CELLECTA®

Mojave® S1-10

Dry laid resilient overlay platform floor system incorporating UFH

- ⬡ **Installation guidelines**
- ⬡ **Proven constructions**
- ⬡ **Technical data sheets**
- ⬡ **Top tips**

Handling & Storage

Storage of Mojave®

All components of the **Mojave®** UFH system should be stored on a pallet in dry conditions on a dry, flat and level base.

If you are required to re-stack the **ScreedBoard®** or **XFLO®**, we advise that the boards are stored on a pallet or are fully supported from the underside. Care should be taken not to damage the edges of the board whilst re-stacking.

Pallets of **ScreedBoard®** must not be stacked on top of each other.

ScreedBoard® is supplied on pallets, wrapped in temporary protection. This covering is to offer dust protection and a temporary measure to protect the boards from the weather during the loading/unloading process, it is **not** a waterproof cover.

Mojave® is an internal product and should remain dry at all times. If the product is to be temporarily stored outside appropriate measures are required to protect the boards from moisture, such as a suitable waterproof tarpaulin or sheeting.

The stacking of **ScreedBoard®** on their edges, should be avoided as this can lead to damage of the tongue and/or groove.

Prior to installation, all **Mojave®** components should be left to acclimatise for 48 hours in the installation space, remove the temporary packaging for this process.

Moisture Damage

Whilst **ScreedBoard®** is a dimensionally stable product, even when wet, any wet boards should be left to dry out completely on a level surface and be assessed for suitability before being installed.

Should the boards become saturated during storage or in-situ, we strongly advise contacting our technical department to arrange a site survey to review the products suitability.

Attention should be paid to all health & safety regulations. For Safety Data Sheets please contact the technical department.

CELLECTA is constantly reviewing all of its guidance and best practices and therefore reserve the right to alter specifications and guidance at any time and without notice.

The information contained in this document is based on CELLECTA's experience and represents best practices at the time of writing.

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Pre-Installation

Before commencing installation, take time to familiarise yourself with the products and installation instructions. To complete the installation you will need the following items:

- ScreedBoard® 20
- CELLECTA Pro Adhesive
- ScreedBoard® Tool Kit
- XFLO® & CELLECTA ULTRAplate
- RUBBERfon® Impact 3

- YELOfon® ES Strip
- Hand or circular saw
- Tape measure
- 6-8mm packers
- Club hammer

Sub-Floor Preparation

Prior to installing the **Mojave® S1-3**, it is important that the subfloors are dry, level and structurally sound. The floor should have a tolerance of at least SR2, this equates to a maximum 5mm gap over a two metre straight edge.

A concrete floor should have a maximum relative humidity of 75% or lower when measured in accordance with BS8203. If this level is not reached a DPM should be designed in. Please seek the advise of a specialist if deemed necessary.

Installation of RUBBERfon® Impact 3

Roll out the **Impact 3** across the floor cutting where required with a utility knife. **Impact 3** rolls can be loose laid with the edges of the rolls tightly butted together, care should be taken to ensure there are no gaps in the resilient layer.

Installation of XFLO® & ULTRAplate

Before beginning the installation of the **XFLO®**, carefully study the system layout drawing supplied by the underfloor heating system manufacturer. Note the manifold position, orientation of boards and position of pipes.

At 90 degrees to the **Impact 3** and starting in the far corner of the room, place 6-8mm packers against both walls and install the first **XFLO®** board ensuring the returns meet the drawing provided by the underfloor heating system manufacturer.

Continue installing the boards across the floor, ensuring the pipe channels line up and the routes are correctly positioned in accordance with the pipe layout.

Upon reaching the opposite corner rotate the **XFLO®** to utilise the return channels. Measure and cut the boards to suit using a sharp knife or fine toothed saw, leave all off cuts to one side as you may be able to utilise these later. Begin a new row, again taking care to line up the pipe channels.

ULTRAplate is installed along the straight routes of the **XFLO®** starting 20mm away from the return, so as not to impede the return loops. Press the **ULTRAplate** into the grooves, leaving a min. 5mm gap between each plate.

