REDUC Installation Guidelines

The following instructions are issued as an aid to the correct installation procedures. Individual site conditions may necessitate variances to these standard instructions and all such cases should be referred to Hodgson & Hodgson's Technical Department. If in any doubt prior to, or during installation, call 01664 821810 for assistance.

1. Preparation and Planning

All REDUC products should be stored inside and under cover in a dry, well-ventilated area. Ensure they do not come into direct contact with moisture or are subjected to high levels of humidity, as the boards may swell and warp. Protect boards, particularly at the corners from potential damage.

Acclimatise the boards in the area in which they are to be laid for 24 hours prior to installation to reduce expansion and contraction issues.

Reduc joint adhesive: allow the adhesive time to cure prior to walking on the floor for up to 48 hours. The adhesive will not cure in temperatures below 5°C.

Wear a suitable facemask to avoid the inhalation of dust when cutting REDUC.

2. Installation

Method 1
Overlaying onto Existing Timber Floors.

Ensure the existing floor is dry, flat, and structurally sound and secure any loose or squeaky sub-floors. Remove any protrusions e.g. nails, carpet tacks, mortar or plaster spills etc. Remove existing skirting boards and ensure the surface of the base of the perimeter walls are smooth, flat and free from dust or loose particles.

REDUC 100mm SoundSlab insulation is an integral component of the REDUC flooring system. The overall acoustic performance will be enhanced with REDUC SoundSlab between the floor joists. SoundSlab can be installed from floor level by full or partial removal of the floor boards. Friction fit the SoundSlab snugly between floor joists to rest on the top of the ceiling below. Ensure the entire ceiling area, including gaps between the end joists and the wall are covered. Re-lay the existing flooring boards before installing the acoustic flooring. Alternatively, if the ceilings are being removed, SoundSlab can be fitted from below.

Apply REDUC Isolation Tape around the bottom vertical face of all perimeter walls. If the surface of the wall is uneven, plaster fill or render to a smooth finish. The REDUC Isolation Tape should be at least 2mm higher than the acoustic flooring height. Once the acoustic floor has been fitted, align the skirting boards on top of the REDUC Isolation Tape creating a gap of least 2mm between the acoustic floor and skirting board base. Use acoustic sealant to fill any minor gaps between the floor and the wall.

Before starting, plan the floor layout to minimise waste. Remove the board tongues at wall edges. Starting at the opposite corner from the door opening, Cut and lay the first board felt side down to butt up against the REDUC Isolation Tape. Continue the first row using REDUC Adhesive to bond all joints (one litre covers 25m^2 floor area). Start the second row using suitable off-cuts from the first row and complete all subsequent rows in the same way. Acoustic floors should be laid Room by Room to maintain the acoustic integrity of each area and to reduce expansion and contraction. At door thresholds leave a 5mm gap between the ajoining acoustic flooring and fill the gap using only acoustic sealant. Note: At the door threshold, the acoustic boards may require additional base packers or leveling to support the joint.

BATHROOMS: Acoustic floating flooring should only be laid onto the walking surface of the floor.

New Bathrooms: Raise and secure the bath, WC & shower onto a ply deck or plinth to suit the finished height of the acoustic/decorative flooring. This action negates the problems associated with high loads and/or mechanical connections both through the floor and via the walls.

Existing Bathrooms: Where the bath, WC & shower etc are in-situ, the acoustic flooring should be laid on the walking surface only with a 1-2 mm gap around the sanitary items which should be sealed/isolated using only acoustic sealant. The finished decorative floor can be sealed with a flexible waterproof sanitary sealant.

Note: Thin (non-structural up to 21mm) acoustic floors will most likely require a bonded 6mm ply overlaid to prevent 'Joint Grinning' when laying thin vinyl, rubber and lino etc. (For tiling - see direct to joists)

KITCHENS: the entire floor area should be covered. The kitchen base unit legs must be isolated and the load spread over the acoustic flooring surface. Cut lengths of 50mm x 25mm timber battens with REDUC 50mm x 5mm Isolation Tape applied to the length of the batten base. Place the Isolation Tape side on top of the acoustic floor and secure/screw the legs onto the timber batten surface.

