

RAF

Raised Access Flooring



RAISED ACCESS FLOORING



INTERNAL RAISED ACCESS FLOORING

Raised access flooring (RAF) was created in response to the need to hide large volumes of cables, pipework, tubing, etc. that are typically found in offices, technical rooms, and other locations.

The installation of a raised floor creates a space under the floor where all these services, including equipment and room cooling systems, can be neatly housed and hidden away.

DESIGNED TO BE INSTALLED IN:

Facilities with a high volume of services or in rooms that house technical equipment that requires special ventilation.

Commercial applications: offices, libraries, museums, schools, shopping centres, etc.

Technical applications: telecommunications/electricity plants, control rooms, laboratories, data centres, etc.

ADVANTAGES

Ability to hide away all types of ugly and dangerous cables, pipes etc under the floor.

Improved installation efficiency in comparison to conventional floor.

Easy to take with you when relocating offices.

Easy access to installations. Simply lift up the floor panel with the suction lifting device.

Installation can be carried out with other types of trade work.

Option of rerouting services following installation of floor.

ADVANTAGES OVER OTHER RAISED ACCESS FLOOR SYSTEMS

Able to withstand a high mechanical load

The potential for combining different structures, as required in each particular case.

A high resistance to fire under laboratory tests.

Very low dimensional tolerances, between +0.1 and -0.2 mm. This means that the panels can easily be interchanged.

Cores made of high-performance materials with very high densities.

Compliance with UNE EN ISO 9001, guaranteeing quality controls during each stage of the manufacturing process.

On the top surface, any 60x60 ceramic tile by Porcelanosa Group can be used.

Ceramic tiles protected by a plastic surround to prevent the edges from breaking.

A wide range of complementary products to ensure a good finish.



STRUCTURE

All the components of the RAF system have been designed to ensure a top-quality flooring system. They have very low tolerances and are manufactured with top-quality raw materials. The main components of the system are the panels and the structure.

PEDESTALS

100% galvanised steel structure. This pedestals dictate the floor height according to the project requirements. Each pedestal incorporates a series of plastic noise-reduction heads fitted with four positioning lugs.

One of the main advantages of the pedestal system is that it is fitted with a 14 mm threaded bolt that can be adjusted to accommodate different floor height requirements.

STRINGERS

Like the pedestals, the stringers are made entirely of galvanised steel. Their main function is to increase the strength of the floor but they have the added advantage of improving sound performance as they are covered with special noise-reduction strips.



PANELS

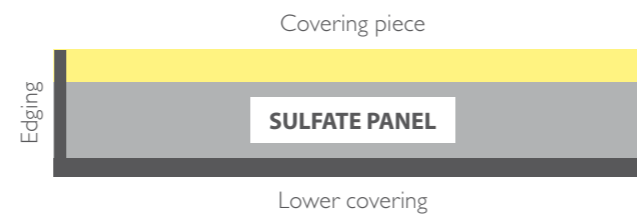
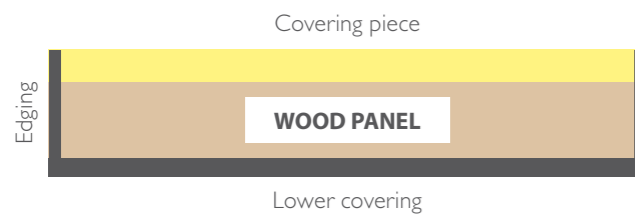
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WOOD PANELS

They are made of chipboard with a high-performance resin binder. Available in a thickness of 38mm, they feature an aluminium, galvanized steel or plastic lower covering, thus offering slightly different properties to suit each individual case. The panels have a plastic surround to prevent the edges from breaking.

SULFATE PANELS

The mineral core is made up of a single layer of high-density calcium sulphate, in thicknesses of 30 and 34mm, with a lower covering made of plastic film or aluminium or galvanized steel. Like the RAF WOOD panels, they are also surrounded with plastic edging material in a choice of different colours to prevent the edges from breaking.



