

Ceramic wall tiles

Ceramic tiles are widely used in bathrooms and kitchens. There is an extensive range of tiles available differing in size, colour and decorative design. Ceramic tiles are usually sold in boxes of a specified number but can also be purchased singly or by the square metre.

It's important to remember that the preparation of the wall surface is a major factor in how good the finished job will appear, as the glaze on the tiles will highlight any unevenness in the surface.

Preparation

Ceramic tiles can be applied to many different surfaces but each may require a different preparation. Bare plaster is the ideal surface on which to apply ceramic tiles, but ensure the plaster is sound.

- Scrape away any flaking paint and remove areas of loose plaster then repair any damage to the wall surface using plaster or filler.
- Newly plastered walls should always be treated with a Polyvinyl acetate (PVA) sealant solution - five parts water to one part PVA. This will seal the surface and promote adhesion.
- Tiles can be applied to gloss painted walls but the gloss paint must be keyed with a coarse wet-and-dry abrasive paper.
- Plasterboard can also be tiled but as tiles are usually applied in areas of high water usage, moisture-check plasterboard must be used.

To determine the number of tiles you will need, calculate the surface area of the wall by multiplying the length of the wall by its height (or by the height you wish to tile up to). This should be done for each surface you are planning to tile; then the figures for each surface should be added together.

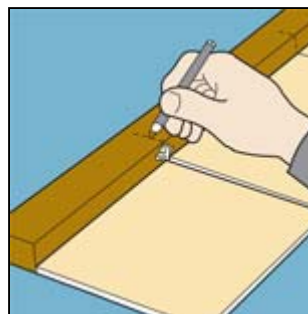
Always add at least 10% to your final figure to allow for wastage and cutting, and then divide the total surface area by the area of one tile. Some boxes of tiles give the surface area of their contents, so by dividing the total surface area by this figure you can work out the number of boxes that will be required.

Tiling tips

Tiles should always be centred on the wall surface so any cut tiles appear at the edges. A small area, such as above a washbasin, can be tiled using only whole tiles. But plan the position of the tiles using the centre of a tile or its edge as the central starting point.

When tiling large wall surfaces it is advisable to use a homemade tile gauge.

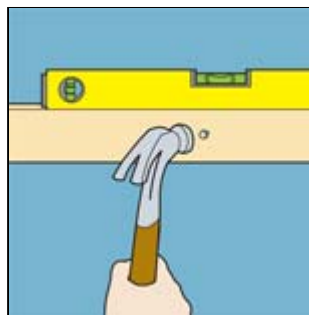
- Take a 2m (6ft) length of softwood batten 50mm (2 in) wide x 25mm (1 in) thick and position several tiles along



its edge inserting plastic spacers between them. Mark the position of the tiles on the batten.

- Then find and mark the vertical and horizontal centres of the wall.
- Place the tile gauge against the horizontal line, aligning a joint mark on the tile gauge with the vertical line. As it is difficult to cut narrow strips of tile, the gap at the end of the wall should be between one-third and two-thirds of a tile width. If this is not the case move the tile gauge by half a tile width to increase or decrease the gap at the end.
- Similarly, by positioning the tile gauge against the vertical line and aligning a joint mark with the horizontal line you can plan your tile layout to ensure the gap between the bottom edge of your first row of tiles and the floor or skirting board is about three quarters of a tile width.
- As most floors are uneven it is necessary to fix a horizontal guide batten at the base of the wall using a spirit level to ensure it is level. The guide batten will also support the tiles.
- It is good practice to also fix a vertical guide batten to the wall to ensure the tiles are fixed in precise columns. When all the whole tiles are in place the battens are removed and the cut tiles can be fitted in the remaining spaces.

Taking a 2m length of batten position several tiles along its edge inserting plastic spacers between them and mark the position of the tiles.



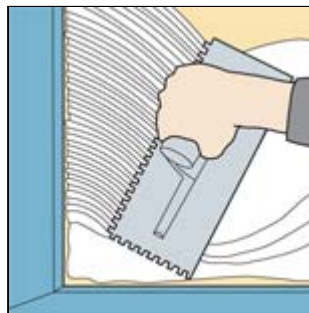
Fix a horizontal guide batten at the base of the wall using a spirit level to ensure it is level.

Fixing the tiles

Tiling adhesive is available as a dry powder that you mix with water or in ready-mix tubs, which can be used as both adhesive and grouting. Remember that some surfaces may require a particular adhesive e.g. shower cubicles, so ask at your local DIY store if you are not sure.

The adhesive is applied to the wall using a serrated trowel or spreader and should not be more than 4mm thick.

- Apply the adhesive evenly over the surface but avoid covering too large an area as it may dry before you fit the tiles.
- Position the first tile in the angle of the guide battens, pressing it firmly into the adhesive using a slight twisting motion.
- Continue applying the tiles across the wall building up the levels as you go.
- Plastic spacers can be used between the tiles ensuring the joints remain uniform and will also prevent the tiles from slipping.
- When all the whole tiles have been applied to the wall, leave for at least 12 hours to allow the adhesive to dry and then remove the horizontal guide batten.



