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Odyssey
FIXING GUIDE
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General

## Introduction

Welcome to the Fixing Guides for the Odyssey Collection of Mezzo, Grande and Primo floor/wall tiles and Tapestry wall tiles.

For more detailed guidelines regarding complex floor tile pattern installation, please refer to the Victorian Floor Tiles Fixing Guide.

## Odyssey Primo Tiles $151 \times 151 \times 9 \mathrm{~mm} / 6^{\prime \prime} \times 6^{\prime \prime} \times 3 / 8^{\prime \prime}$ are made to order

The smaller Odyssey tiles, borders and corners are made to your specific and individual order. Please check delivery times with your stockist to avoid disappointment if they need to be installed for a specific date. The Primo range colours co-ordinate with White and Dover White tiles from our Victorian Floor Tiles collection. These plain colour Victorian Floor tiles are specifically made to co-ordinate with the Primo range colours. If you require any of these plain tiles to complete your installation, please order them at the same time as your Primo tiles, as they will be made to match. Please ask your Original Style stockist for a brochure or visit www.originalstyle.com. This will ensure that tile colours will be as closely matched as possible. However, we cannot guarantee against some colour variation. Please note that, due to their bespoke nature, confirmed orders cannot be cancelled and product returns are not accepted (statutory rights reserved).

## Odyssey Grande Tiles $298 \times 298 \times 8 \mathrm{~mm} / 113 / 4^{\prime \prime} \times 113 / 4^{\prime \prime} \times 5 / 16^{\prime \prime}$ are stock items

If you require plain tiles to complete your installation, please order them at the same time as your Odyssey tiles, to ensure that the tile colours will be as closely matched as possible. However, we cannot guarantee against some colour variation.

## Mezzo Tiles $200 \times 200 \mathrm{~mm}\left(77 / 8^{\prime \prime} \times 77 / 8^{\prime \prime}\right)$ are stock items

The exclusive Mezzo patterns were designed in-house and are printed in our Exeter factory. The nine designs are all $200 \times 200 \mathrm{~mm} / 77 / 8^{\prime \prime} \times 7 / 8^{\prime \prime}$, a size which is versatile for both large and small spaces.

## Tapestry Collection Wall Tiles $152 \times 152 \mathrm{~mm}\left(6^{\prime \prime} \times 6^{\prime \prime}\right)$ are made to order

These smaller Odyssey tiles are hand-finished and so each one is a small, unique work of art, made to your specific order requirements by skilled craftsmen in our Devon studio. Tapestry Collection wall tiles have been designed to co-ordinate with Brilliant White wall tiles from our Artworks Collection.

## The right tools for the job

These tools will help you complete your tiling project to a professional standard. Most are readily available to buy or hire.

| Adhesive spreader/ bedding trowel | The notched edge of this tool ensures an even spread of adhesive of an even depth. |
| :---: | :---: |
| Chinagraph pencil | For marking any tiles that need cutting. This will not stain the tiles and will resist being washed away when using a water-fed cutting machine. Never use a felt tip pen as they can leave permanent marks. |
| Drill | Use a water fed carbide tipped drill bit or a water fed hollow tipped diamond coated drill bit. |
| Electric water-fed diamond wheel cutter | A water fed diamond wheel cutter is the best way of cutting porcelain and ceramic tiles. These are available from tool hire companies, tile shops, or DIY stores. Follow the manufacturer's advice regarding protective goggles, masks and gloves. |
| Epoxy squeegee | A rigid squeegee specifically designed for the application of epoxy grouts. |
| Eye protection, gloves and dust mask | It is vital that you use all possible protection when using any cutting or drilling machinery. Always use personal protective equipment as advised by the HSE. Visit www.hse.gov.uk for further health and safety advice. |
| Gauging trowel | For removing the grout from its container, or the vessel used for mixing the grout. Use it to place adhesive onto a bedding trowel. |
| Grout finishing tool | This tool is run along the grout lines before they set completely to give consistent, neat finished grout lines. A piece of dowel can work just as well. NB: NOT to be used on epoxy grout. |
| Spacers | These small pieces of plastic are inserted between the corners of the tiles or mosaic sheets to provide consistent spacing. Push them in side-on so they are at right angles to the surface, and place them at regular intervals to maintain the spaces, and remove them before the grout is applied. |
| Spirit level/laser level/ plumb line | One or more of these tools will be necessary to ensure that your tile installation is level and that verticals are straight. A plumb line can be made from a small weight on a length of string. |
| Sponges | Use to remove grout residue and for smooth joints. Always use new sponges and grouting tools rather than old sponges and tools which may have adhesive or grout residue which could scratch tiles. |
| Squeegee or rubber trowel | Used for spreading grouting compound into the spaces between the tiles. |
| Steel ruler/tape measure | For accurate measuring. |
| Scribe and snap straight cutter | A simple scribe and snap machine for straight cuts. |
| Tile gauge | A device for accurately measuring and shaping your tiles. |
| Tile nippers | A specialist tool for 'nibbling' away unwanted sections of tiles. |
| Wedges | These are wooden or plastic for minute tile adjustment. |

