as plant rooms and car park decks.

## Product Benefits

- Extra high compressive strength 500kPa
- Excellent life-long thermal performance
- Very low water absorption
- Closed cell structure

## Physical Properties

	<b>XROOF</b>
	<b>500</b>
Thermal conductivity EN 12667 (W/mK)	0.035
Strength at 10% compression EN 826 (kPa)	500
Strength at 2% compression EN 1606 (kPa)	180
Long term water absorption by immersion EN 12087 (%)	0.7
Temperature range (°C)	-50/+75
Board size (mm)	600 x 1250
Thickness* (mm) (other sizes manufactured to order)	- - 50 60 75 80 100 120 140 160
Edge profile	 Shiplap

## Typical Thickness of Insulation Required

	Thickness of insulation required for a 200mm concrete deck					
HEXATHERM XROOF 500	130*	170*	180*	210*	240*	280*
Note. * Multiple layers of XROOF 500 required	0.25	0.20	0.18	0.16	0.14	0.12

U-value (W/m²K)  
Calculated in accordance  
with ISO 6946: 1997

## Third Party Accreditation and Approvals



BE 009119-1



## Environmental Credentials



New car dealership, Nottingham: XROOF 500 - 100mm



01634 29-66-77



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# Proprietary Cavity Closers

## Introduction

CELLECTA proprietary cavity closers eliminate cold bridging around window and door openings, ensuring compliance with Part L. Both types of UNICLOSER X incorporate a HEXATHERM® high performance extruded polystyrene thermal core and at least one rigid dpc profile. Eight standard\* widths (50-150mm) are available to suit different cavity widths.

## Key Benefits of UNICLOSER X

- ❖ Eliminates cold bridging around windows and doors
- ❖ Effective rigid integral DPC
- ❖ BM TRADA Q Mark third party accredited
- ❖ Quick and easy to install



Standard-Fixed to the frame and built in



Standard-Retro fitted



Double Standard-Retro fitted

## Product Information





### UNICLOSER X

UNICLOSER X combine the benefits of a HEXATHERM® extruded polystyrene with one or two U-PVC damp proof course profiles to produce a rigid cavity closer that eliminates cold bridging around window and door openings.

## Product Benefits

- ❖ Eliminates cold bridging around window and door openings
- ❖ Effective DPC
- ❖ Compatible with full and partial fill cavity insulation
- ❖ Quick and easy to install
- ❖ Environmentally friendly - 100% recyclable

## Physical Properties

	UNICLOSER X	
	Standard	Double Standard
Thermal conductivity EN 12667 (W/mK)	0.033	0.033
Number of rigid DPC profiles	1	2
Closer length (mm)	2500	2500
*Standard widths (mm) (Other sizes manufactured to order: 30 - 300mm, in 5mm increments)	50 65 75 85 90 100 125 150	50 65 75 85 90 100 125 150
Profile(s) detail		
Number of fixings required per length	6 "Universal fixings" 	12 "Wall ties" 

## Installation Options

### Building the closer in as the wall is constructed

#### UNICLOSER X - Standard

As the wall is built, simply push **Universal Fixing** (purchase separately) into the closer's insulation core at 225mm intervals around door openings and 450mm intervals around window openings and bed into the mortar joints.

#### UNICLOSER X - Double Standard

As the wall is constructed, simply clip the unique **Wall Ties** (purchase separately) into the closer's track at 225mm intervals around door openings and 450mm intervals around window openings and bed into the mortar joints.

### Retro fit

#### UNICLOSER X - Standard

If the wall has already been constructed, simply snap the leg off the **Universal Fixing** (purchase separately) and push the remaining bracket into the closer's insulation core at <450mm intervals. Insert the closer into the cavity and secure with masonry nails.