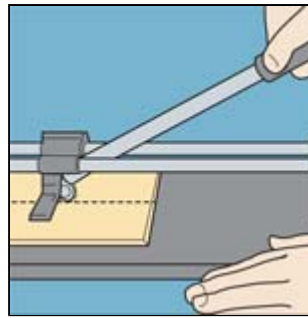
Use a serrated trowel to apply the adhesive no more than 4mm thick.

Basic tile cutting

- To accurately measure the tiles you need to cut, place a tile with its glazed surface to the wall in the position

where it is to be fixed and mark the edges with a felt tip pen, remembering to allow for the joint.

- To actually cut the tile you can use either a hand-held glass cutter or a flat-bed tile cutter.
- Using a straight edge, line up the pen marks on the edges of the tile and score the glazed surface with the glass cutter. Placing the tile over the edge of a table or workbench you can then snap the tile along the scored line.



If using a flat-bed tile cutter, position the tile with the glazed surface facing upwards on the tile cutter with the scoring mechanism in line with the marks on the edges of the tile. Push the lever forward to score the tile and then push the lever down to break the tile evenly along the scored line.

With a flat-bed tile cutter, position the tile with the glazed surface facing upwards and the scoring mechanism in line with the marks on the edges of the tile.

Fitting cut tiles

- When fitting cut tiles it is easier to apply the adhesive to the tile rather than to a small area of wall surface. Positioning the first cut tile up close to the vertical guide batten, push into place and then repeat until the horizontal gap at the bottom of the wall is filled.
- Remove the vertical guide batten and repeat the tile measuring, cutting and fixing process until the vertical gap is filled.

Grouting

Once all the cut tiles have been applied to the wall, leave for at least 12 hours to allow the tile adhesive to go hard. Before grouting ensure there are no raised bits of adhesive along the joints and that none of the plastic spacers are protruding above the surface of the tile. If they are they, remove them with a blade or narrow bladed screwdriver.

- Using a rubber-edged squeegee or a sponge rub the grout all over the surface of the tiles, pushing it firmly into the joints.
- Wipe the excess grout from the tiles with a damp cloth before it hardens but avoid removing the grout from the joints.
- At this stage you may want to use a grout shaper to run along the grout lines to achieve an extremely smooth finish.
- Finally, clean the tiles using a soft dry cloth.

Tiling internal corners

Fixing tiles to walls that meet at an internal corner will generally involve cutting the tiles.

- Measure the space between the corner and the edge of the last whole tile. Take measurements for each piece as the gap may vary in width as you go up the wall. Remember to leave a space for the grouting.
- Cut the tile using a glass cutter or flat bed tile cutter.
- Apply tile adhesive to the back of the tile. Fix the tile so that the cut edge is facing into the corner. Work your way up the wall. Repeat the same process on the adjoining wall.
- When the tile adhesive has dried, apply grout into the gaps between the tiles but **not** in

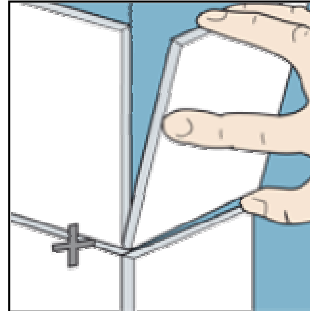
the gap where the tiles meet in the corner.

- Seal the corner joint with waterproof mastic. The mastic will allow for a little wall movement over time. It is recommended that you mask the edges of the tiles with tape prior to applying the mastic to prevent smearing the surface of the tiles.
- When a skin has formed on the mastic, peel off the tape.

Tiling external corners

Always try to start fitting tiles to an external corner using whole tiles as opposed to cut tiles, although this will probably not be possible with a window recess. There are two ways of joining tiles at a corner of this type. The first is achieved by simply using an overlapping butt joint.

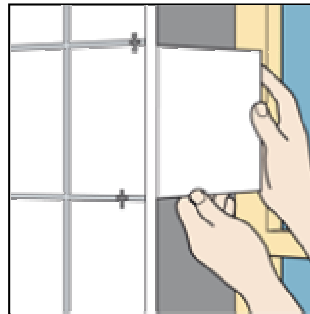
- To create an overlapping butt joint, the edge of one tile is overlapped by another tile. This method works best when the corner is very perpendicular and the tiles have glazed edges.
- The least conspicuous wall should be tiled first with the edge of the tile flush with the corner's edge. Then tile the other wall overlapping the tiles on the first wall so their edges are concealed.



An overlapping butt joint.

The other method involves using plastic corner trim where the tiles from two walls meet. Plastic corner trim offers protection to the external corners and provides a neat, rounded edge.

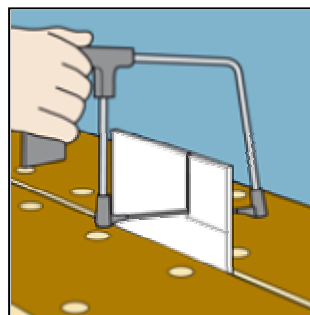
- Fix the tiles up to the corner of the first wall.
- Apply tile adhesive to the adjoining wall and push the perforated base of the corner trim into the tile adhesive. The outer edge of the trim should line up with the face of the tiles on the adjacent wall.
- Now you can start tiling the second wall, carefully fitting them neatly into the corner against the trim. Do not push too hard as the corner trim may dislodge, but at the same time ensure the tiles on both walls are in line.