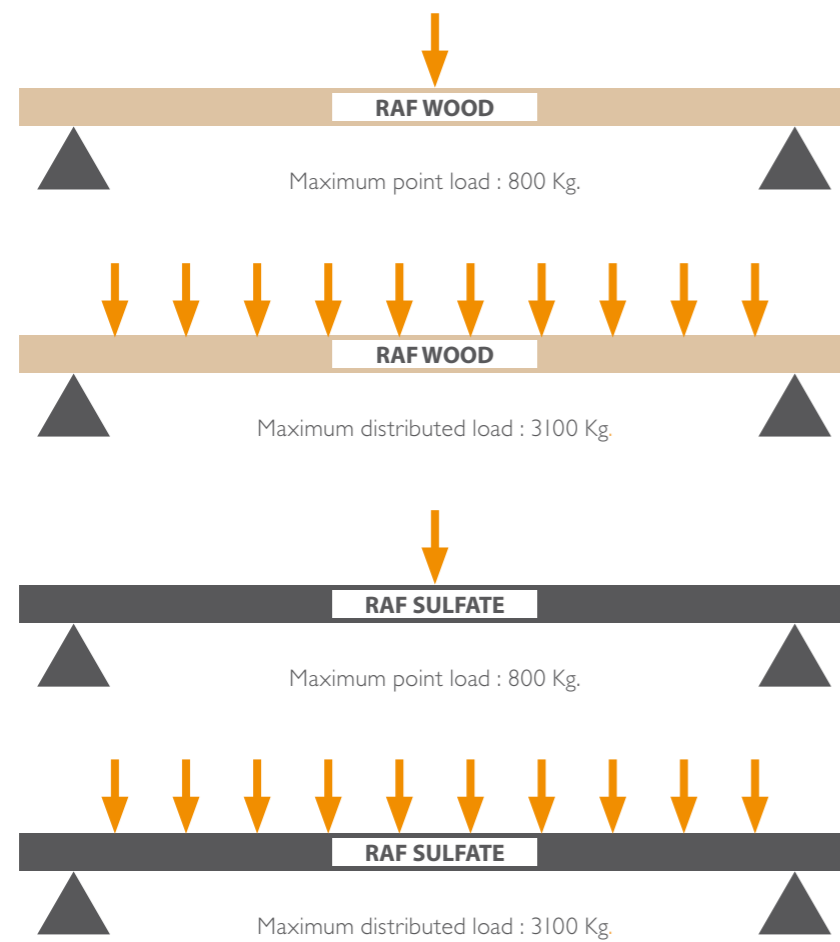
MECHANICAL PROPERTIES

One of the most important characteristics of a RAF is an adequate mechanical resistance for this kind of flooring and its intended use. To determine its resistance, tests are conducted to ascertain the resistance of the different types of panels with their different top coverings to distributed and point loads.

The main variables that determine a floor's load bearing capacity are the material used for the core of the panels and its density, the type of structure that is used, and the top and lower covering of the panels.

Depending on the structure that is used and the material chosen for the top covering, the centre of panels can withstand point loads of up to 1000kg and distributed loads of up to 4100 Kg/m².

*Tests conducted in compliance with the raised access flooring standard (UNE 12825).