TOP TIP - *Use a small off cut of pipe to ensure the pipe routes are in line.*

Installation of ScreedBoard® 20

Before installing the **ScreedBoard®** over the underfloor heating system, it is important to carry out all required tests, including pressure testing.

Starting in the far corner install the first **ScreedBoard®** with the tongue of the short and long side facing the wall at 90 degrees to the **XFLO®**, ensuring the 6-8mm gap is maintained between the board and wall.

T*TOP TIP -* *Do not* *use the YELOfon® ES in place of packers as this is a compressible material*

Run a bead of CELLECTA **Pro Adhesive** along the short groove of the **ScreedBoard®**. Interlock the next board ensuring the joints are flush and the edges line up exactly. Place the **ScreedBoard® Fixing Batten** carefully in the groove of the second **ScreedBoard®** and tap with a club hammer to ensure there are no gaps showing between the boards. Repeat the process across the floor.

Installation of ScreedBoard 20 (cont)

At wall abutments, measure the gap from the laid **ScreedBoard®** to the wall allowing for a 5mm gap between the wall and the **Mojave®**.

Using a hand or circular saw cut the **ScreedBoard®** to the required length. Although not hazardous, **ScreedBoard®** can produce a fine dust when cut. Ensure a suitable face mask and dust extraction are used and cut the boards in a well ventilated area in accordance with the Safety Data Sheet.

Apply **Pro Adhesive** in the groove and install to complete the row. Place the **ScreedBoard® Pull Bar** over the edge of the board nearest to the wall and tap gently with a club hammer to fully interlock the boards.

Place a bead of **Pro Adhesive** along the long edge of the first board of **ScreedBoard®**. Ensuring the cut is on the outside, use the off cut to begin the next row. Where possible, it is advised that any off cut should be no less than 100mm in width.

Install the long edge of the **ScreedBoard®**, leaving approximately a 30mm gap between the short edges. Ensure there is no gap between the long edge. Using the **Laying Timber**, gently tap the short edge into place ensuring that all edges line up.

The remainder of the **ScreedBoard®** should be installed in a brick bond formation ensuring all boards are glued and tightly interlocked. If utilising the **ScreedBoard®** as part of an acoustic system, it is important that none of the boards are in contact with any walls or door treatments as this can result in acoustic failure.

Remove the packing shims from around the **Mojave®** and install **YELO*fon*® ES strip** around all perimeters to isolate the **Mojave®** and stop flanking transmission. Any soil pipes or services that penetrate the **Mojave®** should be isolated from the board using **YELO*fon*® ES**.

If undertaking dry lining after the boards have been installed, care should be taken to protect the **Mojave®** from excessive point loads of further trades (ie. plasterboard trolleys). All plasterboard, as well as the skirting boards **must be** isolated from the **Mojave®** by the **YELO*fon*® ES** Strip.

Sanitary Ware & Kitchen Units

All kitchen units and sanitary ware should be built off the structural floor, ensure a gap is left between units, overlay board and any floor finish. Seal any gaps with a suitable mastic.

Use timber packers to raise the height of the sanitary ware or units to suit the finished height of the **Mojave®** and selected floor finish.

Ensure that all sanitary ware/kitchen units are isolated from the **Mojave®** to stop flanking transmission. For more information please speak with our technical department.

Floor Finishes

Carpet

Underlays and carpet can be installed directly over the **Mojave®** without additional preparation.
If mechanically fixing carpet grippers, care must be taken not to penetrate the **XFLO®** or any resilient layer.

If bonding carpet tiles to the **ScreedBoard®** follow the below steps to prime the floor prior to installation.

Wooden and laminate floors

Ensure any wood flooring is acclimatised to the room it will be installed in, in accordance with the manufactures guidance. Where possible wood flooring should be laid at a 90 degree angle to the **ScreedBoard® 20**.

Allow suitable expansion joints in the floor finish around the perimeter of the room in line with the manufacturers advice.

Installation Guidelines

CELLECTA®

If wooden flooring needs to be mechanically fixed, care should be taken to not penetrate the underfloor heating or **RUBBER*fon*®**. If the flooring needs to be adhered to the **ScreedBoard®**, the board will need priming, following the below steps.

Tiles

Before installing any tiles, take time to plan and review the installation guidelines from the tile manufacturer. All tiles should be installed in line with these and the relevant British Standards.

