

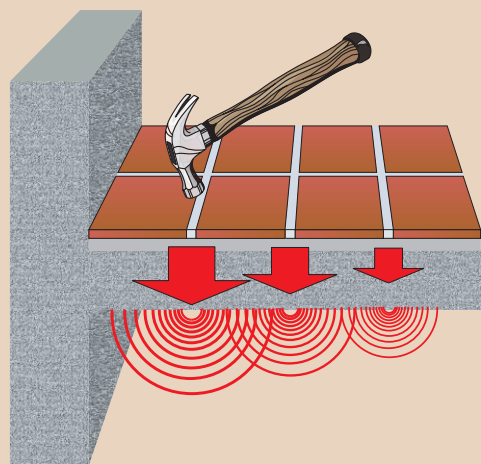
## Ceramic tiles transmit impact noise

Ceramic tiles, unlike soft floor coverings such as carpet, are rigid and readily transmit impact noise. Where

the floor has another dwelling beneath in flats, for example, this can be a particular problem.

Noise insulation is required by Part E of the Building Regulations.

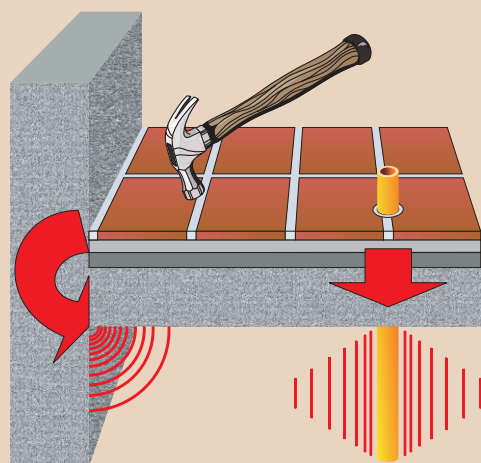
### 1 Ceramic tiles and adhesives transmit noise/vibration



Rigid materials such as concrete, metal, ceramic and stone offer much less resistance to the passage of impact noise than soft absorbent materials such as foam and rubber.

A rigid floor that has been tiled directly with ceramic tiles or natural stones will transmit impact noise and vibration through itself and into its supporting structure.

### 2 Impact noise can be transmitted through structures such as walls and pipes

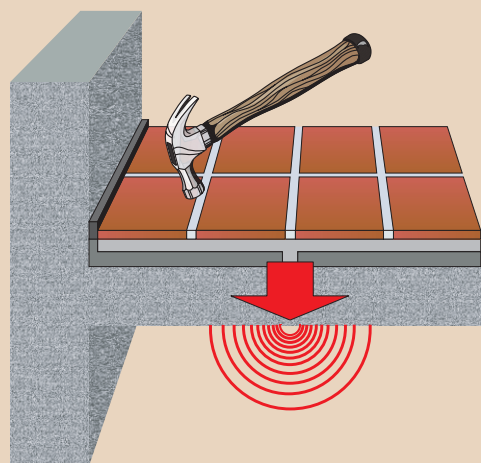


It is not enough simply to insulate the floor from direct noise transmission by applying an absorbent layer underneath the tile bed.

Noise/vibration can be transmitted via any other direct contact between the tile bed and the building structure.

The most common place for this to occur is around the perimeter of the tiled area at the junction with the wall but pipes, conduits, etc will also provide transmission paths.

### 3 Acoustic 'bridges' can be made inadvertently



Any part of the floor that provides a rigid path to the structure will allow noise/vibration to be transmitted.

During application the tile adhesive can penetrate the gaps between adjacent sections of insulating mat and form bridges of set mortar that will allow transmission.

## Provide an acoustic insulation layer to prevent structure-transmitted noise

**weber.sys acoustic** is a complete system for the insulation of floors from impact noise, which satisfies the requirements of the *Building Regulations 2000, Part E* –

*Resistance to the passage of sound.* It includes a sound absorbing underlay that has a waterproof surface plus perimeter and joint tape to eliminate other potential

routes for noise/vibration to be transmitted into the building structure. The under-tile system is approximately 10 mm and it provides a noise reduction of 19 dB.

### Products required

**weber.sys acoustic**  
**weber.set rapid SPF** or **weber.set SPF**  
**weber.joint wide flex**

#### Stage 1: Apply the underlay

Ensure the surface is sound and fully dry. Fill any holes and remove any raised material. Sweep off any loose debris or dust.

