



## **N & C LiveTile Installation Instructions**

### **1. Approval of tiles prior to fixing**

Before commencing the installation it is recommended to randomly select an acceptable blend of tiles from different boxes.

### **2. Work Safety**

While working with glass tiles & adhesives, use protective equipment (e.g. goggles, gloves and possibly a respirator).

### **3. Substrate Preparation**

This will vary according to the type of surface on which the glass tiles are to be laid.

#### **Concrete and screeded surfaces.**

The substrate must be completely flat, sound, fully cured, clean, free from laitance, dirt, dust and any contamination which may prevent adhesion.

Cement:Sand Renders should be left for 2 weeks before tiling.

Cement:Sand Screed should be cured for 3 weeks before tiling.

New concrete, concrete blocks and bricks and calcium silicate bricks should cure for at least 6 weeks before rendering or direct fixing.

Ensure concrete or screed bases have cured adequately to receive tiling, refer to BS 5385 part 3.

Uneven sub floors should be levelled using a proprietary Smoothing Compound.

Prime floor with Nicobond Primer according to the manufacturer's instructions.

#### **Timber surfaces.**

Timber is not considered to be a suitable base for tiling and is therefore not recommended. If timber has to be used it should be rigid, free from movement and stable with respect to humidity and moisture changes. The rigid timber floor should then be overlaid with a proprietary cement mortar faced hard foam support element Tile Backing Board ie Nicobond Lux Element of 20mm thickness. In the case of wall tiling 10 or 12mm thickness should be used. These boards should be fixed and secured following the manufacturers recommendations.

#### **Gypsum plaster/plaster board. (Dry areas only)**

**New plasterwork** should have been completed at least **4 weeks** previously and should be dry throughout. Tiles should only be fixed to the finish coat, never direct to the backing coat.

Plasterwork is unsuitable as a background for tiling in wet areas." (BS 5385: Part 1: 1995 Section 3 Table 4 d).

### Surface Preparation

The substrate must be fully cured, dimensionally stable, clean, dry and free from dust or any other contamination which will reduce adhesion.

### Priming

Apply a brush coat of a blend of 4 volumes of water to 1 volume PVA Bonding Agent and Sealer, ie Nicobond Universal Bonding Agent & Sealer and allow to dry.

## **4. Tile fixing**

Care should be taken when setting out to ensure the correct orientation of the tiles. This is given by the position of the LIVE TILE logo (the figure on the rear side of the tile), which must face upwards on walls and be in uniform direction on a floor. If a chessboard pattern on a floor is adopted lay tiles at right angles to each other.

### **Adhesive for Concrete/ Screed and Sand:Cement render surfaces:**

The tiles should be fixed using Nicobond Glass Tile Adhesive, a single component flexible adhesive meeting the requirements of BSEN 12004 C2TE and BSEN 12002 S1.

A thin layer of adhesive (up to 6mm) should be floated onto the surface and lightly combed through with a notched trowel. Bed the tiles into the adhesive using a sliding and twisting movement to ensure good contact and solid bedding of the glass tiles, in both wall and floor situations. For larger size formats 'buttering' of the reverse of the tile is recommended ensuring the adhesive bed thickness does not exceed 6mm.

Do not apply undue pressure to the tile surface by i.e. use of rubber mallet to level the tiles. Adjustments to the tile alignment can be made up to 20 minutes after installation depending on the temperature and local conditions. If adhesive hardens, remove and reapply.

### **Gypsum plaster/plaster board and Timber surfaces**

The tiles should be fixed using a ready mixed or "paste" dispersion adhesive ie. Nicobond Waterproof Ready to use Tile Cement which meets the requirements of BSEN 12004 D2T.

### Notched Trowel Method

Spread the adhesive onto the surface using the straight edge of the notched trowel to give an even surface of adhesive up to a maximum depth of 3mm. Lightly comb the top surface of the adhesive using the notched edge of the trowel. Do not press the trowel through the full depth of the adhesive other wise solid bedding will not be achieved.

Fix glass tiles immediately by pressing them firmly into position with a slight sliding or twisting action.

## **5. Notes to fixing**

In accordance with BS5385 N & C Livetile wall and floor tiles must not be butt jointed.

The use of tile spacers for glass wall tile installations minimum 2mm thickness is recommended and minimum 4mm for floor tiling.

It is recommended glass tiles are brought to the installation site at least one day in advance so that they can acclimatise.

It is not recommended to force dry the adhesive (in particular during winter) as this may affect the adhesive setting process.

Ensure any adhesive residues are removed from the tile surface whilst the adhesive is still wet.