Prime and seal the floor using CELLECTA **MP60 Primer** to the clean dry surface using a long handled foam roller, do not pour directly onto the **ScreedBoard®**. Allow to thoroughly dry (approx 2-4 hours).

Do not use in confined spaces without adequate ventilation. Wear suitable clothing, gloves and face mask. For full details, see CELLECTA's safety data sheets. Once dried, install the tile adhesive onto the primed **ScreedBoard®** and install tiles in accordance with the manufacturers guidelines.

Where possible, tiles should be installed from the centre of the floor outward to ensure cuts are positioned against the perimeter of the room. For larger format tiles, speak to our technical team prior to commencing installation. For natural stone tiles a decoupling membrane may be required, please check with your tile manufacturer before installing.

Vinyl

If installed correctly, **Mojave® S1-3** will give a seamless finish that can accept vinyl flooring directly. Remove any debris from the surface of the **ScreedBoard®** and scrape away any excess adhesive from the joints.

Carefully check the floor installation to identify any imperfections that may show through the vinyl. For minor repairs mix CELLECTA **FC180** to the desired consistency with cold clean water - typically using 200ml of water to 1kg of powder. In a clean container, sprinkle in the **FC180** to the water whilst mixing vigorously until lump free. Mix only as much as can be applied within 10-15 minutes.

Spread the **FC180** mix evenly into the areas in need of repair with a smoothing trowel. Leave for approx. 15 minutes and then re-work to smooth. Sand back any excess ridges that may show through the vinyl.

Should it be deemed necessary, CELLECTA **RL24** can be installed over the **Mojave®.** Follow the above steps to ensure that no levelling compound can migrate through any larger gaps in the **ScreedBoard®.**

Prime and seal the **ScreedBoard®** in accordance with the instructions above. In a clean container, mix CELLECTA **RL24** in a ratio of 25kg of dry powder to 6 litres of clean water to a smooth and lump free consistency (ratio to be maintained for part quantities).

Using a smoothing trowel, apply to the prepared surface to the required thickness. Allow to fully dry before proceeding (24 hours @ 3mm). Vinyl can be installed directly to the **RL24** without additional primer.

Need more installation help on site?

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 CPD's

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

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CELLECTA®
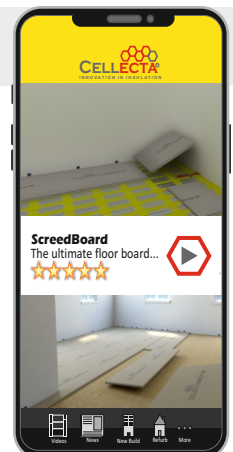
ScreedBoard® 20

High Density Overlay Board for Acoustic and Underfloor Heating Applications

Product Information

ScreedBoard® 20 is the ideal overlay floorboard for acoustic applications incorporating underfloor heating due to its rapid conduction properties, enabling the system to run more efficiently, saving on running costs and improving reaction times.

Product Benefits

- Looks and feels like screed
- Highly conductive - Perfect for UFH applications
- Suitable for all types of steel, concrete and timber floors
- **Robust Detail** proprietary treatment: **E-FS-3**, **E-FT-5**, **E-FT-6** and **FFT4** compliant
- Directly accepts tiles

Technical Data

		ScreedBoard® 20
Product description	-	High conductivity, inter-locking overlay floorboard
Thickness	mm	**20**
Composition	-	100% recycled high density gypsum & cellulose
Thermal resistance	m²K/W	0.05
Edge profile	-	Interlocking tongue & groove
Board dimensions	mm	600 x 1200
Weight	kg/m² kg/board	25.00 18.00
Associated flanking strip options	-	YELOfon FS15, 30, 50 YELOfon ES5/120