Using plastic corner trim.

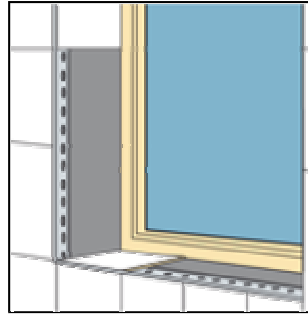
Tiling a window recess

- Tile up to the beginning of the window recess, cutting tiles if necessary. To cut an 'L' shaped piece of tile to fit around the corner of the window, accurately mark guidelines on the face of the tile.
- Then using a tile saw cut the tile along the longest line to the point where the guidelines meet.
- Score the other guideline and break it away. Use a tile file to smooth the cut edges. (This method of cutting tiles can also be used for tiles that need to fit around a plateswitch).
- Having completed tiling around the window, fix tiles to the bottom of the recess starting with a whole tile at the outer edge of the recess and work towards the window frame. The tiles meeting at the edge of the recess can be joined together the same way you create an external corner.

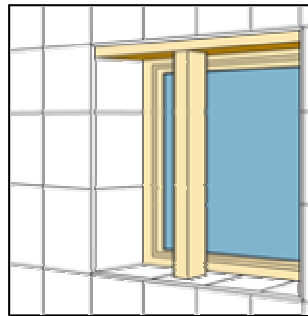


Use a tile saw to cut the tile along the longest line to the point where the guidelines meet.

- Tile the inner surfaces of the recess next and then fix the tiles to the upper part of the recess. To support the tiles on the upper part of the window recess until the adhesive dries, wedge lengths of wooden batten vertically in the window recess.
- Finally grout all the joins when the adhesive has dried.



Fix tiles to the bottom of the recess starting with a whole tile at the outer edge and work towards the window frame.

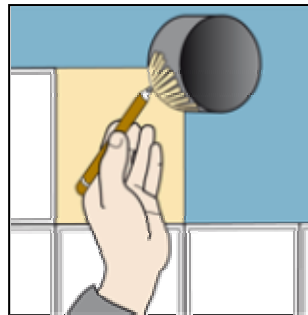


Until the adhesive dries, wedge lengths of wooden batten vertically in the window recess.

Cutting tiles in a curved line

To cut tiles in a curved line, you firstly need to make a template of the curved obstruction.

- To do this, use a piece of card cut to the same dimensions as your tiles. Address one edge of the card to the edge of the tile nearest to the obstruction.
- Cut the card to create several flaps in the edge of the card that butts against the obstruction. With the flaps pressed against the obstruction carefully mark the outline of the curve onto the card.
- Then take the card and transfer the outline of the curve as accurately as possible onto the face of the tile using a chinagraph pencil.
- Clamp the tile onto a worktop with the tile face-side up. Make sure you put a piece of scrap wood between the clamp and the tile so you don't damage its glazed surface.
- Using a tile saw, cut slowly and carefully along the marked line. Do not apply too much pressure because this may chip or snap the tile. Once the excess has been removed file the cut edge.



Drilling holes through tiles

You may find it necessary at some point to fix something onto a tiled wall. For example,

you might want a soap dish in your bathroom, a mirror, or some kitchen accessories fitted.

It is a good idea to make fixings in tiled walls by drilling into the grout lines wherever possible. However, this may not always be practical.

When drilling into walls, always ensure there is no wiring behind the plaster. Use a cable and pipe detector to do this.

When drilling through tiles, a lot of dust is created which can stain the grouting therefore it is necessary to clear up the dust before it can settle. Making a simple cardboard tray and taping it to the wall under the hole you are drilling is an effective way of catching the dust.

- Mark on the tile where you want to make the hole for the screw fixing with a chinagraph pencil.
- To stop the tip of the drill bit from sliding on the tile's smooth surface, stick a piece of masking tape over the mark where you want to drill. The mark should still be visible through the tape allowing you to draw another over the top.
- To make the pilot hole in the tile use a small drill bit as it minimises the chance of the glaze cracking. Press the drill tip firmly against the mark on the tape and start drilling slowly.
- Drill carefully through the glazed surface and keep going until you reach the plaster underneath the tile.
- Having made the pilot hole fit a drill bit that matches the size of the screw you intend to use and position the drill in the hole. Carefully drill through the tile, plaster and well into the masonry.
- An alternative to a standard drill bit is one that is made specifically for drilling tiles. It has a spear point designed to break through the glaze without cracking it. These bits are available in a range of sizes.
- A useful tip when putting a wall plug into a tiled wall is to drill the hole 3mm deeper than the length of the plug, so that it can be pushed in beyond the tile. This minimises the chance of breaking the tile with sideways pressure when you insert the screw.