DATASHEET

MEDITE® SMARTPLY®
INNOVATIVE TIMBER PRODUCTS

SMARTPLY®
SURE STEP DB

SMARTPLY SURE STEP DB is an airtight, tongue and groove OSB/3 panel with a high-performance and durable coating. This innovative panel has also been tested in a flooring system to meet the residential internal floor sound insulation requirements for use in all timber-based joists.

Using SURE STEP DB as an airtight layer for flooring or decking can contribute to sustainable building practices as well as reduce the energy consumption for heating, whilst the unique coating brings improved durability during the construction phase and slip resistance to the panel in all site conditions.

AT A GLANCE > SMARTPLY SURE STEP DB:

- TESTED TO MEET 40DB BUILDING REGULATION
- HIGH QUALITY STRUCTURAL PANEL
- 45 — 45 DAYS NO DEGRADATION
- DURABLE COATING
- TONGUE AND GROOVE
- 0 — NO ADDED FORMALDEHYDE
- FSC® CERTIFIED

www.mdfosb.com

SMARTPLY®
DEFINING THE STANDARD OF OSB

DATASHEET

SMARTPLY® SURE STEP DB

FEATURES & BENEFITS

- Certified airtight by Passive House Institute
- Improved slip resistant panel
- Can be exposed for up to 45 days without degradation
- Excellent strength – 18mm panels stronger than 22mm chipboard along the main axis
- 30% lighter than 22mm chipboard – lighter to lift and cheaper haulage costs
- Greater m^2 coverage – 50 sheets per pack of 18mm covers 144m^2 compared to 82 sheets per pack of 22mm P5 covering 118m^2
- Manufactured from FSC® certified timber
- For use with joists 600mm apart
- Tongue and groove for quick and easy installation
- Manufactured using no added formaldehyde resins

SUITABILITY

Manufactured in accordance with EN 300 **SMARTPLY SURE STEP DB** is a load bearing panel ideal for use as decking for internal flooring to meet the sound insulation requirements.

EN 300 classifies OSB panels by their properties which relate to their intended use. **SMARTPLY SURE STEP DB** is classified as follows:

- OSB/3 - load bearing panel for use in humid conditions

Structures comprising **SMARTPLY SURE STEP DB** should be assigned to service class 1 or 2 as defined in EN 1995-1-1 (Eurocode 5). According to this standard, **SMARTPLY SURE STEP DB** is suitable for use in both of these service classes.

Manufactured on the state of the art Contiroll® OSB production line in our own factory. **SMARTPLY SURE STEP DB** is a structural panel designed for internal flooring on timber based joists. SURE STEP DB is a structural panel that can be used for many applications:

- Flooring
- Roofing
- Modular construction
- Offsite manufacturing
- Timber frame construction
- Steel frame construction
- Temporary decking

SPECIFICATION AND DESIGN

As design values can vary between manufacturers, it is important to ensure that the **SMARTPLY SURE STEP DB** panels specified by the designer are those used on site. All SMARTPLY panels are clearly marked with the following information:

a SMARTPLY logo

b UKCA marking
- i. UKCA logo
- ii. Accredited body
- iii. DOP number

c FSC® certification (if applicable)

d CE marking
- i. CE logo
- ii. Notified body
- iii. DOP number

e Relevant Standard (EN13986/EN300) and AVCP level (2+ structural)

f Panel grade (OSB/3 - OSB/4)

g Thickness

h Formaldehyde class (eg - E1)

i Additional marking:
- i. Date and time stamp
- ii. Main axis arrow
- iii. Product certification (IAB, BBA, WPA, FR BUILD) if applicable

Note: Markings may vary depending on product type.

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SMARTPLY® SURE STEP DB

SIZES

SMARTPLY SURE STEP DB is available in a variety of sizes, with other sizes available on request (minimum order quantity may apply).

Dimensions	Thickness
2397x1200mm TG2	18, 22mm

ACOUSTIC PERFORMANCE

The Building Regulations Approved Document E in England, Wales and the Technical Booklet G in Northern Ireland for sound building performance require that internal floors within dwellings have a minimum airborne sound insulation of 40 decibels (dB).