CLASS A1 BS EN13501-1

Third Party Accreditation and Approvals

RD Proprietary Component

NHBC **LABC warranty** **Premier Guarantee** Accepted

bmtrada 2015

S R L Performance Tested

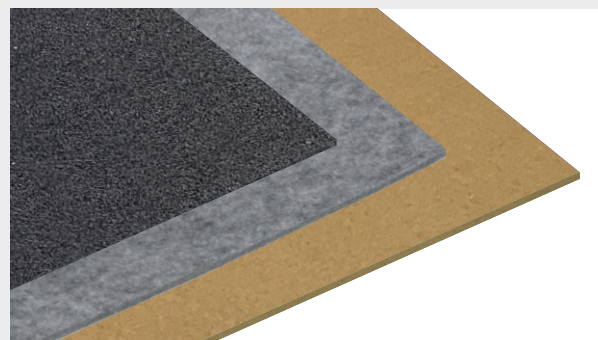### Environmental Credentials

GWP <5

100% Recycled Gypsum

zero ODP

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

RD Proprietary* Treatment

NHBC **LABC warranty** **Premier Guarantee** Accepted

bmtrada 2015

S R L Performance Tested

Environmental Credentials

GWP <5

100% Recyclable Layers

zero ODP

XFLO®
High Compressive Strength Underfloor Heating Floorboard

Product Information
XFLO® 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 resistance to compression - 250, 300 & 500kPa
- Manufactured to suit pipe and output requirements
- Works in conjunction with acoustic treatments

Technical Data

		XFLO®		
		250	**300**	**500**
Product description	-	High compressive strength underfloor heating board		Ultra strength UFH board
Strength at 10% compression	kPa	250	300	500
Thermal conductivity	W/mK	0.033	0.033	**0.035**
Temperature range	°C	-50/+75	-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	10, 12, 14, 15, 16, 18, 20
Pipe centres	mm	150, 200, 300	150, 200, 300	150, 200, 300
Board size	mm	600 x 2500	600 x 2500	600 x 1250
Thickness' (other sizes manufactured to order)	mm	**20, 25, 30, 35**	**40, 50, 60, 75**	**50, 60, 75**

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 though 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

Adhesives & Floor Primer

CELL**ECTA PRO Adhesive:** Multi purpose, moisture curing polyurethane (MCPU) joint adhesive

Bottle size	1kg
Typical coverage	33m²
Curing time	24 hours
Application	Bonding **HiDECK**, **ScreedBoard** & timber treatments T & G edges

CELL**ECTA MP60 Primer:** Multi-purpose dispersion primer for preparation of surface prior to fixing floor tiles

Bottle size	5kg
Typical coverage	60m²
Curing time	24 hours
Application	Sealing high density gypsum boards

Levelling Compounds

CELL**ECTA RL24 Rapid Drying Levelling Screed**
Composition: Fibre reinforced levelling compound

Bag size	20kg
Typical coverage	4m² @ 3mm
Drying time	Foot traffic 2 hours @ 3mm
Installation of floor finish	≤3mm - 24 hours >3mm - 24 hrs/mm

CELL**ECTA FC180 Feathering Coat**
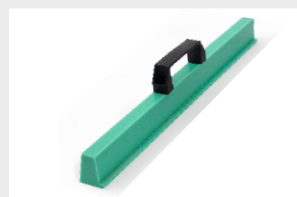**Composition:** Calcium sulphate repair compound

Bag size	20kg
Typical coverage	13m² @ 1mm
Drying time	45mm @ 3mm
Installation of floor finish	2 hours @ 3mm

Fixing tools

ScreedBoard® Fixing Batten

	Application	Fitting **ScreedBoard 20** **ScreedBoard 28** **ScreedBoard 30**

Floor Board Pull Bar

	Application	Fitting **ScreedBoards** **HiDECK Structural** Timber treatments

YELOfon® Perimeter Edge Strips

5mm thick, non-cross-linked, closed-cell polyethylene foam rolls

Product reference	Dimensions
ES5/15	5mm x **15mm** x 50m
ES5/60	5mm x **60mm** x 50m
ES5/100	5mm x **100mm** x 50m
ES5/120	5mm x **120mm** x 50m
ES5/150	5mm x **150mm** x 50m

S1-3 System Components

Layer	Product
1	ScreedBoard 20
2	ULTRAplate
3	XFLO, 250, 300, 500
4	RUBBERfon 3
Edge strip	YELOfon ES5/120
Robust Detail Compliance	
Steel floors	**E-FS-1**: FFT4
Concrete floors	**E-FC-1** & **2**: FFT4
Timber floors	PCT required