## Glossary of tiling terms

| Adhesive | The glue used to fix tiles to the substrate. <br> There is a wide choice available, so always ask your stockist for advice on your particular project and type of tiles. |
| :---: | :---: |
| Grout | A hardening compound used to seal the joints between tiles. There is such a wide choice available, it is best to seek advice from your stockist on your particular project and type of tiles to be used. |
| Movement joints | Where tiles meet another surface, the joint is filled with silicone sealant, not grout, to allow for minor expansion and contraction. Should be placed according to architect's specifications, over existing joints and any changes in plane <br> Movement joints eliminate stress transferring from the substrate. <br> Internal: Please refer to BS5385-1 2009, 6.5-6.5.2 <br> External: Please refer to BS5385-3 2014, 7.1.6.1-7.1.6.4 |
| Pointing | Where grout is mixed to a thicker consistency than usual and applied into the joints with a squeegee, pressed in firmly and finished off with a grouting tool to give a neat finish. Any excess is removed using a damp sponge and the surface wiped clean. |
| Render | A wall finish made up of sand and cement, usually made up of sand/cement in the ratio of 4:1. |
| Screed | A floor screed is usually a cementitious material made from 1:3, 1:4 or 1:5 ratio of cement to sharp sand. |
| Silicone sealant | A material with elastic and waterproofing properties used to fill movement joints instead of grout. |
| Solid bed | A method of tiling where there are no voids under the surface of the tile. |
| Slurry grouting | Where the grout mix is runnier than normal and is spread across a large area at a time using a spreader. Care is needed to ensure the grout goes right into the joint and no areas are missed out. |
| Stud wall | Internal walls in a home, usually constructed of plasterboard over a wooden framework. |
| Substrate | Any surface on to which tiles are laid. |
| Thin set | A layer of adhesive applied to a depth of less than $5 \mathrm{~mm} / 1 / 4^{\prime \prime}$ |

## Selecting your tiles

This is obviously the most important and enjoyable task. With such a large range of tiles to choose from, you may like to order some samples to see how they fit in with the rest of your furnishings and decorations.

## Suitability

Please see symbols for individual products in the current Odyssey brochure (as shown right).

Grande and Primo tiles are suitable for interior and external use, wet and dry walls and most can be used on both wet (shod) and dry floors.

Mezzo tiles are suitable for interior dry floors and wet and dry walls. They can be used as exterior wall tiles as well. Not suitable for commercial floors due to low glaze wear rating.

Tapestry wall tiles are not suitable for work surfaces, floors or external use. They are suitable for interior

| Wet \& dry walls <br> (inc.showers and wet rooms) | Wet \& dry floors |
| ---: | :---: |
| Wrat |  |
| (inc.showers and wet rooms) |  | walls only, including walls in wet rooms and showers.

If you are in any doubt about the suitability of Odyssey tiles for your particular requirements, please contact our Customer Services team for advice by emailing info@originalstyle.com

## Slip testing floor tiles

It is very important that you take note of these symbols particularly those that show the suitability of the tiles for floors in wet and dry areas. Every tile for floor applications has been measured for slip resistance in wet and dry areas in shod conditions and wet areas in barefoot conditions to ensure suitability in accordance with the Health and Safety Executive's guidelines using the Pendulum Test Method BS7976-2. This test is designed to simulate the action of a slipping foot and uses a weighted swinging arm which contacts the surface of the tile with a standard rubber slider that represents the rubber sole of a shoe in both dry and wet conditions. The slip resistance is the upswing measured from a scale on the instrument. The greater the upswing, the lower the slip resistance and the greater the slip potential. Accepted limits for flooring using this technique are:

| Slip potential | Slip resistance value using 4 S96 rubber slider |
| :---: | :---: |
| High | 0 to 24 |
| Moderate | 25 to 35 |
| Low | $36+$ |

## Pendulum test BS7976-2 (Transport \& Road Research Laboratory)

As above, to determine the wet co-efficient of friction using a TRRL rubber slider to represent barefoot in wet conditions (to test as appropriate). Accepted limits for flooring using thjis technique are:

| Slip potential | Slip resistance value TRRL 55 rubber slider |
| :---: | :---: |
| High | 19 and below |
| Moderate | 20 to 39 |
| Low | 40 to 74 |

The testing is conducted in-house.

## Step treads used internally and Light Reflection Value (LRV)

We recommend the use of Victorian Floor Tile step treads in a contrasting colour to the adjacent pattern if Primo tiles are used on steps and stairs. This is to provide an additional, visual reminder of the edge to steps and stairs and to provide additional strength on stair edges.
Black and Red step treads are available from our Victorian Floor Tile Collection.

## How many tiles will you need?

| Wall Tiles | Tiles per m2* | Tiles per sq.ft* |
| :--- | :---: | :---: |
| $152 \times 152 \mathrm{~mm}\left(6^{\prime \prime} \times 6^{\prime \prime}\right)$ | 43 | 4 |
| Floor Tiles | Tiles per m2* | Tiles per sq.ft* |
| $151 \times 151 \mathrm{~mm}\left(6^{\prime \prime} \times 6^{\prime \prime}\right)$ | 44 | 4 |
| $200 \times 200 \mathrm{~mm}\left(77 / 8^{\prime \prime} \times 77 / 8^{\prime \prime}\right)$ | 25 | 2.3 |
| $298 \times 298 \mathrm{~mm}\left(113 / 4^{\prime \prime} \times 113 / 4^{\prime \prime}\right)$ | 11.3 | 1.0 |


| Floor Tiles | Tiles per linear $m^{*}$ | Per linear ft* |
| :--- | :---: | :---: |
| $151 \times 151 \mathrm{~mm}, 151 \times 75 \mathrm{~mm}$, |  |  |
| $151 \times 53 \mathrm{~mm}$ | 6.6 | 2 |
| $\left(6^{\prime \prime} \times 6^{\prime \prime}, 6^{\prime \prime} \times 3^{\prime \prime}, 6^{\prime \prime} \times 2^{\prime \prime}\right)$ |  | 1 |
| $298 \times 298 \mathrm{~mm}\left(113 / 4^{\prime \prime} \times 113 / 4^{\prime \prime}\right)$ | 3.3 | 1 |

Approximately based on a 2-3mm (1/16-1/8") grout gap
Once you have decided which pattern/border/corner you will be using, calculate how many you will need by measuring the area to be tiled.
To calculate the number of tiles required, first decide which size tile you want. If you have any problems calculating the number of tiles required please do not hesitate to email our customer services team at info@originalstyle.com
Calculating the tiles you may require is the easy part. On the floor, measure the length and multiply by the width.
If the shape of the area to be tiled is a simple square or rectangle you can simply calculate the area of each tile and divide it into the area of the floor or room. This assumes that the area being tiled is square at the edges, if not you will need to allow some extra for part tiles.