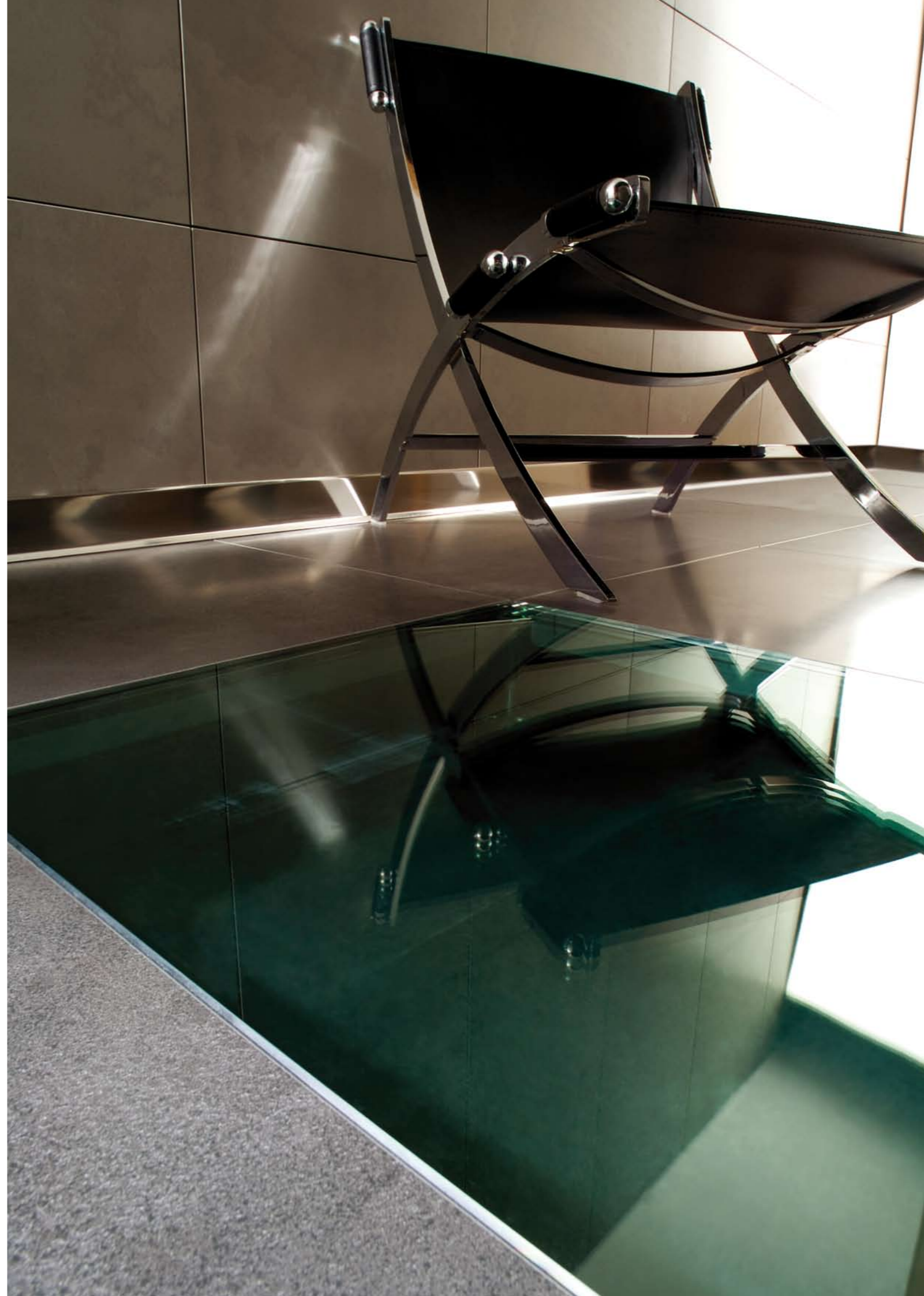
SOUND PROOFING PROPERTIES OF RAFS

A room's soundproofing capacity depends on the soundproofing properties of each of its components, including the floor:

The factors that influence a RAF's soundproofing capacity are the material that the top covering is made of, the material of the core and its density, whether stringers are used or not, and the height of the plenum.

Butech's RAFs are made of ideal soundproofing materials with the right densities to guarantee the best soundproof protection, with cores with a density of up to 1500kg/m³.

To ensure maximum comfort and good soundproof protection, Butech conducts rigorous soundproofing tests of its floors, in accordance with DIN 52210. This standard analyses four different cases: protection against airborne noise, impact noise, horizontal airborne noise and vertical airborne noise.





RAISED ACCESS FLOORING FOR EXTERIORS

The raised access floor (RAF) system for terraces has been specially created to provide an aesthetic solution for terraces containing unsightly drainage slopes.

By building a completely flat floor over the existing terrace floor, these slopes are conveniently hidden underneath.

Height deviations are offset with height-adjustable plots and any accumulated water is drained through open joints on the newly paved surface and then channelled down the terrace's waterproofed slopes to the drain.



ADVANTAGES

The system can be used to create a flat paved surface over sloping masonry floors with height deviations of up to 2%. Any height deviations over 2% will need to be corrected with mortar or with wedges.

The creation of an air void under the newly paved surface generates a continuous flow of air through the pavement joints, which prevents the build-up of condensation and also produces an insulation layer .

The under floor void, can also be used to house cables, pipes, etc.

