



## **London Glass Installation Instructions** **Tile Adhesive**

Recommended for tile sizes up to 600 x 400mm

### **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 Walls and Rendered surfaces.**

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

Cement:Sand Renders should be left for 2 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.

#### **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. In the case of wall tiling it is preferred to overlay with a proprietary cement mortar faced hard foam Tile Backing board, e.g Nicobond Lux Element of 10 or 12mm thickness should be used. These boards should be fixed and secured following the manufacturer's 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 may reduce adhesion.

#### **Priming**

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

#### **4. Tile fixing**

##### **Adhesive for Sand:Cement render surfaces and Tile Backing Boards:**

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. 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 e.g. by use of a 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 e.g. Nicobond Waterproof Ready to use Tile Cement or Nicobond AquaUltra Grip, 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 otherwise 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 London Glass tiles must not be butt jointed.

The use of tile spacers for glass wall tile installations, minimum 2 mm thickness is recommended.

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 setting process.

Ensure any adhesive residues are removed from the tile surface whilst it 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, flexible cementitious 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.

## 8. Cutting:

The surface of glass tiles is very hard and therefore the selection of tools is of the utmost importance (e.g. a cutting wheels, of angle approximately 155° is recommended; use cutting oils whereby you can prevent the tools from being rapidly worn to achieve cleaner section). Maintain an even pressure whilst cutting.

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

For 8 mm glass floor tiles, use an 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 breakage during the cutting that will follow and also from later breakage which could be caused by internal stresses in the glass.

Sufficiently grind **all** edges created by cutting in order to remove any cracks that may have arisen. First grind the edges at an angle of 45°, then follow with the cut surface. When grinding with grinding machine, use a drill equipped with an abrasive disc.

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

## 9. Drilling:

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

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

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

Pre-drill the tile from the rear side (to approximately one half the thickness), to avoid splitting of the edges while finishing the drilling operation. This again must be water cooled as above. Finish the hole by turning the tile over, marking, and drilling from the other side.

**Carefully grind 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 with a grinding wheel made of nylon fibres with abrasive elements. Dipping the tile in water during sanding will provide the best results for sanding, smoothing and bevelling the edges. Recommended grinding speed - 2000 – 3000 rpm when using an 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 over tightening 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.

## **14. Recommended Products**

NICOBOND Glass Tile Adhesive

NICOBOND Ready to use Waterproof Tile Cement

NICOBOND AquaUltraGrip

NICOBOND Flexible Grout

## **15. Note**

Cement or polymer based ceramic tile adhesives are not suitable for fixing foil backed Milky Way Silver.

N & C LiveTile.

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