## Third Party Accreditation and Approvals

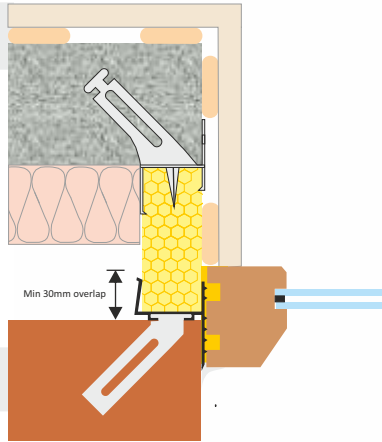


## Environmental Credentials



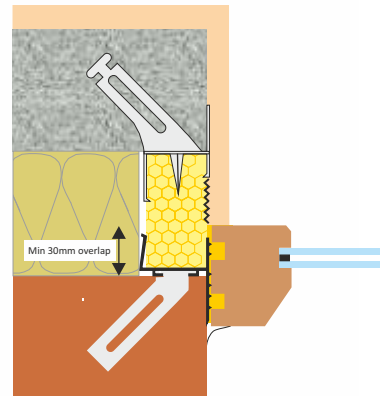
## Vertical Jamb Details

**UNICLOSER X Standard**  
Partial fill insulation and dry lined



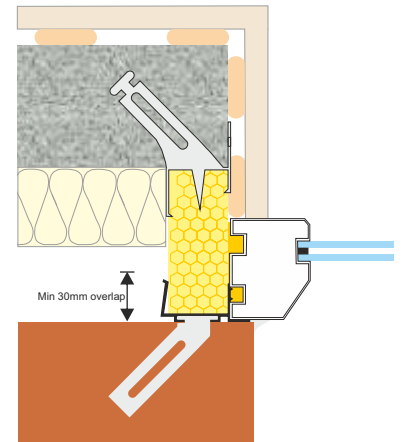
C1

**UNICLOSER X Standard**  
Full cavity insulation and wet plastered



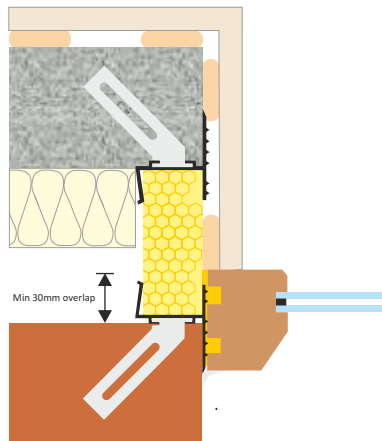
C2

**UNICLOSER X Standard - reveal detail**  
Partial fill cavity insulation and dry lined



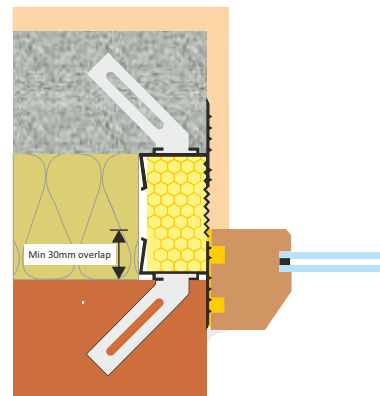
C3

**UNICLOSER X Double Standard**  
Partial fill insulation and dry lined



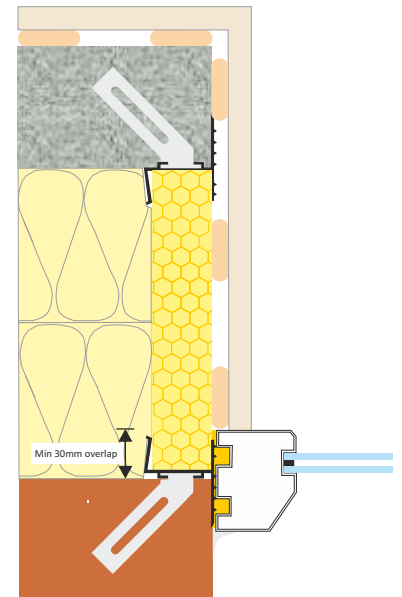
C4

**UNICLOSER X Double Standard**  
Full cavity insulation and wet plastered



C5

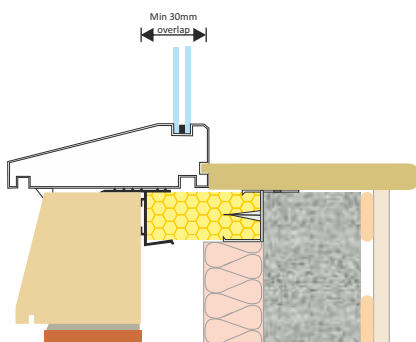
**UNICLOSER X Double Standard**  
Large width cavity up to 300mm wide