A deemed to satisfy solution for internal flooring on timber-based joists includes wood-based panels with a minimum mass of 15kg/m^2, minimum 100mm of mineral wool insulation, and ceiling of a single layer of plasterboard with a minimum mass of 10kg/m^2.

If the internal floor system differs from this approved system, then the floor performance must be demonstrated by tests performed in accredited laboratory.

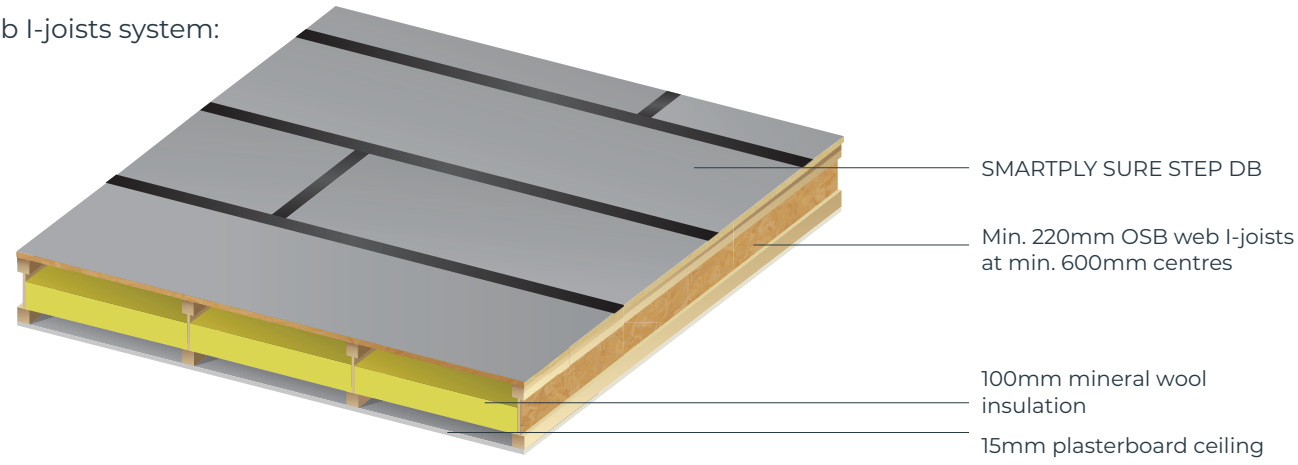
SMARTPLY SURE STEP DB was tested in a series of timber-based joists floor systems in a UKAS accredited laboratory and the floor systems achieved at least 40dB insulation form airborne sounds, therefore allowing a lighter wood-based panel to achieve the required performance.

The compliant systems are as follow:

Floor decking	18mm SMARTPLY SURE STEP DB 22mm SMARTPLY SURE STEP DB
Floor decking	OSB-web I-joists min. 220mm at 600mm centres Metal web joists min. 220mm at 600mm centres Solid timber joists min. 220mm at 600mm centres
Floor decking	100mm mineral wool insulation (8– 36 kg/m^3)
Floor decking	15mm plasterboard (≥ 10.1 kg/m^2)

The performance of the floor system tested in a UKAS accredited laboratory were assessed independently by The Robin McKenzie Partnership (RMP) a consultancy division of Edinburgh Napier University.

OSB-Web I-joists system:



SMARTPLY® SURE STEP DB

PERFORMANCE

SMARTPLY SURE STEP DB is manufactured in house by applying an innovative and high-performance coating on the top surface of SMARTPLY OSB/3 panels.

The mechanical and structural performances of **SMARTPLY SURE STEP DB** can therefore be taken from the DOP or found below for the specific properties. **SMARTPLY SURE STEP DB** properties have been idependently tested by 3rd party accredited laboratories.

The panels achieved low slip potential in dry and wet conditions. However, the product is not “anti-slip” and therefore it is recommended to take extreme care when walking on the panels in humid conditions and to avoid spills of materials that may increase the slip risk potential of the surface (such as oil, grease, dust).

Moderate change was observed on the panels during the duration of the standing water test, but no cracking of the coating occurred while standing water was present on the surface of the panel for the duration of the test. In the event of prolonged water pooling localised flake telegraphing on the surface can occur.