Note: for High Specification kitchens- REDUC structural acoustic floors should be laid to support the additional loads for multiple white goods and granite worktops etc.

Method 2
Laying Directly onto Timber Joists.
REDUC Foundation 35 and REDUC SoundFloor 28 for joists at up to 400mm centres.
REDUC Foundation 39 and REDUC SoundFloor 32 for joists at up to 600mm centres.

Ensure that the joists are dry and flat to prevent a spring effect when walking across the floor. Once flat, the structural boards will provide a firm surface for decorative floor coverings. Lay structural boards perpendicular to the joists. If additional support is required, install noggins. Fitting detail as Method 1 above.

REDUC Foundation 35 or 39 is recommend for the majority of floor finishes including tiling (with a stress reliving membrane) and bonded engineered timber. Whilst Foundation 35 and 39 offer the best acoustic overall performance for all flooring types, REDUC SoundFloor 28 and 32 are both suitable for direct to joist applications, however, the boards are lighter and will not provide the same degree of acoustic performance or stability for tiling projects.

Stud partitions on top of continuous structural acoustic floors are NOT recommended when: a) Sound testing is a requirement. In the case of a failure, locating and rectifying the problem over continuous floor areas and multiple rooms is difficult. b) There is a high risk for natural expansion, humidity or water leakage or contraction where rooms vary in temperature.

Non load-bearing timber and metal stud partitions could be built directly off REDUC Foundation 35 and Foundation 39 provided the associated risks above are taken into account. Non load bearing partitions can be mechanically fixed into 75% of the upper surface of the boards. Alternatively to reduce the amount of connections and allow the floor some movement: apply REDUC Heavy Duty Isolation Tape to the base

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of a timber floor plate with no mechanical fixings. The floor plate should run the full length up to the wall edges and be butted against Heavy Duty Isolation Tape. The floor plate can then be mechanically fixed to the vertical wall fixed plates and stud work, ideally using angle brackets and fixings up 75% of the floor/wall plate depth. All plasterboard layers should be a minimum of 2mm above the acoustic floor surface.

Method 3
Overlaying Directly onto Concrete Floors.
REDUC SoundFloor 28 and SoundFloor 32, REDUC Micro 17 and Micro 21, REDUC SoundFloor 18 and STI.

Ensure the upper face of the concrete floor is dry and flat. Apply a suitable smoothing compound or leveling screed as necessary.

Lay Flooring as per Method 1

Method 4
Overlaying onto Battens on Concrete Floors.
REDUC Foundation 35 and REDUC SoundFloor 28 for battens at up to 400mm spacings.
REDUC Foundation 39 and REDUC SoundFloor 32 for battens at up to 600mm spacings.

In-situ timber battens must be flat and at least 50mm thick to support the acoustic floor. A new battened sub-floor should be leveled and prepared to ensure the battens or framed timber floor provides for a rigid base for the floating floor and ensure minimal bounce. Installation as Method 1 & 2 direct to joists.

Access Trap: If access to ducts and services is required, cut an access trap by setting a power saw at 45 degrees and at a depth to suit the floor. Replace the trap by laying a bead of acoustic sealant.

Wet Room Floors

A selection of REDUC structural products are suitable for use in the construction of wet room floors. However, as this is a specialist application, expert advice should be sought when detailing the floor.

Underfloor Heating

REDUC Foundation boards are suitable for use with water based or electric heating systems and will provide a firm and stable base, subject to the boards being conditioned before use to avoid shrinkage and warping. The heating system should be laid in accordance with the manufacturer's instructions and on top of the REDUC flooring due to the highly insulative properties of the product and to avoid increased running costs and heat response times.