Otherwise, the easiest method is to make a scale drawing of the wall or floor on a piece of graph paper, draw the outline of each tile (including borders and corners where appropriate) and add them up.
We recommend that you allow for part tiles, wastage and any imperfections by adding at least 5 per cent to the total for mosaics and 10 per cent for larger tiles. It can be a false economy to only order the exact quantity. You may break some tiles when cutting or you may end up with awkward shapes that take more tiles than anticipated. It can be annoying to get close to the end of the project only to find that you are short of one or two tiles, especially as colours can vary between different batches.
Please make sure you order enough tiles for your project, allowing enough for cutting and wastage.

## Size variation

Please see tile sizes in Product Guide section in the Odyssey brochure.
Dimensions provided are nominal.

## Mezzo, Grande and Primo

Due to the nature of the clay firing process tile dimensions may vary by up to $+/-0.6 \%$ up to a maximum of $+/-2.0 \mathrm{~mm}$ from the work size.

## Planning for walls and floors

It is important to plan the installation of your floor or wall before starting to fit any tiles. Here are a few of the main areas to think about whilst in the planning stage:

## Which adhesive and grout should I use?

There is a range of adhesives and grouts to choose from, some are better suited to certain types of surface than others. Before starting your installation, please read the section on adhesives and grouts below.

## Sealing Tiles

Tiles need sealing before installation; again you may have to allow time for sealants to be applied and drying time. Please refer to the floor and wall sections on sealing before starting your installation.

## Protecting your installation

We advise that you do not install any tiles until heavy construction has been completed. In between the installation and putting a floor into service, it is important to protect the tile and grout in order to avoid construction related cleaning problems. Do not use plastic covers as this may induce sweating and discoloration by not allowing the grout and bedding material to dry adequately.

## Protecting your tiles

Before installation, please make sure you store any fixing materials and your tiles in their packaging in a clean and dry area.

## Cutting tiles

It is vital that you use all possible protection when using any cutting instruments/ machinery. Always use personal protective equipment (PPE) such as goggles, a dusk mask and gloves as advised by the HSE. You can visit www.hse.gov.uk for further health and safety advice.

You may find that it is necessary to cut individual tiles to fit in small areas. You need to take extreme care when doing this. Always try to keep each cut no less than $38 \mathrm{~mm} / 1^{1} / 2^{\prime \prime}$.

## Shade variation, tile colours and patterns

Some base tile shade variation may occur between tiles of the same background colour because they are made from naturally occurring raw materials and are fired at very high kiln temperatures during manufacturing. Natural pigments are also used in the decorating process and these are subject to shade variations from tile to tile as well. Some ink colours complement the base tile colours although they may not match them exactly. Pattern edges may vary slightly from tile to tile due to the printing process.

Before fixing it is important to lay tiles out in a good light to ensure that any shade differences and variations are evenly distributed before installation. No liability for shading issues can be accepted after installation.

NB We do not recommend mixing Primo and Grande tiles in the same installation. This is because of size differences, and the Grande base colours do not closely match the Primo base tile colours.

## Preparation

The secret to a perfectly laid floor is to lay the tiles as flat and as evenly as possible. To do this successfully you need the firmest, flattest and driest possible surface to work on. Some surfaces are ideally suited for tiling, others require a certain amount of preparation first, and a few are totally unsuitable.

## Storage

Please store all Original Style tiles and any fixing materials such as grouts and adhesives in a cool and dry storage area. All tiles must be dry before installation and Original Style cannot guarantee that any products will be delivered completely dry.

## Important Note

All surfaces must be allowed to dry out completely before tiling. Failure to do this can result in moisture being trapped behind the tiles which can react with some tiles causing them to deteriorate over a period of time.

Tiles are completely inflexible. With this in mind, it is important to ensure the substrate will not move otherwise cracking or de-bonding will occur. If there is movement in the substrate, we strongly advise that you seek professional advice before proceeding any further. Please look at www.schluter.com/6_1_ditra.aspx for further information.

## ALL floors must be primed prior to installation.

Sand and cement (screed) floors must be completely dry. Allow seven days to cure then another 14 days to dry. Please be aware that certain installations may require a longer drying time, due to thickness of the screed, humidity within the room and weather conditions. Use a hygrometer to test for moisture.

## Floor Tiles

Anhydrite screed and asphalt surfaces: always seek professional advice before installing over anhydrite screeds and asphalt. The laitance (dusty surface) must be removed and special sealers must be used prior to tiling.

Timber and joist floors must be rigid and solid without movement. The best way to achieve this is to lay marine plywood boards measuring $15 \mathrm{~mm} / 5 / 8^{\prime \prime}$ or thicker over the entire floor, screwing it down every $150 \mathrm{~mm} / 6^{\prime \prime}$ in each direction. Before screwing the marine ply down, apply PVA to the reverse and sides (but not on the surface to be tiled). We advise employing a tiling professional to tile onto all wooden surfaces, as it is essential that any movement or flexing in the floor is removed and special flexible adhesives are used.

Old stone, or quarry tiles are best removed. If this is impossible or impractical, and they are completely sound, they should be thoroughly cleaned of any contaminates i.e. dirt, grease, oil, waxes etc. Vinyl tiles should always be removed. If tiled over they can sweat and cause debonding of the adhesive.

IMPORTANT: Do not lay tiles directly onto a bed of wet sand and cement. This may give rise to efflorescence on the surface of some tiles. Efflorescence (which is a natural chemical reaction) is the name for a whitish bloom that can appear if there is moisture within the tile.

## Underfloor Heating

Underfloor heating is an excellent and extremely efficient way of heating, either as the sole source of heat in a room or as a backup to an existing heating system. There are two types, electric and piped water. The electric method is extremely simple to install. A length of wire and rolled out mat is laid out on the substrate prior to tiles being fixed. A wall mounted thermostat enables complete control over the temperature. Natural stone, Victorian floor tiles and ceramic and floor porcelain tiles can be used effectively with underfloor heating systems providing expansion joints are incorporated. These absorb thermal expansion and contraction between the tiles and adjoining surfaces. Electric underfloor heating will heighten the floor by approximately $5-6 \mathrm{~mm} / 1 / 4$, so this should be planned into your installation.