TABLE 1:

SMARTPLY SURE STEP DB Properties - Coated Side			
Slip resistance	Dry conditions	BS 7976-2	Low slip risk
	Wet conditions		Low slip risk
Reaction to fire (Flooring)		EN 13501-1	Cfl, s1
Slip resistance		Slip resistance	Slip resistance
Resistance to cold liquids		EN 13442	No change after 5 hours
Standing water test (EPH test method)	Coating only	Moderate change	45 days
	T&G joint*		45 days
Airtightness	Panels only, and as an airtight system	EN 12114	Class phA (≤0.1m3/m2.h @ 50Pa)
Vapour diffusion factor	Dry cup	EN 12572	μ = 686 (sd=12.3m for 18mm)
	Wet cup		μ = 406 (sd=7.3m for 18mm)

*Protected with glue and specialist tape as per the installation recommendations.

AIRTIGHTNESS

SMARTPLY SURE STEP DB is certified by the Passive House Institute as an airtight product. The panel can be used as the airtight layer in floor or roof systems to provide a high performance, robust and durable solution. Associated with SMARTPLY AIRTIGHT, an airtight sheathing panel for use in wall and ceillings, SMARTPLY sustainable airtight products can ensure that a high level of airtightness is achieved in all types of buildings and construction systems.

For the optimum performance and to ensure the targeted airtighteness levels are achieved it is necessary to follow the installations steps detailed in the associated document “SURE STEP DB airtight installation guidance” and use specialist airtight tapes and primers (supplied by others) as recommended for all connections.

Visit the MEDITE SMARTPLY YouTube channel for detailed installation videos.

SMARTPLY® SURE STEP DB

STANDARD INSTALLATION

SMARTPLY SURE STEP DB is an OSB/3 grade panel and should be installed by following the recommendations provided in the **SMARTPLY SURE STEP DB** and SMARTPLY FLOOR technical datasheets.

To achieve the performance quoted in this datasheet, the floor system built must comply with the details provided in the performance section of this datasheet. To perform as a floor system the panel needs to be protected at the T&G joint, cut and exposed edges as they are a weak area where water ingress can occur and cause swelling and cracking of the coating. SMARTPLY recommends that these areas are protected by using a specialised construction waterproof high-performance polyethylene-coated cloth tape and installed as detailed in the step by step instructions below:

Step by step installation with glue and tape:

1. Apply one continuous bead of D4 rated (EN 204) adhesive to the top of the joists and noggins corresponding to the area of the 1st panel to be installed.
2. Install the first panel following the recommended guidelines and best practices, including fixings centres and types (SMARTPLY MAX, SMARTPLY FLOOR, SMARTPLY ROOF). The fixings heads should be flush or just below the panel surface.
3. Apply one bead of D4 rated (EN 204) adhesive on both the tongue and groove of the joints about to be installed making sure that the entire joint is bonded. The joint should then be sealed with a specialist waterproof high-performance polyethylene-coated cloth tape. The surface of the panel should be clean and dry before applying the tape. This will prevent moisture ingress in the joint and edge swelling. The tape should be pressed on the panel firmly (a rubber roller or rubber knife can be used to avoid damaging the tape) to ensure a strong and waterproof bond with the panel.
4. The panels cut edges on top of the joists should be sealed and protected with a specialist waterproof high-performance polyethylene-coated cloth tape. This will prevent moisture ingress in the panel edge and edge swelling.
5. Continue installing the panels as required in a staggered pattern by repeating the fixing, gluing and taping steps for each panel.
6. All exposed edges should be sealed by applying a continuous layer of D4 rated (EN 204) adhesive by using a brush or by wrapping specialist waterproof high-performance polyethylene-coated cloth tape around the edges.
7. Any gaps in the joints and all fixing heads should be sealed by applying a bead/drop of D4 rated (EN 204) adhesive or by applying a small area of tape.
8. The floor should be cleaned after any construction work has been completed.

