

Introduction

Lamaphon LFU boards have been specifically developed to improve airborne and impact sound isolation in intermediate floor constructions. They represent one of many Lamaphon solutions for this application.

They may be employed in a range of floor types to achieve compliance with Approved Document E of the Building Regulations 2003 (England & Wales).

Lamaphon LFU boards comprise a lamella construction rockfibre backing bonded to a tongued and grooved flooring grade top board. Standard boards include 18mm V313 moisture resistant chipboard and 19mm cement particle board.

The product is available with a range of standard backing thicknesses.

Applications

Lamaphon LFU boards can be employed in a variety of floor types for both new build and refurbishment projects. We recommend you contact our technical section for selection advice against individual applications. Common specification examples incorporating Lamaphon LFU boards include:

Timber Intermediate Floor:

Lower plasterboard ceiling lining (min. surface mass 20kg/m²) attached via proprietary resilient bar to underside of timber floor joists. Infill between joists of 100mm Lamaphon rockfibre slab grade S31. 18mm T & G OSB sheathing board fixed to top of joists. Lamaphon LFU type LFU/SCPB19 - O/A thickness 44mm.

Cast concrete Intermediate Floor:

Type 1 cast concrete slab (min. 365kg/m²) with lower plasterboard ceiling lining Type C or better. Lamaphon LFU type LFU/MRCB/18 - O/A thickness 33mm.

Special Applications:

The range of possible combinations of surface boards and backings allows for application specific LFU variants. An example is: *Studio Grade LFU* - designed as a component element in studio floors to support an isolated inner shell construction. LFU boards are also available in any thickness in the range to 30-200mm and therefore provide a simple solution to achieve specific height build-ups.

Installation

Lamaphon LFU boards should be installed with a staggered layout. The minimum stagger between joints in adjacent rows is 200mm (a half board length is preferred). At the floor perimeter the boards must be a minimum of 100mm wide. The tongued and grooved joints should be fixed throughout using a suitable wood adhesive.

The boards should be continually isolated from the walls, upstands or door threshold plates by the use of a resilient perimeter isolation strip (PIS). Suitable products include: 12mm thick Lamaphon PIS type SR/MF140 or 6-13mm Lamacell Foam. The height of the PIS should equal the depth of the entire final floating floor construction e.g. LFU height plus any additional applied boards or other rigid materials (excluding soft floor coverings).

Installation normally commences from a corner with the PIS pre-applied to these adjacent walls. The edge of the LFU abutting the PIS should be pre-cut to remove the projecting tongue (depending on the particular layout plan, more of this edge may require removal to ensure compliance with the minimum board width at the opposite wall). At the opposing walls the PIS may require post insertion (depending on type and thickness used) to allow for engagement of the final T & G joint. A suitable close-dimensioned

clearance gap should be allowed to permit a subsequent tight compressive fit of the PIS.

To avoid linkage between the floating floor and the perimeter walls a gap of at least 5mm should be allowed between the final floor finish and the bottom of the skirting (soft floor coverings and resilient seals may be ignored).

Partitions and intermediate walls should not be built directly off the floating floor, but from the lower sub floor construction.

Where the LFU is applied to sub floors that may contain dampness or moisture, a suitable damp proof membrane must be laid prior to the application of the units.

Performance

Our technical sales department would be pleased to advise on anticipated acoustic performance for a particular floor construction and additional enhancement measures.

Specification

Product	Lamaphon LFU Acoustic Flooring System
Surface Boards	18mm T & G V313 moisture resistant chipboard (MRCB) 19mm T & G cement particle Board (SCPB)
Cover Size	2400 x 600mm 1200 x 600mm (SCPB only)
Board Weights	Nom. 13.5 Kg/m ² (MRCB) Nom. 24 Kg/m ² (SCPB)
Density (Rockfibre Backing)	Standard Product: Nom. 105 Kg/m ³ Special Versions: 65 – 180 Kg/m ³
Thermal Conductivity	Board: 0.14 W/m ⁰ K (MRCB) / 0.35 W/m ⁰ K (SCPB) Backing: 0.039 W/m ⁰ K
Thickness (Rockfibre Backing)	15, 25, 30, 40 & 50mm Special Versions: 13 – 175mm