NB The underfloor heating manufacturers' guidelines must be followed.
When installing underfloor heating, please note that the adhesive and grout manufacturers' instructions must also be followed. It is very important to obtain all information concerning installation, particularly regarding delay times before and after installation, before the actual work begins. If the installation is done incorrectly, the tiles may be subject to cracking, due to thermal expansion and contraction, and drying.

Underfloor heating should not be switched on until 28 days after installation of the tiles, to allow the adhesive to cure fully. On the first day after the 28 day curing period, turn up the heating to $5^{\circ} \mathrm{C}$ and then raise it by $5^{\circ} \mathrm{C}$ per day for the next five days.

## Floor Tiles

## Installation

Before installing any Odyssey tiles please read the guidelines below. We strongly recommend that our tiles are laid by an experienced professional tiler. The satisfactory installation of all ceramic tiles depends on their application to a sound, level surface and use of the correct adhesive for that surface. Laying directly into wet cement is not recommended. Detailed guidelines on fixing are set out in BS 5385: Part 3: 2014.

## The key to success is to:

Gather together all the tools, tiles and materials you need before you start.
Thoroughly prepare the surfaces to be tiled; time spent on this will save time later.
Keep the work area clear and clean as you go along.
Work methodically and avoid mistakes by allowing sufficient time for each task.
This guide is not intended to be a definitive guide to fixing tiles. If you are uncertain about anything having read this guide you should consult a professional tile installer.

## PLEASE NOTE

It is the responsibility of the purchaser of Original Style products to adhere to the following guidelines in accordance with the British Standards Institute series BS5385 parts 1 to 5.

To store products in adequate, clean, dry and secure space that is free from frost and moisture

To ensure that installation is carried out in adequate artificial lighting conditions

## Floor Tiles

## Marking out the work area

## Floors

Begin by taking a good look at the room. Establish the centre of the room by measuring the midpoints of two opposite walls and drawing a line between these points. Now find the centre of this line.


Now lay out the tiles loosely, allowing for the joints. The joints will depend on what you are trying to achieve and on your choice of tiles.

## How wide should the joints be?

Mezzo, Primo, Grande and Victorian Floor tiles can be laid with grout gaps of 2-3mm ( $1 / 16^{\prime \prime} \times$ $1 / 8^{\prime \prime}$ )

If you are using more than one product, check the thickness of the tiles - you may have to adjust levels with extra adhesive to ensure an even and flat surface when the tiling is completed. Different levels can also be built up by using Marmox or Wedi boards.

The aim is to achieve a pleasing pattern whilst avoiding unnecessary cutting or thin slivers of tile at the edges of the room. It is desirable to maintain whole tiles in the doorway. If you are tiling through a doorway (i.e. installing tiles in two different rooms), make sure you install a movement joint at the threshold. This will allow for differing substrates and ambient temperatures between the rooms.

Once you have marked out where the tiles are going, begin laying at the centre end of the room i.e. furthest from the door.

The first row is the most important; get this straight and level and laying the rest of the tiles will be easy. Get it wrong and it will become progressively more difficult to obtain a pleasing result.

## Bathrooms

Baths and shower trays must be perfectly level before you start tiling. To ensure a visually pleasing result, use the window as your centre point, and place larger cuts rather than smaller ones into the corners, floors and ceilings.

## Sealing

Particular care should be taken to use the correct adhesive, grout and sealants. Carefully read manufacturers' information and always follow the manufacturer's instructions.

## Sealing for exterior use

Primo and Grande wall and floor tiles are suitable for outdoor use and are frost resistant, provided that the floor tiles are laid in such a way that rainwater drains freely off them and cannot penetrate beneath and between them. Tiles should not be laid on flat, asphalt covered roofs in areas subject to frost.

Primo tiles should be impregnated with one of the following: *LTP Mattstone or Lithofin KF Stain Stop for a natural finish, or equivalent. Impregnate the clean dry Primo prior to grouting and following grouting, cleaning and drying.

Although Mezzo and Grande do not require impregnating as they are undecorated/ decorated full bodied porcelain, we recommend giving them a coat of LTP Mattstone or Lithofin FZ Protector.

## Sealing for interior use

Primo tiles should be impregnated with one of the following: for a natural finish use *LTP Mattstone maintained with LTP Wax Wash and for a sheen finish use LTP Glaze Protector (interior use only) maintained with LTP Floorshine. Lithofin KF StainStop will also give a natural finish. Impregnate the clean dry Primo tiles prior to grouting and following grouting cleaning and drying. Although Mezzo and Grande do not require impregnating as they are a undecorated/decorated full bodied porcelain, we recommend giving them a coat of LTP Mattstone or Lithofin FZ Protector.
*LTP Products are available in the UK. Check with your retailer for the most appropriate products available in your country. Always follow the manufacturers' instructions for all adhesives, grout, impregnators and sealing products.

For more sealing, cleaning and maintenance advice, visit http:// Ltp-online.co.uk We recommend that you test all sealers, impregnators and intensive cleaning products on a loose tile before applying such products to an already installed floor. Always follow manufacturers' instructions. No liability for damage from such products can be accepted without prior testing.

## Floor Tiles

## Fixing

It is essential to first mix tiles from different boxes so that variations in colour and shade are blended together thoroughly to give a pleasing design or pattern.

IMPORTANT: Please note, variations in shade and pattern are an inherent feature of ceramic tiles. Before fixing you should sort the tiles to give a pleasing combination of colour and effect. Do not fix tiles if an acceptable blend cannot be achieved. No responsibility can be accepted for shading or quality once the tiles have been fixed.

