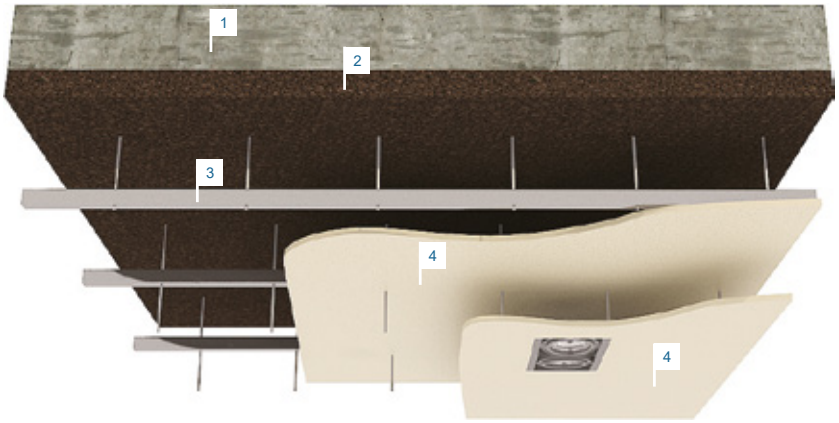
Acoustic Insulation

ACOUSTIC INSULATION IS CHARACTERIZED BY THREE DIFFERENT TYPES OF INSULATION:

1. INSULATION FROM OVERHEAD NOISE

INSULATION FROM OVERHEAD NOISE consists of reducing the transmission of noise produced outside or in adjoining rooms which is propagated via the structure of the buildings (walls, flooring, doors and windows).



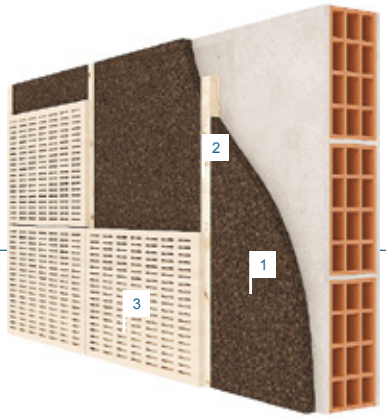
1. Slab 2. Expanded Cork Board – ICB 3. Risers 4. Plasterboard

isocor

Acoustic Insulation

2. ACOUSTIC CORRECTION

ACOUSTIC CORRECTION consists of reducing the sound level in dB (decibels) of a certain environment as well as reducing its reverberation time. Expanded Cork Board proves to be an excellent material for the acoustic correction of certain environments such as theatres, classrooms, concert halls, meeting rooms etc. Expanded Cork Board reduces the sound level through absorption effects, allowing a reduction in reverberation times.

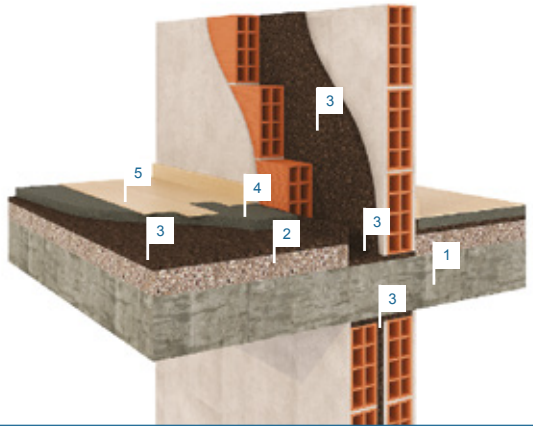


ABSORPTION COEFFICIENT P/500HZ
ICB 25mm=0,33

1. Expanded Cork Board – ICB
2. Lathing
3. Perforated panels

3. INSULATION FROM PERCUSSION NOISES

The INSULATION OF PERCUSSION NOISE consists of reducing the noise sound level of impacts on the slabs, transmitted to the immediately lower storey. For effective reduction, total independence must be ensured between the property's flooring and structure. The interposition of an elastic element, the Expanded Cork Board, between the flooring and the slab, brings about a reduction in the transmission of vibrations and noises resulting from impacts. It will also be important to maintain the discontinuity between the flooring screed and the adjoining walls, thereby eliminating marginal transmissions.



LNEC OVERHEAD NOISE TESTS
11 cm dual wall
+ 4 cm cork - ICB in air gap
RW=53 dB (LNEC test)

LNEC IMPACT NOISE TESTS
14 cm concrete slab
7cm light weight concrete with Regranulate of Expanded Cork
2cm Expanded Cork Board - ICB
4cm screed
+ final flooring
Ln,r,w = 55 dB (LNEC test)

1. Slab 2. Light concrete with cork 3. Expanded cork agglomerate - ICB 4. Screed 5. Final Flooring

Benefits

Excellent acoustic correction effectiveness	**Avoids propagation of existing vibrations**
Major reduction in overhead and percussive noises	