C6

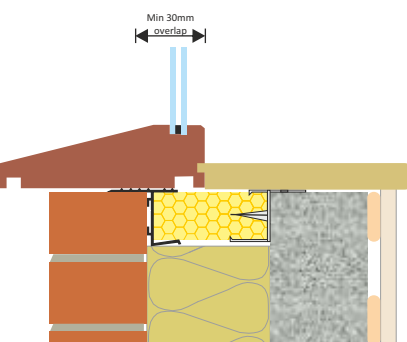
## Sill Details

**UNICLOSER X Standard**  
Partial fill cavity insulation and dry lined



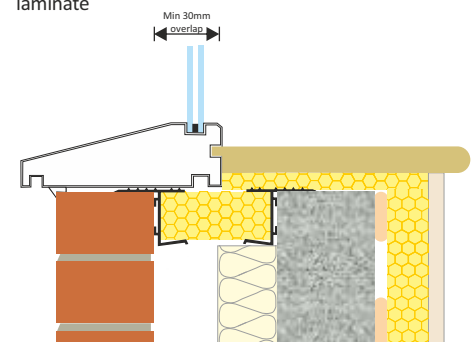
C7

**UNICLOSER X Standard**  
Full fill cavity insulation and dry lined



C8

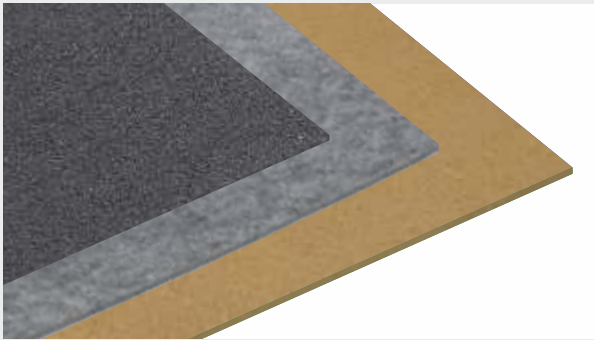
**UNICLOSER X Double Standard**  
Partial fill cavity insulation and plasterboard thermal laminate



C9

## Mojave® Resilient Layers

High Performance Resilient Layers for Acoustic and UFH Applications



### Product Information

To ensure a **Mojave**® underfloor heating system complies with acoustic performance standards

**CELLECTA** offers three resilient layers:

**RUBBERfon® 3** - Low profile, high load applications

**FIBREfon® 8\*** - Timber and metal joist floor applications

**FIBREfon® 10** - High load concrete floor applications

### Product Benefits

- Excellent acoustic performance
- All three thickness' are **Robust Detail FFT4** compliant
- **FIBREfon® 8\*** proprietary resilient layer for **E-FS-3, E-FT-5 & E-FT-6**

### Technical Data

		RUBBERfon®		FIBREfon®	
		3	8*	10	
Product description	-	Resilient layer for concrete floor applications	Ultimate acoustic performance resilient layer	Resilient layer for concrete floor applications	
Thickness	mm	3	8	10	
Composition	-	100% Recycled rebonded rubber	70% Recycled polyester fleece	Woodfibre board	
Board/roll dimensions	m	1 x 15	0.60 x 1.20	0.60 x 1.20	
Weight	kg/m² kg/unit	2.25 33.75 (roll)	1.00 0.72 (board)	2.20 1.58 (board)	
Floor type suitability	-	Concrete floors	Timber/metal joist floors	Concrete floors	
Robust Detail compliance	-	FFT4 (E-FS-1, E-FC-1 & E-FC-2)	FFT4 (E-FS-1, E-FC-1 & E-FC-2) E-FS-3 E-FT-5 E-FT-6	FFT4 (E-FS-1, E-FC-1 & E-FC-2)	

### Third Party Accreditation and Approvals



### Environmental Credentials



## ULTRAplate

Aluminium Heat Diffusion Plates



### Product Information

**CELLECTA's ULTRAplates** are made from highly conductive aluminium. Plates are manufactured to suit the specific application, diameter of pipe and spacing required. When inserted into an **XFLO**® insulation board they provide outstanding homogenous transfer heat performance through to the floor's surface.

### Product Benefits

- Highly conductive, increases the UFH's efficiency
- Made from high quality aluminum plate
- Manufactured to suit pipe diameter used
- Quick and easy to install
- 1, 2, 3 impressions

### Technical Data

		ULTRAplate		
		1i	2i	3i
Product description	-	Aluminum heat diffusion plate		
Number of pipe impressions	-	1	2	3
Pipe diameters	mm	10, 12, 14, 15, 16, 20	10, 12, 14, 15, 16, 20	10, 12, 14, 15, 16, 20
Aluminium thickness	mm	0.05	0.05	0.05
Plate length	mm	1000	1000	1000
Standard plate width (other widths available subject to minimum quantities)	mm	130	390	390