## Adhesives

For substrates that can expand and contract i.e. wood or floors with underfloor heating, it is important to use a flexible 52 adhesive. Some changes of plane will require expansion joints. Always seek professional advice.

Adhesive is also available as standard set or rapid set. Standard set takes up to 24 hours to go off, whereas rapid set can take up to two hours depending on the thickness, temperature and humidity conditions. All tiles should have a $2 \mathrm{~mm} / 1 / 16^{\prime \prime}$ layer of adhesive spread onto the backs, in addition to the adhesive spread on the floor. This method is known as solid bed.

## Control joints

There are numerous reasons for building movement and expansion joints. Divide a larger tiled area into a series of smaller ones with sealant and bond breaker between them. Designers may show points at which joints are needed but these are mandatory where tiles adjoin walls or some other building material and where there is an expansion joint in the substrate, among other circumstances.

## Which adhesive and grout?

It is imperative to follow the manufacturers' instructions on the products and, if in doubt, please consult the dealer you purchased the products from or your installer for more information.

Always follow the manufacturer's directions when mixing and applying installation materials. Take special care to note if a product is suitable for interiors and exteriors as well as floors. A recognised adhesive manufacturer will have a range of products, each appropriate to specific substrates.

NB: Not all adhesives, cleaners, grouts and sealers are equally suitable for all types of tiles. Take advice from your supplier.

## Adhesives - continued

## Applying the Adhesive

Spread adhesive over as much of the floor as you can work on, within about 15 minutes; approximately one square metre /one square yard is usually about right. Spread the adhesive as a solid, even layer (rather than using spots of adhesive) Use a notched trowel to form parallel lines. The thickness should be approximately $8-10 \mathrm{~mm} / 5 / 16^{\prime \prime}-3 / 8^{\prime \prime}$ for floors.

Place the first whole tile on the adhesive, press it down firmly. Check the first tile is straight and level. Now lay the adjacent tiles in the same way, using spacers (see note, 'Using spacers') to create an even joint between them.

## Using spacers

If spacers are used by inserting them vertically on floors and horizontally on walls (ie they stick out at right angles to the tiled surface) they need to be removed from the joints as soon as the adhesive setting time is achieved.

If spacers are left overnight or for long periods to allow the adhesive to dry completely, they may cause damage to tile edges as the adhesive contracts and tightens around the spacer. Spacers left sticking out can also be knocked accidentally against tile edges, causing damage and chipping. Avoid walking on floors until spacers have been removed and the tiling is completed.

When you get to the edge of the room, cut the tile to fit the gap. Where floor and wall tiles meet, a neater finish will be achieved if the wall tiles sit over the floor tiles. Leave a gap between the edge of the floor tile and the wall to allow for expansion.

Be careful to keep adhesive off the face of the tiles - wipe away any surplus with a clean, damp sponge as you go.

When you have covered the first square metre prepare another area, and so on.
If there are any areas not tiled around the edges of the wall etc you may need to cut the tiles to fit (see section on Cutting tiles).

## Adhesives and grouts for wet areas

The requirements for adhesives, grouts and sealers differ according to the type of tile used, the background material, and the width of the joints and whether the shower is gravity fed or a power shower, accordingly it is important that you seek advice from your supplier.

Although most adhesives and grouts are water resistant in normal situations, they can be further improved using a flexible additive. For power showers we recommend epoxy grouting. Always seal the grout and tiles after installation, following the manufacturer's instructions.

## Floor Tiles

## Grouting

Grouting gives a neat appearance to the tiled surface. Grouting should always be finished flush with the tiled surface.

After the final seal, avoid walking on the floor until the sealer has set thoroughly (always follow the manufacturer's recommendations). Allow the adhesive to dry out for a minimum of 24 hours before grouting. Thick layers of adhesive, cool temperatures and other factors can prolong drying.

## Grouting recommendations

Tiles should be spaced $2-3 \mathrm{~mm}\left(1 / 16-1 / 8^{\prime \prime}\right)$ apart.
Mezzo, Grande and Primo: Use a white or light grey cement-based grout. Coloured grouts can be used although strong colours have high levels of pigment which may stain the tiles. Black grout is NOT recommended for this reason.

## Which Grout?

NB: Not all adhesives, cleaners, grouts and sealers are equally suitable for all types of tiles. Take advice from your supplier.

Always try a small amount before grouting your entire tiled area to check you are happy with the look of the grouted tiles before grouting the complete area.

## How to grout tiles

Clean the surface where you are going to tile and allow it to dry before proceeding. Impregnate/seal the tile prior to grouting to reduce the possibility of staining.

Regardless of the grout colour chosen it is advised that you test a tile prior to grouting to ensure the grout pigment will not contaminate the surface of the tile.

It is very important to mix the grout following the manufacturers' instructions. Once mixed, let the grout stand for two minutes, then apply to the wall/floor using a squeegee working in a diagonal motion across the tiles. We recommend you cover about one metre at a time, leave for five minutes before removing any excess grout with a squeegee. Wait another five minutes before wiping the tiled surface with a clean sponge. Always check that there are no lines left in the grout.

Once the whole work is completed, leave for two hours, wash down all the tiles with clean water and sponge, and correct any faults.

## Important Note: <br> If using Mapei Ultra Colour Plus Grout, it must be mixed in accordance with manufacturer's recommendations.

## Grouting - continued

## Useful Tip

Always aim to complete whole sections of grouting in one session to ensure an even finish with no colour variation. Wash down with clean water and a sponge every square metre to avoid any excess grout drying on the surface. Never grout corners of rooms; these must be grout-free and filled with a suitable low modulus neutral cure silicone.

## Coloured grout

Please be aware that certain grouts are not UV resistant and will fade when placed in direct sunlight, advice must be sought from the grout manufacturer.

## Cleaning and maintenance

Please note, the use of certain acid based cleaning products may cause some tiles to react and change in character. It is advisable to test a new cleaning product on a small inconspicuous area before use. All manufacturers will have cleaning products to work in conjunction with their impregnators and sealers.