SMARTPLY® SURE STEP DB

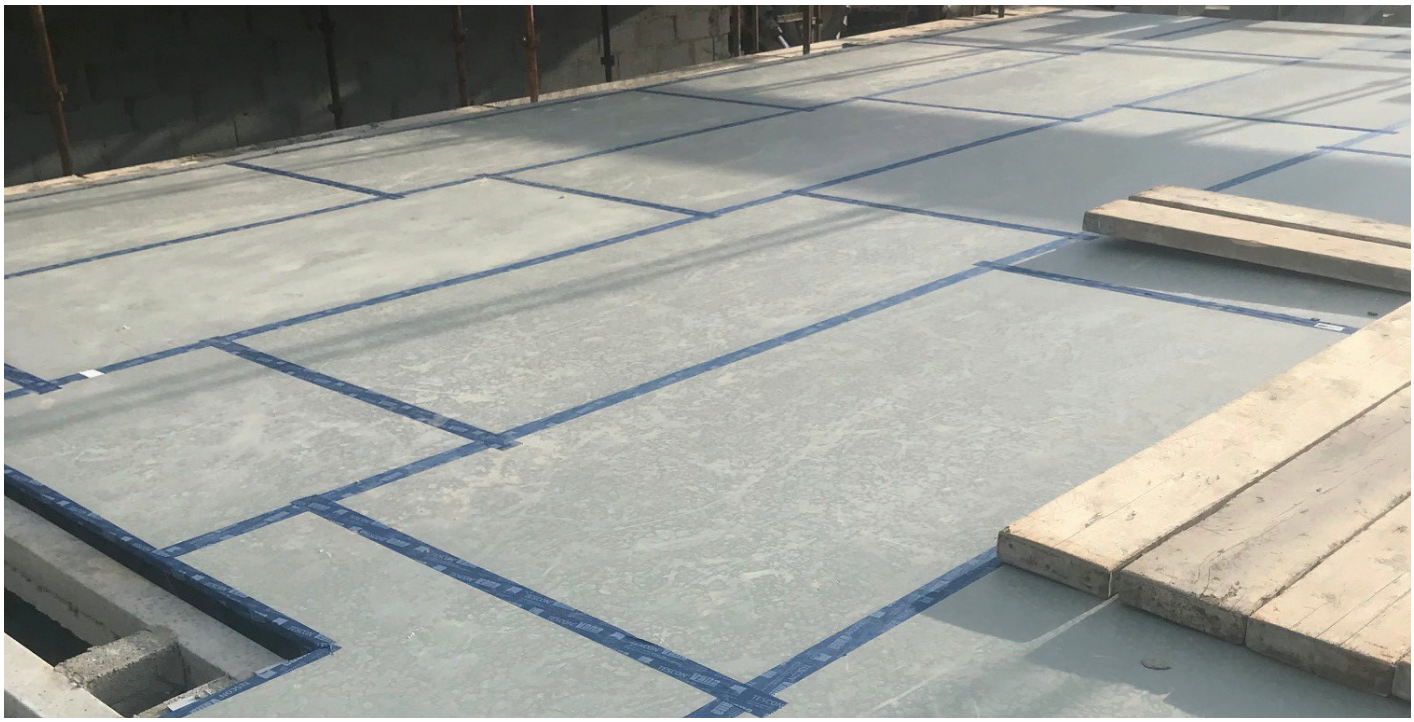
TRANSPORTATION, STORAGE & HANDLING

Careful transportation, storage and handling are important to maintain panels in their correct condition for use. Precautions must be taken during storage, prior to delivery and on site to minimise changes in moisture content of the OSB panels due to weather. Panels must be stored on dry bases, and packs must be evenly supported on bearers with spacer sticks at regular intervals (depending on panel thickness but max 600 c/c).

Packs should be sheeted with tarpaulins or other impervious material so arranged to give full cover, but at the same time to permit free passage of air around and through the pack. Care must be taken not to deform stacked panels. Bands should be cut as soon as practical and safe to avoid permanently deforming the panels. During transport and handling it is particularly important to protect edges and corners with suitable coverings to prevent damage from chafing or slings. Where the panels are required to have low moisture contents, it might not be possible to maintain suitable conditions on site other than for short periods, and deliveries must be arranged accordingly.

SURFACE DAMAGE

The high performance and durable coating is designed to perform as a resistant flooring surface. However, in the event of extensive damage to the panel coated surface – exposing the OSB below the coating – during transport, storage handling or in use it is recommended to seal the damage with specialist waterproof high-performance polyethylene-coated cloth tape to prevent water ingress in the OSB and excessive surface swelling which could extend the damage.