Easy to access this space under the floor (do not use P-404 to bond tiles and plots in areas where you need to access the services underneath).

The cavity between the raised floor and the living area below also helps to reduce the penetration of noise into the home.

The system is quick to install as the tiles and supports are installed at the same time.

Advantages of Ston Ker: Easy to clean, low dimensional tolerances, wide variety of finishes, hardness, etc.

COMPONENTS OF RAFS FOR EXTERIORS

RAFs for exteriors are flooring systems that incorporate special ceramic tiles on PVC pedestals of adjustable heights, so that a certain space is left between the substrate and the tiled surface. This kind of floor is typically used for terracing and on flat roofs subjected to low-to-medium pedestrian traffic. The system is made up of pedestals of adjustable heights and special tiles for exterior RAFs.

PEDESTALS

The PVC pedestals act as a support for the tiles and also determine the height of the system and width of the tile joints. They can range in height from 10mm to 580mm. In addition to the final height of the base structure, the thickness of the tiles must also be calculated.

CERAMIC TILES

Special ceramic tiles for exterior RAFs are double porcelain tiles glued together with a flexible adhesive with a high bonding strength. The resulting tiles are thick enough to comply with the breaking strength required for this type of raised access flooring.



CHEMICAL PROPERTIES

Resistant to aqueous solutions containing inorganic salts, acids and alkalis.

Resistant to most organic solvents, like alcohol, esters and ketones.

Resistant to commercial detergents and bleaches.

Resistant to microorganisms, since they are not a culture medium.

Not resistant to oxidizing substances like nitric or sulphuric acid, or halogenated hydrocarbon solvents like petrol.