### Third Party Accreditation and Approvals



### Environmental Credentials





## Legislation

HM Building Regulations - Approved Document L1A & L1B:  
Conservation of Fuel and Power in Dwellings

HM Building Regulations - Approved Document L2A & L2B:  
Conservation of Fuel and Power in Buildings Other Than  
Dwellings

HM Building Regulations 2003 - Approved Document E: 2010  
Edition: Resistance to the Passage of Sound

Welsh Government Building Regulations - Approved  
Document L1A & L1B: Conservation of Fuel and Power in  
Dwellings

Welsh Government Building Regulations - Approved Document  
L2A & L2B: Conservation of Fuel and Power in Buildings Other  
Than Dwelling

Welsh Government Building Regulations 2003 - Approved  
Document E: Resistance to the Passage of Sound

Scottish Building Standards - Section 5: Noise

Scottish Building Standards- Section 6: Energy

Building Research Establishment Document REP 262: 2002  
Thermal Insulation: Avoiding Risks

CIBSE Guide A: Environmental Design, Section A3: Thermal  
Properties of Building Structures

DEFRA DTLR - Limiting thermal bridging and air leakage: Robust  
construction details for dwellings and similar buildings

## Standards and Codes of Practice

BS EN ISO 13370: 2017 - Thermal performance of buildings:  
heat transfer via the ground: Calculation Methods

BS 5250: 2011+A1: 2016 - Code of practice for control of  
condensation in buildings

BS EN 1991-1-3:2003+A1: 2015 - Eurocode 1. Actions on  
structures. General actions. Snow loads

BS EN 1991-1-4:2005+A1: 2010 - Eurocode 1. Actions on  
structures. General actions. Wind action

BS EN 1991-1-7:2006+A1: 2014 - Eurocode 1. Actions on  
structures. General actions. Accidental actions

BS 8215: 1991 - Code of practice for design and installation  
of damp proof courses in masonry construction

BS EN 12056-3:2000 - Gravity drainage systems inside  
buildings. Roof drainage, layout and calculation

BS EN 12667: 2001 - Thermal performance of building  
materials and products. Determination of thermal resistance by  
means of guarded hot plate and heat flow meter methods.  
Products of high and medium thermal resistance

BS EN ISO 717-1: 2013 - Acoustics. Rating of sound in buildings  
and of building elements

BS EN 13164:2012+A1:2015 - Thermal insulation products for  
buildings. Factory made extruded polystyrene foam specification

BS EN 826:2013 - Thermal insulating products for building  
applications: Determination of compression behaviour

BS EN 12087:2013 - Thermal insulating products for building  
applications. Determination of long-term water absorption by  
immersion

BS EN 12088:2013 - Thermal insulating products for building  
applications. Determination of long-term water absorption by  
diffusion

BS EN ISO 11925-2:2020 - Reaction to fire tests. Ignitability of  
products subjected to direct impingement of flame. Single-  
flame source test

BS EN 13501-1:2018 - Fire classification of construction  
products and building elements. Classification using data from  
reaction to fire tests

BS 8204-2 2003+A22011 - Screed, bases and in-situ flooring.  
Concrete wearing surfaces. Code of practices - Levelness of floors:  
SR1 - 3mm gap over a 2m straight edge, laid in contact with the floor  
SR2 - 5mm gap over a 2m straight edge, laid in contact with the floor  
SR3 - 10mm gap over a 2m straight edge, laid in contact with the floor

## Glossary

**Thermal conductivity** (Lambda value - $\lambda$ ): This is a measure of  
the rate at which a material will pass heat and is expressed in  
units of Watts per metre per degree of temperature  
difference ( $W/mK$ ).

**U-value:** This is a measure of how much heat will pass  
through a square metre of a structure when the air  
temperatures on either side differ by one degree.  
U-values are expressed in units of Watts per square metre  
per degree of temperature difference ( $W/m^2K$ ).

**Thermal bridging** is a thermally conductive material which  
penetrates or bypasses an insulation system; such as a metal  
fastener, concrete beam, slab or column. Heat will flow along  
the easiest path from the heated space to the outside - the  
path with the least resistance. This will not necessarily be the  
path perpendicular to the surfaces. Frequently heat will  
"short circuit" through an element which has a much higher  
conductivity than surrounding material, which can be  
described as a thermal bridge.

Typical effect of thermal bridges are:

- Decreased interior surface temperatures, in the worst case  
this can result in condensation problems, particularly at  
corners.
- Significantly increased heat losses and cold areas in  
buildings.