3. Floor Finishes

If the floor is to be used as a deck for adhesive bonded thin vinyl, rubber, lino, cork etc then to prevent joint grinning and material creasing it will be necessary to fully bond a 6mm plywood overlay on top of the REDUC boards with a contact adhesive or equal applied in accordance with the manufacturer's instructions. The 6mm ply layer must not contact the wall, skirting or floor based items. DO NOT use any form of mechanical fixings to secure the 6mm ply layer or floor coverings e.g. nails, screws, staples, tacks etc. as they will create sound paths through the acoustic floor.

Carpets and underlay: secure gripper rods with an adhesive rather than nails.

Floated wood plank overlays: REDUC structural acoustic floors provide a firm surface, ideal for overlaying floated T&G or interlocking laminates and engineered wood plank flooring. A thin 3mm resilient layer of polyurethane foam sandwiched between the floor and decorative wood is recommended to prevent squeaking. Floated wood offers the best acoustic performance with this type of overlay and is the least problematic. However the above wood products could be fully bonded (No Nails) the contractor must evaluate the possible expansion and contraction issues associated with floating floors before proceeding. Short length Parquet type designs and thin non structural Reduc flooring will require a 6mm ply bonded overlay to stabilise the acoustic floor. .

Floor Tiling: should only be laid onto Foundation 35 or 39 structural acoustic flooring incorporating a *stress relieving membrane and fixed with a flexible bedding compound and grout to neutralise any differential movement between the acoustic flooring and the tiles. *Contact Schluter-Systems on: 01530 813396 or similar suppliers for further information. When laying a natural stone finish e.g. marble, granite, limestone etc., seek professional advice. Ensure the floor structure is strong enough to withstand the additional weight and lay in accordance with the floor finish supplier's recommendations.

When using adhesive to fix the floor covering, it should be laid in accordance with the FLOOR FINISH MANUFACTURER's instructions and/or a specialist contractor.

UNDER NO CIRCUMSTANCES SHOULD MECHANICAL FIXINGS BE USED WHEN LAYING FLOOR FINISHES.

4. Maintaining Acoustic Integrity of REDUC

In order to maintain the acoustic integrity of REDUC, every care should be taken to avoid rigid connections between the "floating floor" and the adjacent structure of the building by following the guidelines below:

DO NOT nail or screw bookcases, shelving or fitted furniture etc. to the floor.

DO NOT build partition walls directly off the acoustic floor when creating an ensuite bathroom or undertaking similar building alterations. This may cause cracks to appear between the top of the wall and the ceiling as a result of the natural movement of the floor. The acoustic flooring should be cut away and the partition built off the substrate floor. Fix REDUC Heavy Duty Isolation Tape along the bottom of both sides of the partition wall and re-lay the acoustic flooring, butt jointing it to the Isolation Tape.

If installing additional sanitary ware, seek professional advice to ensure the acoustic flooring is capable of withstanding the additional weight of any point loading. Alternatively, cut away the acoustic flooring and install fittings on a solid plinth of equal thickness to the flooring.

If penetrating the floor with soil pipes or other plumbing features, electrical wiring etc, seek professional advice before commencing work to ensure the acoustic integrity is maintained when work is complete.

DO NOT install down-lighters in a ceiling directly below an acoustic floor as this could create a path for noise to "leak" through.

Like other timber flooring products, REDUC boards may warp if subjected to excessive water caused by flooding or continuous high levels of steam and humidity. Ensure kitchens, bathrooms and shower rooms are adequately ventilated.

If the acoustic flooring is subjected to water damage it should be replaced. DO NOT try to nail or screw the boards back into position as this will create a direct path for noise transmission through the floor and may result in the floor "squeaking".

If in any doubt contact H&H Acoustic Technologies Ltd.

Tel: 01536 270450
Email: info@acoustictechnologies.co.uk
Web: www.acoustictechnologies.co.uk

TRIM ACOUSTICS
Trim Acoustics Cardinal West, Cardinal Way, Godmanchester,Huntingdon, Cambridgeshire, PE29 2XNTel: 020-8443-0099
sales@trimacoustics.co.uk
www.trimacoustics.co.uk

H&H Acoustic Technologies