the heritage stone company

1. INTRODUCTION

1.1 Introduction

Congratulations on choosing natural stone tiles to be used in your home.

Natural stone floor and wall tiles will enhance and improve the appearance of your home and in certain circumstances improve your standard of living by the ease in which they can be cleaned; reducing the amount of dust mites and pollen particles that can result in allergies.

The information contained within this guide has been produced in good faith and is to be used as a guide and general overview of the various stages involved in the laying of stone tiles/slabs. It is recommended that additional professional advice be sought if the tiles are to be laid successfully. The Heritage Stone Company can offer advice and guidance but takes no responsibility for problems arising as the result of customers simply following the information contained herein.

Only the products that The Heritage Stone Company recommends for fixing and maintaining the tiles are referred to in this guide. Where ever possible the directions for use of each product should be carefully followed (this information can be found on the back of the bottles of Sealants and bags of Adhesive/Grout). For more information please ask for a technical data sheet on the relevant product (a copy of this is reproduced on the back of bags supplied). Where alternative fixing products are being used, their compatibility should be checked with the supplier or manufacturer of these materials.

Should you require any further tiles, sealants or adhesives or if you have any questions relating to the products that you have purchased, please do not hesitate to contact us.

Technical helpline 01939-290690

Before you commence tiling ensure you have the correct equipment to hand.

Checklist

- Tiling trowel 6mm for mosaics, 10 mm for tiles.
- Chalk Line
- Spirit Level
- Tape measure
- Wet cutter
- Angle Grinder
- Grouting Squeegee
- Grouting Sponge

1.2 Products Supplied

Adhesive – All of the adhesives that we supply are from the StoneFix range and have been specifically selected to meet the requirements of the stone tiles that you have ordered, and the substructure to which the tiles are to be bonded. StoneFix Adhesives are high performance S Grade Flexible Eco Friendly Products, formulated using unique cross-linked polymer technology offering the highest levels of flexibility available in the market today. The addition of water mark proof technology ensures that no water staining occurs. The incorporation of under floor heating systems is discussed prior to ordering so as to ensure Adhesives and primers specially designed for this type of application are supplied. Adhesive beds are normally from 3 to 15mm in thickness. Where ever possible the directions for use of each product should be carefully followed (this information can be found on the back of the bags of adhesive).

Grout – All of the grouts that we supply are from the StoneFix range and have been specifically selected to meet the requirements of the stone tiles that you have ordered. StoneFix grouts are fast setting highly flexible products that are used as they incorporate the latest innovations in new anti-efflorescence are free from uneven colour, remain easy to keep clean and will not support mould growth as they incorporate BIO STOP technology enhanced with silicone. StoneFix Grouts can be used for joint widths from 2 - 20mm. Where ever possible the directions for use of each product should be carefully followed (this information can be found on the back of the bags of Grout).

Sealants - Lithofin MN Stainstop This special impregnating sealer optimally protects absorbent, stain-sensitive natural and artificial stone surfaces. Largely prevents the penetration of oil, grease, and water and makes further maintenance easier. Highly recommended in kitchens and bathrooms. No health concerns once dry, according to FMPA report.

- also suitable for polished surfaces
- ready-to-use
- for indoor and outdoor use
- no gloss
- long-term effect
  Coverage:ca.10-20m^2/L Packaging: 1L, 5L

2. PREPARATION

2.1 Introduction

It is of great importance that the sub-floor is adequately prepared for the tiling process. This involves ensuring that the floor is level, clean and dry. Throughout the preparation process the Tiles/Adhesives and Grouts should be stored in a clean and dry area.

2.2 Types of Sub-Floor

The most suitable sub-floor for tiling is either a concrete, sand and cement screed or a sand and cement render. However, tiles may be laid on other surfaces such as timber floors. If the original floor is old tiles, vinyl, cork, linoleum, or woodblock, then it is necessary to remove this before laying the tiles, making sure the ground is clean, level and any old adhesive removed.