SMARTPLY®
SURE STEP DB

QUALITY & ENVIRONMENTAL CERTIFICATION

SMARTPLY OSB panels are manufactured in accordance with the requirements of EN 300: Oriented Strand Boards (OSB) - definitions, classification and specifications.

SMARTPLY OSB is CE marked in accordance with the harmonised standard EN 13986: Wood-based panels for use in construction – characteristics, evaluation of conformity and marking. This standard is a technical specification for wood based panels which implements the provisions of the Construction Products Regulation (CPR). In addition to the CE mark, SMARTPLY OSB panels are marked 2+ Structural for ease of reference. SMARTPLY OSB is UKCA marked in accordance with the designated standard BS EN 13986.

Other quality certification includes KOMO (Netherlands).

SMARTPLY operates under an Integrated Management System (IMS) for Quality (ISO 9001), environment (ISO 14001), Health and Safety (ISO 45001) and Energy (ISO 50001), which is certified by the National Standard Authority of Ireland (NSAI).

All SMARTPLY products are manufactured from Forest Stewardship Council® (FSC®) certified timber.

SMARTPLY operates under an Integrated Pollution Prevention Control (IPPC) licence, which is monitored by the Environmental Protection Agency (EPA) in Ireland.

All SMARTPLY products are manufactured using formaldehyde-free resin.

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SMARTPLY® SURE STEP DB

NO ADDED FORMALDEHYDE

SMARTPLY SURE STEP DB is manufactured using advanced resin technology that results in a high performance, no added formaldehyde panel. This specialist resin formulation provides a supreme bond with the wood strands as it has a reaction with the wood itself, when put under intense heat, creating a chemical weld. This is a different and superior type of bond to the mechanical weld that formaldehyde-based products exhibit. Depth of penetration is well beyond the minimum 0.3mm needed for a wood resin to provide adequate adhesive strength. This extra resin penetration also greatly improves the wood's resistance to thickness swell.

EXPLORE OUR SMARTPLY RANGE

For quick reference, see below our table that highlights each product's features and benefits.

PRODUCT	OSB/3	OSB/4*	No added formaldehyde	Available in T&G	Certified Airtight	Low Slip Risk Coating	Pre-cut /Pre-rebated	Primed	Sound Reduction Compliance
SMARTPLY MAX	●		●	●					
SMARTPLY MAX DB	●		●	●					●
SMARTPLY ULTIMA		●	●	●					
SMARTPLY SURE STEP DB	●		●	●	●	●			●
SMARTPLY STRONGDECK		●	●	●					
SMARTPLY AIRTIGHT	●		●		●				
SMARTPLY PATTRESS PLUS	●		●				●		
SMARTPLY SITEPROTECT	●		●					●	

***OSB/4 is approximately 30% stronger and 20% more moisture resistant than OSB/3 making it more suitable for humid and heavy duty load -bearing applications.**

Looking for a certified airtight structural panel for your next project? **SMARTPLY AIRTIGHT** is a structural OSB/3 panel with integrated vapour control and air barrier properties for use as structural sheathing in timber frame structures.

Find out more.

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For further information and/or technical advice please contact our dedicated customer service team.

UK: +44 (0) 1322 424900
Ireland: +35 (0) 3518 10205
France: +33 (0) 9751 89830
Netherlands: +31 (0) 8588 86230
Belgium: +32 (0) 2808 6256

As we continually update our technical datasheets, please check on www.mdfosb.com that you have the latest version.

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The recommendations provided in this technical datasheet for the correct use of **SMARTPLY SURE STEP DB** are specifically designed to ensure longevity and performance of this quality product in service. It is therefore essential that these recommendations are strictly followed.

The product is designed to be installed by a competent contractor, experienced with this type of product. **SMARTPLY EUROPE DAC** cannot be held responsible for damages arising from nonadherence to these recommendations, or product failures resulting from inadequate structural design or misuse of this product.

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In order to provide comprehensive guidance for the correct use of SMARTPLY SURE STEP DB, this technical datasheet makes reference to relevant BS and EN standards. SMARTPLY EUROPE DAC cannot be held responsible for claims arising from the use of any information that has been extracted from such sources.