**Y values** ( $y$ ): This is a measure of the total heat loss expected  
from all of the thermal bridge losses in all of the junctions in  
the building.



### CELLECTA and The Environment



CELLECTA operates a progressive, sustainable environmental policy, with all our insulation products manufactured under **ISO 9001** & many under **14001** management controls. We use materials that, where possible are made from recycled materials and are recyclable.

#### Architectural Drawings

Architects and designers can quickly and easily insert CELLECTA insulation products into their drawings by either downloading the specific detail from CELLECTA's web site or contacting CELLECTA's technical team who will email the relevant **FASTRACKCAD** or **BIMstore** file.

#### Specification Clauses

Architects, designers and specifiers can quickly and easily insert CELLECTA insulation products into their specification document, by either downloading the specific NBS clause from CELLECTA's website, contacting the technical team on 01634 29-66-77 or email [technical@cellecta.co.uk](mailto:technical@cellecta.co.uk), who will email the relevant clause.

#### Installation Instructions

For detailed installation instructions and advice contact CELLECTA's technical team on 01634 29-66-77 or email [technical@cellecta.co.uk](mailto:technical@cellecta.co.uk)

#### Fire Classification

CELLECTA's thermal insulation boards contain a fire retardant additive to inhibit accidental ignition. However, plastic foams and wood are combustible and may burn rapidly if exposed to intense fire.

**HEXATHERM®** - Euroclass **E\***

**ScreedBoard® 20, HiDECK® Structural 25, 28, 30** - Euroclass **A1\*** (non-combustable)

**ScreedBoard® 28 & 30** - Euroclass **Bfl,S1\*** (limited combustibility)

\*When tested in accordance with BS EN 13501-1: 2007 +A1: 2009

#### CE Marking



**HEXATHERM** insulation boards are manufactured in accordance with European CE legislation

EN 13164: 2012  
+A1: 2015

### Product Packaging



CELLECTA insulation products are packed or palletised in such a way that they arrive on site in pristine condition.

#### BM TRADA Q Mark Third Party Certification

The **BM TRADA Q-Mark** is regarded as one of the most rigorous certification processes available for construction products. It is a quality mark that identifies the product(s) as having been assessed against specified performance levels through independent accredited testing.

The **BM TRADA Q-Mark** enables Q-Mark holders to prove the technical performance of their products allowing specifiers and end users to purchase with confidence.

#### On-site Handling & Storage

CELLECTA polyethylene and XPS can be stored outside, but should be protected from long-term exposure to direct sunlight, otherwise surface degradation may occur.

#### Health and Safety

Copies of safety data sheets for all CELLECTA products are available upon request.

#### Notes

CELLECTA reserves the right to amend product specifications without prior notice. Colours shown are for illustration purposes. Product technical data stated is typical. The information included in this technical manual is based on CELLECTA's experience and is believed to be reliable. Decibel values quoted and applications illustrated are typical and should not be taken as a basis for design.

CELLECTA, as the manufacturer, has no control over the installation of its products. The purchaser should evaluate the product's suitability and is responsible for adhering to any laws or regulations in this respect, making the purchaser also liable for observing any third party rights.



The paper used to produce this technical manual was produced in a mill that is both FSC and PEFC chain of custody certified, with all wood raw material originating from sustainable and controlled sources.

**HEXATHERM, Gobi, Mojave, ScreedBoard, XFLO and YELOfon** are registered trademarks of CELLECTA Limited

CELLECTA's extensive range of high performance underfloor heating, thermal and acoustic insulation products are supported by a technical advice line, staffed by experienced consultants who can provide a number of useful services including:

- ✧ U-value, condensation risk or imposed load calculations
- ✧ Advice on the most suitable products to use
- ✧ Issue detailed fixing instructions
- ✧ Arrange site surveys
- ✧ Technical specifications



**01634 29-66-77**



**01634 22-66-30**



**technical@cellecta.co.uk**



**cellecta.co.uk**

Other products available from CELLECTA:

**YELOfon®**

Closed Cell Acoustic Products

**FIBREfon®**

Fibrous Based Acoustic Products

**DECKfon®**

Open Cell Acoustic Products

**RUBBERfon®**

High Compressive Strength Acoustic Products

**HiGYP®**

High Density Acoustic Wall Boards

**HiDECK®**

High Density Floor Boards



**FASTRACK CAD**  
ARCHITECTURAL CAD DATABASES

Available on  
**bimstore.co**



**CELLECTA**  
Installation App