NB: Not all cleaners are equally suitable for all types of tiles. Take advice from your supplier. However, pH neutral cleaners are suitable for most tiles, such as Fila pH Neutral and LP Wax Wash.

All spills should be cleaned up as quickly as possible.
Use only the recommended dilution of pH neutral cleaner. More is not always best. A higher concentration of detergent in the cleaning solution will only make it more difficult to rinse. If the floor is exposed to excessive spills or large amounts of traffic, a stronger cleaning agent may be required. These stronger cleaning agents should be on the alkaline side of the pH scale and generally have a pH of 9 or higher for the initial clean, after which reduce to a pH neutral cleaner. Follow the manufacturer's recommendations at all times when using these products as some may not be suitable for other surfaces in a room i.e. chrome finishes on showers and varnishes, paint etc.

Once the detergent has been applied allow it to sit as per manufacturers' recommendations then rinse thoroughly with clean, clear water, vacuum any excess water away and towel dry the floor to eliminate water marks and streaks.

## Wall Tiles

## Tapestry wall tiles

All Tapestry wall tiles made by dry pressing or extruding processes conform to BS EN14411. There are no standards for tiles and mouldings made from the slip casting process. Internal standards are adopted for slip cast pieces.

## Shade variation on glazed ceramic tiles

Shade variation of the background glaze colour is an inherent feature of the manufacturing process of these wall tiles. We recommend that tiles are loosely laid out and blended prior to fixing to achieve the most pleasing distribution of shades. Differences between batches can be more marked, so for this reason we recommend that you buy all the tiles you need at one time. Make sure your tiles are all from the same batch. No liability for shading issues can be accepted after installation.

The batch number is given on the label on the boxes. Please refer to the first two sets of numbers on the batch code and ensure these are all the same for your project.

No liability for shading issues can be accepted after installation, even if the home owner is away during tile installation.

## Scratching and crazing

As with all glazed surfaces, some wearing or scratching may occur over time. Care should therefore be taken to select the proper tile for a given use. The wall tiles shown in this brochure are not recommended for surfaces subject to heavy wear. Highly glazed ceramic tiles may craze with time, and no guarantee can be given against this occurrence.

## Wet Area

Tiles suitable for wet walls need to be installed with a reduced water absorption grout, type CG2WA. The grout must be fully flush with the face of the tile to prevent the ingress of water into the porous back of the tile. This may cause changes to the glaze colour giving a patchwork effect. Wet areas must be fully water proofed (tanked) prior to tiling.

When installing tiles in power showers epoxy grout must be used.

## Tile weights

## Wall Tiles

Always check the tile weight is suitable for your substrate adding $3.5 \mathrm{~kg} / \mathrm{m}^{2}$ or $6.4 \mathrm{lb} / \mathrm{yd}^{2}$ for adhesive and grout to the tile weight per $\mathrm{m}^{2}$ or $\mathrm{yd}^{2}$. The weights of the tiles are given in the brochure and on the internet. Below is a table with typical wall substrates and their maximum tile weight loading:

| Wall Substrate | Weight per $\mathrm{m}^{2}$ | Weight per yd ${ }^{2}$ |
| :---: | :---: | :---: |
| Gypsum Plaster | 20 kg max | 37 lb max |
| Gypsum Plaster board direct | 32 kg max | 59 lb max |
| Sand cement render | 40 kg max | 74 lb max |
| Tile backer boards (polystyrene foam with cement base lattice outer) | 40 kg max | 74 lb max |
| Glass reinforced cement sheets | 50 kg max | $92 \mathrm{lb} \max$ |

## Preparation

All surfaces must be allowed to dry out completely before tiling. Failure to do this can result in moisture being trapped behind the tiles which can react with some tiles causing them to deteriorate over a period of time.

Tiles are completely inflexible. With this in mind, it is important to ensure that the substrate will not move otherwise cracking will occur. If there is movement in the substrate, we strongly advise that you seek professional advice before proceeding any further.

ALL walls should be primed before tiling.
Make sure the wall to which you are fixing tiles is able to take the weight of the adhesive and tiles.

The secret to a perfectly laid wall is to lay the tiles as flat and as evenly as possible. To do this successfully you need the firmest, flattest and driest possible surface to work on. Some surfaces are ideally suited for tiling, others require a certain amount of preparation first, and a few are totally unsuitable.

Painted surfaces are unsuitable for tiles. You will need to scrape off all loose paint and rub the whole surface down with coarse sand paper until all the paint is removed.

Plasterboard walls may be suitable for tiles, depending on their weight and how well the plasterboard is fixed to the stud wall underneath. You may need to seek advice on this. Normally a plasterboard wall which has not been skimmed has a load bearing of 32 kgs per $\mathrm{m}^{2}$. These walls should be primed first, left to dry and then the adhesive applied directly to the wall.

Plaster is a suitable surface as long as it is dry and in good condition. Normally a plaster wall has a load bearing of 20 kgs per $\mathrm{m}^{2}$. Remove any loose or crumbling plaster and repair it with new plaster or filler before rubbing down to a level finish. Prime the walls and leave to dry before commencing to tile. It is important to check weight restrictions before fixing tiles. Always seek professional advice if you are tiling over plaster. Mapei Primer $G$ and Ardex P51 are suitable for priming gypsum pink plaster.

Rendered walls can be tiled but new rendering must be allowed to dry out completely before tiling; normally a period of 21 days is recommended. Rendered vertical walls are a good base for tiles up to $15 \mathrm{~mm} / 5 / 8^{\prime \prime}$ thick with a maximum height of 3.6 metres/ approximately 12 foot. For tiles thicker than this the render must be reinforced with metal mesh screwed to the wall. Professional advice regarding this is recommended.

Papered walls cannot be tiled. Strip the paper completely, check for loose plaster or other damage, repair as necessary and then allow the wall to dry out thoroughly before priming. Allow the primer to fully dry.