As per British Standards provision for an expansion joint of 6mm for all internal corners on both walls and floors should be made. This joint should then be filled with Nicobond Silicone Sealant.

## 6. Grouting

The tiles should be grouted using Nicobond Flexible Grout, a high performance cementitious flexible grout which meets the requirements of BSEN 13888 CG2.

Joints between tiles may be filled once the adhesive has sufficiently hardened usually within 24 hours of tile fixing. White grout is recommended for walls and grey for floors.

## 7. Notes to grouting

Ensure any adhesive residues are removed from the tile surface whilst the adhesive is still wet.

In floor tile installations covering an area greater than 15m<sup>2</sup>, it is necessary to insert movement joints, such provision should also be made for perimeter joints around columns or where tiles abut other materials.

On completion of the installation protect the tile work using plywood or similar to prevent other trades damaging the tile surface.

## 8. Cutting:

The surface of glass tiles is very hard and therefore the selection of tools is of the utmost importance (e.g. cutting wheels, angle approximately 155° is recommended, use cutting oils, whereby you can prevent the tools from being fast worn and you will achieve cleaner fraction). Maintain even pressure while cutting.

The 5mm wall tiles can be cut with hand cutters designed for glass.

For 8mm glass floor tiles, use electric machine cutter with a diamond blade wheel fitted with a suitable water cooling system.

Cutting corners - Drill a hole in the top of a corner sector first. It will prevent from breakage during cutting that will follow and also from later breakage which could be caused by internal stress in glass.

Grind sufficiently **all** edges created by cutting in order to remove any cracks that may have arisen. First grind the edges under the angle of 45° then follow with fracture surface. Grinding with grinding machine, use the drill equipped with abrasive disc.

Use diamond abrasive pad or sharpening stone, both soaked in water.

## 9. Drilling:

To drill holes in glass tiles use an electric drill with variable speed. Use only core drills for glass with a diamond surface, starting all drill holes at 45° to the tile and gradually straighten until drilling at 90° (straight).

**Drilling must be performed with a continuous water cooling system (i.e. hand held spray). If cooling is insufficient, the edges will crack or split off later.**

The larger diameter of the hole to be drilled, the lower speed should be set (e.g. 1800-2000 rpm for Ø 10 mm, 800-1000 rpm for Ø 25 mm).

If you perform pre-drilling from the rear side of the tile (approximately to one half), you will avoid splitting off the edges while finishing the drilling operation, this again must be water cooled as above.

**Grind properly the edges thus created.**

**Do not exert excessive pressure while drilling – the drilling head gradually grinds the hole.**

In case of fixed tiles it is possible to drill holes with a diameter of 6 – 25 mm.

Warning: the hole drilled into a tile should be greater by about 2 mm than any screw fixing to be used.

## **10. Grinding:**

After cutting and drilling we recommend mechanical grinding, smoothing and bevelling of all exposed edges (e.g. by using a drill with a carborundum grinding wheel). Use 60 grade or 100 grade Silicone Carbide paper or a Nicobond Diamond Hand Pad.

For edges and holes with an anticipated higher mechanical loading, we recommend finishing grinding by a grinding wheel made of nylon fibres with abrasive elements. Dipping the tile in water while sanding will provide the best results for sanding, smoothing and bevelling edges. Recommended grinding speed of 2000 – 3000 rpm when using electric sanding disc.

Continue grinding until the glass edge assumes a “milky” appearance, this effect reduces the visibility of jointing material through the tile edge and it also prevents potential cracking caused by incorrect or insufficient grinding of microcracks during the cutting process.

## **11. Installing and attaching accessories to glass tiles:**

Prior to installing accessories, basins, mirrors, shower doors etc, ensure the adhesive and grout is fully cured. It is also important to select the correct anchor bolts, fixing screws and mounting brackets that are compatible with the tile and the substrate that you are mounting to (bricks, plasterboard, wood, etc). The use of plastic bushes inserted through the body of the glass tiles is recommended, this eliminates any direct contact between fixing screws and the glass tile. Avoid overtightening of the screws as this can cause tiles to crack.

## **12. Cleaning and Maintenance**

Glass tiles can be cleaned with water and standard glass cleaning solutions, It is also possible to utilise tile cleaning agents as long as they do not contain abrasive ingredients.

## **13. Miscellaneous Information**

The above installation recommendations are subject to change without notice. Any amendments will supersede these installation recommendations. In the case when there is a conflict the latest dated amendment will prevail.

For further information please contact authorised distributors or [www.livetile.com](http://www.livetile.com)

N & C LiveTile.

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