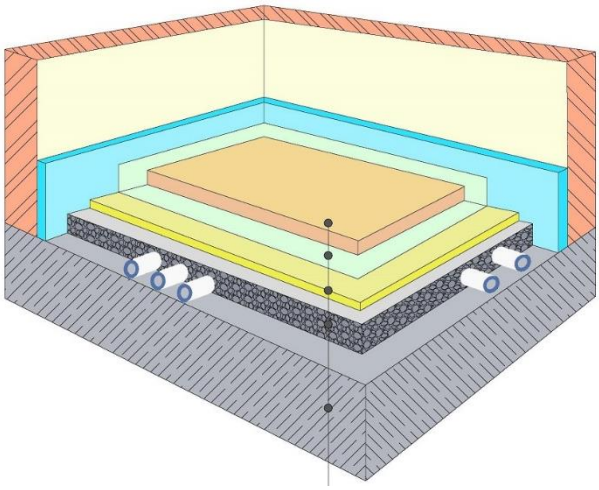
FLOOR WITH A SPREAD LAYER FROM AN OSB BOARD

Modification of the foam concrete: FC 300 to FC 500

Usage: The floor is designed for the use in the **interior of civil buildings** with the placement between two heated rooms, where the absorption of the step noise and airborne noise is required, i.e. particularly in multi-storey buildings.
The improvement index of the step sound-proof properties of the floor and of the airborne noise depending on the type of the wear layer, type and thickness of the used insulation of the step noise and on the supporting ceiling structure.
The levelling layer form foam concrete forms a planar surface for the application of the next layer.

Example of the layer composition:



- structure board OSB in the thickness according to the construction project
- acoustic insulation. in Fig. - thin-layered, non-absorbent
- separating layer
- FC 300 ÷ FC 500 layer covers the installation tubes for the distribution systems of water and electricity as well as other irregularities of the ceiling
- supporting ceiling structure
- floor layers separated from the masonry by a flexible non-absorbent material - EPS, foam PE, etc.

Description of the layers:

Wear layer: slabs, tiles, carpet, PVC.
OSB board: structural supporting board into humid environment, the joint of the board for the groove and tongue, it is advantageous to use two boards laid crossways and joined by screws
Soundproofing insulation layer: acoustic EPS, foam PE, mineral-fibre board with a thickness according to the project
Separating layer: PE foil with the thickness of at least 0.1 mm.
Levelling layer: iwtech europe foam concrete FC 300 to 500, see the technical document no. 115, with the thickness at least up to the upper part of the installation tubes
Supporting ceiling structure: reinforced concrete, ceramic ceiling, wooden ceiling with sufficient bearing capacity - must be assessed by a structural designer
Masonry: plastered and the surface of the plaster is smoothed, contact of the support board and the masonry - linear
Separation of the floor from the masonry: flexible non-absorbent strip - foam PE, EPS, thickness of at least 5 mm, with foldable foil

Related standards:

STN EN 1991-1-1	Loading of building structures
STN EN 1992-1-1+A1	Design of concrete structures
STN EN ISO 717–2	Acoustics - assessment of the sound insulation of building structures and buildings - standard requirements for step soundproof properties of horizontal dividing structures in residential and civil buildings.

Preparation:

Wear layer: It is necessary to observe the applicable application regulations of the supplier.
OSB boards: Apply together with the sound-proofing insulation according to the manual of the supplier of the boards.
Soundproofing insulation layer: Apply immediately after achieving the trafficable strength of the iwtech europe foam concrete FC 300 to 500, it is necessary to observe the respective iwtech europe manufacturing procedure.
Separating layer: In case that there is no vapour barrier under the FC, apply it immediately after achieving the trafficable strength of the foam concrete FC; in case there is a vapour barrier under the FC, leave the FC layer to achieve natural moisture with the contribution of draft-free sudden ventilation
Layer of FC 300 to FC 500 foam concrete: It is necessary to observe the General conditions for the production and processing of iwetech light concrete and the manufacturing procedures for foam concrete FC 300 to FC 500.

Designing:

The composition of the floor, including the thickness of the particular layers, should be part of the construction project.
Further details regarding the levelling layer made of FC 300 to FC 500 can be obtained at the company iwtech europe s.r.o., on request.

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iwtech europe, s.r.o.
Garbiarska 15051/18
080 06 Prešov
Slovak Republic

Výroba/ Production:
K výstavisku 342
911 01 Trenčín
Slovak Republic

tel.:
+421 917 852 394
+421 911 067 555

e-mail:
info@iwtech.sk
www.iwtech.sk