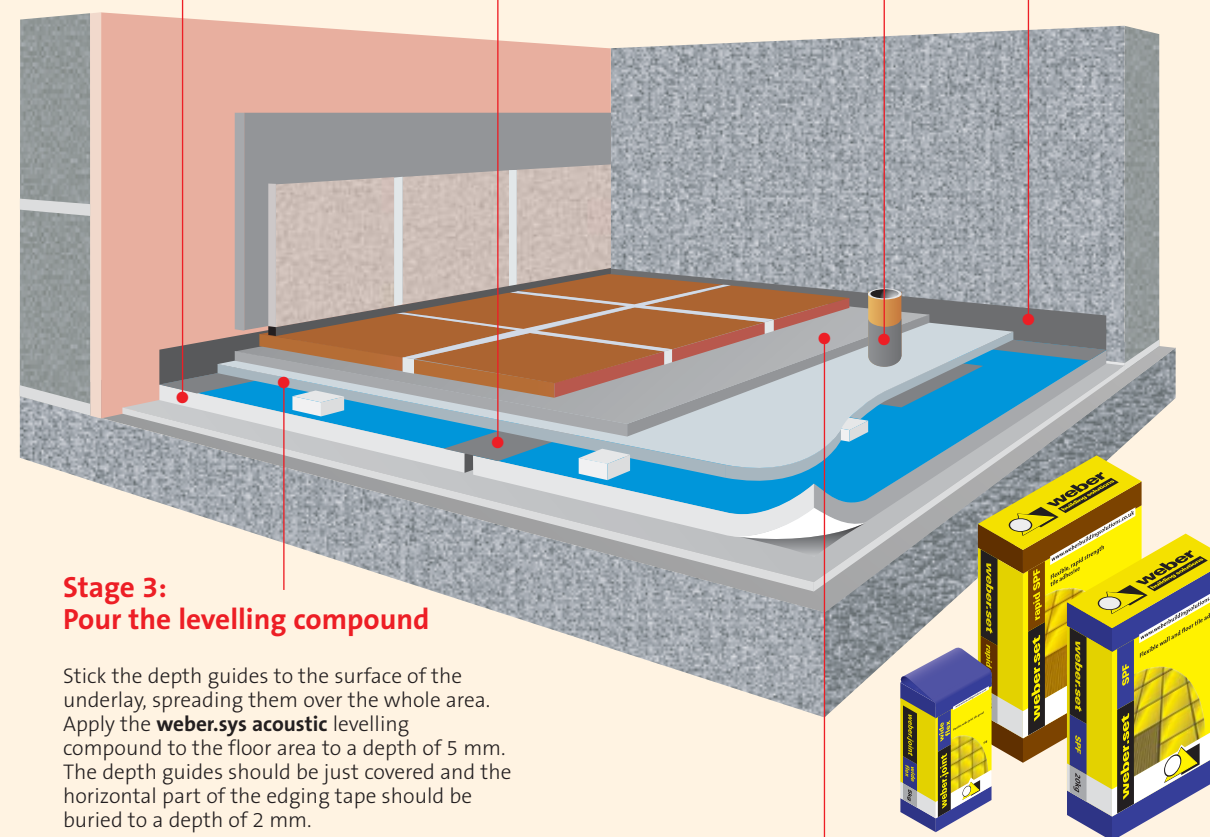
Cut the underlay to suit and then roll back up.

Seal all joints between adjacent sections of underlay with the **BP25N** tape provided. This is important to prevent mortar from penetrating the joints and acting as a bridge to transfer noise/vibration past the absorbent layer.

Apply the **weber.sys acoustic** adhesive to the floor with either a roller or fine V-notched trowel. Roll the underlay down such that the white side is in contact with the adhesive on the floor and smooth down.

#### Stage 2: Protect joints and perimeters

Apply the **BP50N** edging tape onto the underlay around the perimeter. This is essential to prevent noise/vibration transmission into the building structure through the interface with the walls. It is also necessary to apply the edging tape around pipes, fixed units etc.



#### Stage 3: Pour the levelling compound

Stick the depth guides to the surface of the underlay, spreading them over the whole area. Apply the **weber.sys acoustic** levelling compound to the floor area to a depth of 5 mm. The depth guides should be just covered and the horizontal part of the edging tape should be buried to a depth of 2 mm.



#### Stage 4: Fix and grout the tiles

Allow the levelling compound to dry for at least 4 hours. Fix the tiles with **weber.set rapid SPF** or **weber.set SPF** and allow to fully dry. Fill the grout joints using **weber.joint wide flex**.

It is essential that a flexible movement joint is made between the perimeter tiles and any skirting where the tiling abuts a non-insulated area of tiling and where the tiling abuts an edge trim or threshold.