Old ceramic wall tiles: We do not recommend tiling over old tiles because of weight restrictions and stability. Old tiles should be removed and the exposed surface should be prepared as appropriate (see above).

## Wet rooms and showers

Ceramic tiles can be used in showers provided you take certain precautions in preparing the surfaces, and use the correct adhesive and grout. It is vitally important to prepare all substrates in any area subject to frequent water (such as around a bath, basin or shower) carefully to protect them from water absorption. The best substrates are normally water resistant boards such as Wedi or Marmox. The underlying surface must be waterproofed first, using a waterproofing kit known as a tanking system (see below), to prevent the ingress of water into the substrate. There must also be sufficient falls for water to drain away.

## Tanking Systems

We recommend using a tanking system for power showers, shower cubicles, steam rooms and wet rooms in hotels, guest houses, leisure centres, fitness centres and in domestic homes. These normally consist of a primer, a liquid waterproofing membrane that you brush onto the wall and floor, and a tape for reinforcing all internal corners. Please refer to specific manufacturer instructions or, preferably, get a professional to do this job. Tanking a previously painted surface is not recommended. You can usually apply the tile adhesive 24 hours after the wall and floors are waterproofed.

We recommend that all waterproofing processes are carried out by a professional.

## Wall Tiles

## Planning

First, make a tiling gauge.
Use approximately $1 \mathrm{~m} / 39^{\prime \prime}$ length of straight, planed, wooden batten approximately $30 \times$ $20 \mathrm{~mm} / 11 / 8^{\prime \prime} \times 3 / 4^{\prime \prime}$ in cross-section. Use a pencil to mark off the length of your tiles, plus the space between them. For instance, when fixing tiles that measure $150 \times 150 \mathrm{~mm} / 6^{\prime \prime} \times 6^{\prime \prime}$ and have grout gaps between each tile of $2 \mathrm{~mm} / 1 / 16^{\prime \prime}$ you will mark every $152 \mathrm{~mm} / 61 / 16^{\prime \prime}$.

Mark out the work area. You must always check to see whether the ceiling is level first. Aim to position the tiles so that they fit either at the top or at the bottom. This way you will be cutting one edge. This can only be achieved if the floor or ceiling is level.

The first row you fix is the most important. If this is sloping or uneven, then all the other rows will be uneven too.

If the skirting board or floor looks even you may be tempted to start tiling directly up to it. We don't recommend this. Very few properties, old or new, have walls and floors that are perfectly square so you will need to set the level for the first row. Here's how:

Take a straight length of timber batten (dimensions as above).
Using a spirit level, make sure the top of the wooden batten is perfectly level then lightly nail it horizontally along the area to be tiled.

NB. Check for concealed plumbing or electrical wiring before nailing into any walls.
Place your homemade gauge vertically against the wall, its end on the top edge of the fixed wooden batten. Work up the wall making pencil marks as you go, making sure that you won't have to cut lots of fiddly small tiles at the top.

Now use a measure to find the horizontal mid-point of the wall. Put your gauge against this point and work horizontally to determine the location of the last whole tile, and mark the batten. Again, make sure you are not left with small slivers of tiles at each end and, if necessary, adjust the 'mid-point' slightly to avoid this.

Next hang the plumb line so that the line hangs directly over the batten mark. Alternatively, you can use a laser level, a long set-square or an upright spirit level to produce a vertical line. Once you have the precise starting point for your first tile you can begin tiling.

If you are placing a patterned border to run around a room, you need to choose one centre point on one wall, and align all the borders to that one point.

## Bathrooms

Baths and shower trays must be perfectly level before you start tiling. To ensure a visually pleasing result, use the window as your centre point, and place larger cuts rather than smaller ones into the corners, floors and ceilings.

## Wall Tiles

## Adhesives

## Important Note

Epoxy adhesive can be difficult to use and because of the nature of epoxy, can be extremely hard to remove once cured. For this reason, we recommend keeping hot water and a supply of clean sponges at hand to remove excess epoxy quickly and safely. Always test epoxy prior to using with our products.

## It is vital that adhesive is completely dry before grouting.

## Which adhesive and grout?

Certain adhesives are unsuitable for use in wet situations therefore we strongly advise contacting the adhesive and grout manufacturers for their recommendations. Original Style Ltd. makes no representations as to the fitness for purpose of third party adhesives and grouts.

## Adhesives and Grouts for wet areas

The requirements for adhesives, grouts and sealers differ according to the type of tile used, the background material, and the width of the joints and whether the shower is gravity fed or a power shower, accordingly it is important that you seek advice from your supplier. Although most adhesives and grouts are a reduced water absorption type in normal situations, they can be further improved using a flexible additive. For power showers we recommend epoxy adhesives and grouts.

## Applying the Adhesive

Prime the surface to be tiled with acrylic primer and leave it to dry. Then spread adhesive over as much of the wall as you can work on, within about 15 minutes; approximately one square metre /one square yard is usually about right. Spread an even layer about 6 mm (1/4") thick using a notched trowel to form parallel lines. Work to the lines you have drawn on the walls for centre points and level lines and then begin to apply the tiles. Place the first whole tile on the adhesive, press it down firmly.

Check the first tile is straight and level. Now lay the adjacent tiles in the same way, using spacers to create an even joint between them. When you get to the edges of the room, cut the tiles to fit the gap if necessary and clean away any excess adhesive from the corners. The corners will receive silicone for expansion purposes following grouting. Be careful to keep adhesive off the face of the tiles. Wipe away any surplus with a clean damp sponge as you go.

You may find it necessary to cut individual tiles to fit in small areas. Extreme care should be taken especially when cutting small pieces.

Spacers that have been used during the fixing process must be removed from the joints before the adhesive setting time is reached.

## Wall Tiles

## Adhesives - continued

Where the wall tiles meet the floor, a neater finish will be achieved if the wall tiles sit over the floor tiles. Fill the corner gap with acetoxy cure silicon.