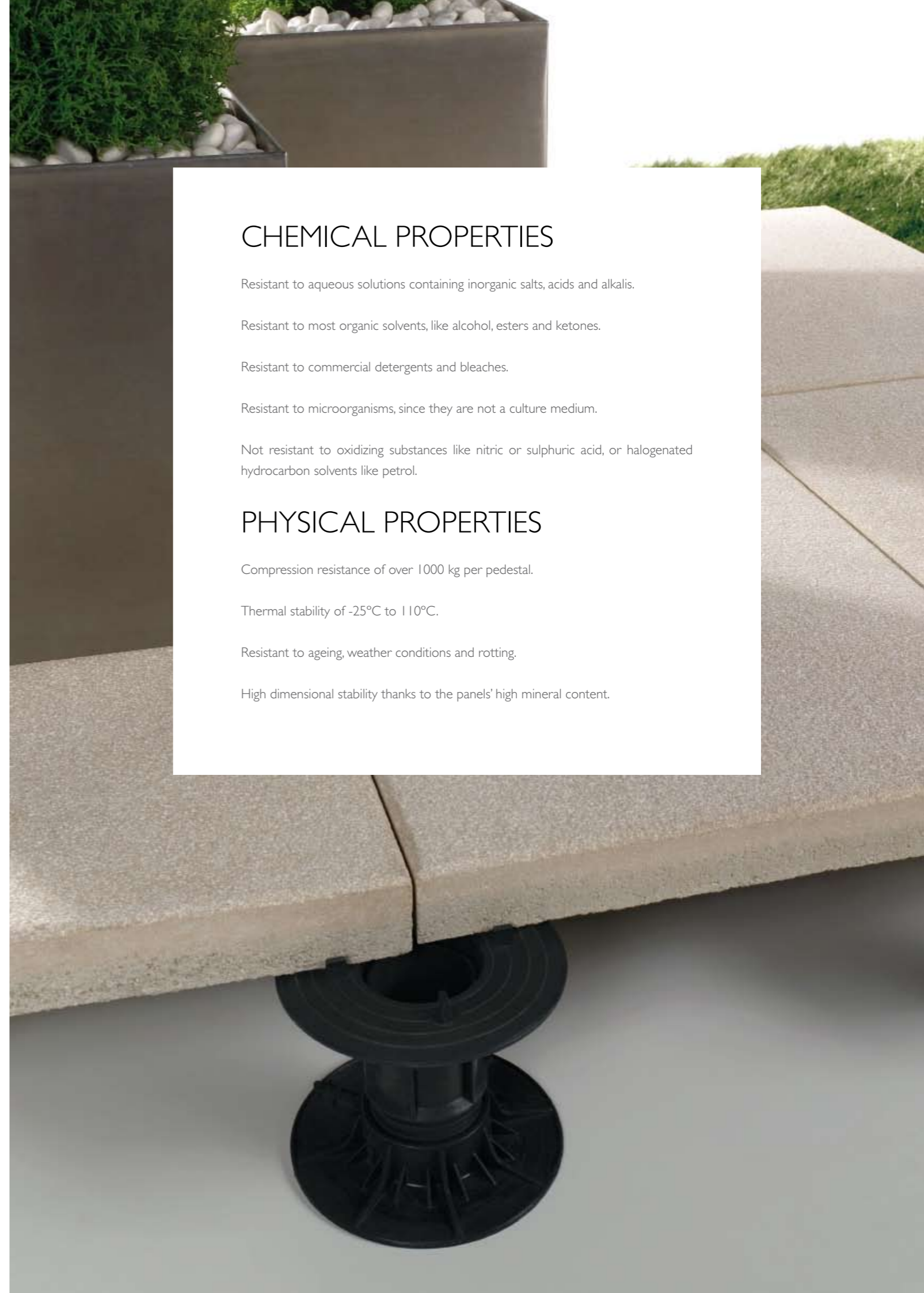
PHYSICAL PROPERTIES

Compression resistance of over 1000 kg per pedestal.

Thermal stability of -25°C to 110°C.

Resistant to ageing, weather conditions and rotting.

High dimensional stability thanks to the panels' high mineral content.



Showrooms

Bangor, Northern Ireland

Enterprise Road
Bangor
Northern Ireland
BT19 7TA
0289146 3051

Birmingham

Starley Way
Marston Green
Solihull B37 7HB
0121 780 0000

600A Stratford Road
Shirley, Solihull
BB904BS
01217466464

Bristol

Lysander Road
Cribbs Causeway
Bristol BS10 7TY
0117 959 7150

Cardiff

360 Newport Road
Cardiff CF23 9YN
02920 465 166

Edinburgh

Unit B Newbridge
Industrial Estate
Cliftonhall Road
Newbridge
Edinburgh EH28 8PJ
0131 335 3883

Croydon

Marshall House
468-472 Purley Way
Waddon
Croydon CR0 4RG
0844 481 8953

Doncaster

The Carr
Carriage Drive
Doncaster DN4 5NT
01302 304 713

Dublin

Unit B, Western
Retail Park
Nangor Road
Dublin 12
14584976

Glasgow

2 Rocep Drive
Braehead
Ranfrew PA48XY
0141 5331000

Leeds

24/26 Cross Stamford
Street,
Regent Street,
Leeds LS7 1BA
01132 444 223

Leicester

8 Counting House Road
Freemans Park
Leicester LE2 7LT
0116 254 5450

Manchester

Water Street
Manchester M3 4JU
0161 817 3300

Newcastle

Unit H
The Waterfront
Newburn Riverside
Newcastle upon Tyne
NE158NZ
01912295710

Northampton

67/83 Bridge Street
Northampton NNI 1PD
01604 232 800

Norwich

Amsterdam Way
Norwich Airport
Norwich NR6 6JA
01603 789 363

Nottingham

Nottingham Road
Chilwell
Nottingham, NG9
6DP
0115 983 6500

Peterborough

DFGesmead
Werrington
Peterborough PE4 6ZL
01733 325 111

Reading

7 Bridgewater Close
Reading
Berkshire RG30 1JT
0844 481 8854

Sheffield

2 Windsor Road
Off Chesterfield Road
Sheffield S8 8UB
01142 500 108

Southampton

101 redbridge road
Southampton
SO15 0ND
0844 481 8956

Warrington

850 Europa Boulevard
Westbrook
Warrington WA5 7ZR
01925 237 807

Watford

Unit 1-6 Otterspool way
watford - herts
WD25 8HL
0844 481 8951

Fulham

Wandsworth bridge road
Fulham, sw6 - 2TY
0844 481 8952

Exeter

Unit B20, Trusham Road
Marsh Barton
Exeter EX2 8QG
01392 215 552



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