Where there is any chance of movement from the substrate it is important to use a flexible adhesive. This will allow for tiny movements and will stop tiles and grout from cracking. However, some changes of plane will require expansion joints. Always seek professional advice.

Adhesive is available as standard set or rapid set. Standard set can take up to 24 hours to go off, whereas rapid set can take up to two hours depending on the thickness and temperature and humidity conditions.

## Grouting

Grouting gives a neat appearance to the tiled surface; it stops dirt or grease building up between the tiles. Grouting should always be finished flush with the tiled surface.
Allow the adhesive to dry out for a minimum of 24 hours before grouting. Thick layers of adhesive, cool temperatures and other factors can prolong drying.

## How to grout tiles

Always try a small inconspicuous area before grouting your entire tiled area to check you are happy with the look of the grouted tiles before grouting the complete area. Clean the surfaces where you are going to grout and allow to fully dry before proceeding.

Regardless of the grout colour chosen it is advised that you test a tile prior to grouting to ensure the grout pigment will not contaminate the surface of the tile.

Recommended grout gaps 2 to $3 \mathrm{~mm} / 1 / 16^{\prime \prime}$ to $3 / 16^{\prime \prime}$

## Useful Tip

Always aim to complete whole sections of grouting in one session to ensure an even finish with no colour variation. Wash down with clean water and a sponge every square metre to avoid any excess grout drying on the surface. Never grout corners of rooms; these must be grout-free and filled with a suitable silicone to allow for wall/ floor expansion.

It is very important to mix the grout following the manufacturers' instructions. Once mixed, let the grout stand for two minutes, then apply to the wall using a squeegee working in a diagonal motion across the tiles. We recommend you cover about one metre at a time and then leave for five minutes before removing any excess grout with a squeegee. Wait another five minutes before wiping the tiled surface with a clean sponge.

Always check that there are no lines left in the grout. Repeat until the whole wall is complete. Once the whole work is completed, leave for two hours, wash down all the tiles with clean water and sponges and correct any faults.

## Important Note:

If using Mapei Ultra Colour Plus Grout, it must be mixed with an electric mixer using 1-1.1 litres of water per 5 kg bag ( $41 / 4 \mathrm{Cups}$ per 11 lb ) of Ultra Colour Plus. Pour all the water in to the bucket and then add all the grout and mix on a slow setting. Leave to stand for two minutes and remix. Do not add more water. If the material begins to harden after 15-20 minutes, remix with just the paddle but do not add any more water. The grout has a pot life of one hour.

Always test a small inconspicuous area before proceeding. Always follow manufacturers' instructions. Use the utmost care when grouting to preserve the beauty of your tiles.

## Finishing off

Once your tiling is complete, inspect it carefully for any joints that the grout has missed, and refill if necessary. Wipe over the entire wall with a damp sponge or cloth and allow it to dry out completely.

## Sealing grout

We also recommend sealing grout seven days after installation with a grout protective sealer, which can be purchased through any reputable tile outlet.

Coloured grouts can be used on these tiles and they can enhance your installation. Many colours are now available so we suggest you check the range with your retailer. As they may alter the overall appearance of the tile colour, we strongly recommend that a small area is tested before installation. Make sure that the grout is recommended for ceramic. Some grouts are not UV resistant and will fade when placed in direct sunlight, so advice must be sought from the grout manufacturer.

It is essential to first mix tiles from different boxes so that variations in colour are blended together thoroughly. Please note, variations in shade and pattern are an inherent feature of ceramics. Do not fix tiles if an acceptable blend cannot be achieved. No responsibility can be accepted for shading or quality once the tiles have been fixed. Please see section on Shade Variation above.

## Control joints

There are numerous reasons for movement and expansion joints. Divide a larger tiled area into a series of smaller ones with sealant and bond breaker between them. Designers may show points at which joints are needed but these are mandatory where tiles adjoin walls or some other building material and where there is an expansion joint in the substrate, among other circumstances. Always seek advice on this.

These instructions are intended as a supplement to and not a replacement for the provisions of BS Codes of Practice or ANSI 108 which set standards for the installation of ceramic wall tiles. Adhesive manufacturers' instructions should also be strictly followed.

## Cleaning

Not all cleaners are equally suitable for all types of wall tiles. Wash down tiled surfaces with either clean water or a neutral (i.e. not acidic or alkaline) detergent. Dry off and polish with a dry duster.

## Photography

Owing to variations in studio lighting and printing inks, the tile colours shown in our brochures may differ slightly from those of the actual tiles. It is always advisable to ask your Original Style supplier to show you a sample.

## Limits of Liability

Original Style accepts no liability for the faulty installation of its products. In the case of any claim relating to the tiles themselves, Original Style's liability, to the extent permitted by law, is limited to either the replacement of the product or a refund of the cost of the product, and does not extend to cover any consequential loss. Claims must be reported within seven working days from receipt of the tiles. Tiles must be inspected prior to installation and claims cannot be considered after the tiles have been installed. Please be advised that installation constitutes acceptance of the quality, colour, size, texture and shade of the tiles. Original Style warrants that its tiles conform to their description and are fit for their purpose. Original Style makes no other express or implied warranty as to fitness or suitability of the products for particular installations. We extend no guarantees, express or implied, as to wear resistance or maintenance procedures. We do not recommend bedding these tiles in sand and cement.

It is imperative to follow grout and adhesive manufacturers' instructions regarding their suitability with our products. If in doubt please consult the grout/adhesive stockist from whom you purchased the products. Original Style makes no representations as to the fitness for purpose of third party adhesives and grouts. Please note the use of certain acid based cleaning products may cause some of the tiles to react and change in character.

Please note, the Fixing Guides above does not apply in the USA. In the USA please follow the recommendations of a reputable adhesive manufacturer and always comply with American National Standards Institution (ANSI) specifications as set out in the Handbook for Ceramic Tile Installation published by the Tile Council of America.
Useful links:
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tileusa.com

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