Any irregularities in the floor may be evened out by the application of adhesive during the fixing process. Where larger holes and bumps exist, a leveling compound should be used.

2.2.1 Concrete Floors and Sand & Cement Screeds

Please Note that a new concrete screed should be left for a period of at least four weeks before the tiles are laid. A new sand and cement screed or sand and cement render should be left for a period of two weeks. Depending on weather and site conditions, further time may be necessary. In all case the moisture content should be tested prior to tiling.

2.2.2 Timber Floors

Timber floors may also be used as long as they are strong and stable enough to withstand the additional load. Timber floors can be strengthened by laying 15mm thick ply wood or WBP ply wood over the entire area to be tiled and screwed down at 15 cm intervals. StoneFix S2 flexible adhesive and StoneFix flexible grout should be used; in addition the incorporation of de-coupling matting such as Ditra Mat is recommended (See Cutting and Fixing the Tiles).

2.3 Under Floor Heating

Natural stones are very good at storing and dispersing heat and hence work very well with under floor heating. It is important to ensure that this is turned off when the tiles are being laid and that flexible adhesives/grouts are used. The incorporation of de-coupling matting such as Ditra Mat is always recommended (See Cutting and Fixing the Tiles)

2.4 Finished Floor Levels

It is important to remember that the finished floor level will be raised by the thickness of the tile plus approximately 4-6mm for the adhesive. (Additional thickness will also result in the use of de-coupling matting and additional self leveling screeds). Thus some doors may need trimming and timber threshold strips may be required to solve the of problem of varying levels in adjoining rooms.

2.5 Types of Walls

The most suitable walls are solid concrete rendered walls, the weight of stone tiles needs to be taken into consideration, the average weight of most stone tiles is 25 - 30 kg/m2. In wet areas it is advisable to use tile backer boards, they are lightweight, waterproof and can support the weight of stone tiles. Walls can be strengthened by over-boarding or laying ply wood over the entire area, flexible adhesive and a flexible grout should be used.

3. LAYOUT

3.1 Introduction

Before commencing the work it is important to consider the shape of the room to be tiled and hence the layout of the tiles themselves. The tiles can be laid either in a traditional straight fashion or, if desired, brick fashioned (half bonded) at an angle in a diamond pattern resulting perhaps in a more aesthetically pleasing finish to the floor. To enhance the character of the room further, either a border or a profile may be added.

3.2 Tiling Process Floor

To begin, find the centre of the room and create a centre line from one end of the room (the end at which the door is located) to the other (the end opposite to the door) using a chalk line.
Once the midpoint of this centre line is ascertained, the tiles should be laid without being fixed, so as to be able to see where the last whole tile ends. This should be done in both directions, if the gap at the end is less than half a tile, move the tiles away from the centre line until you achieve the correct gap, then mark the floor where the first tile will start.

When the actual tiling process commences, it is good practice to start at the point furthest from the door, the principal being that one does not need to step on the newly laid tiles. It is important to remember to leave a sufficient gap for the grout joint. (See Cutting and Fixing the Tiles).

3.3 Tiling Process Walls

Similar to floor tiling a start point must be ascertained, if the floor is level and you are following the line of the tiles on the walls. Use a spirit level and mark a vertical line on the wall with a pencil from the edge of the centre positioned floor tile. Then measure up the wall and draw a vertical line around the room at the correct height for an equal distribution of wall tile between the floor and the ceiling. Remember to take into account any windowsills, and the height of the bath to ensure you do not leave too many small cuts.

4. CUTTING & FIXING

4.1 Before Tiling

Before tiling it is important to ensure all the tiles are completely dry and free from dust both on the face of the tile and the one to be adhered. Mix the tiles to ensure that any colour, shade or batch differences are mixed to ensure a random and even distribution of any irregularities in the tiles.

4.2 Cutting

It is most likely that it will be necessary to cut tiles during the fixing process. Any broken or damaged tiles should be put aside and used for this purpose. Where there is a large amount of cutting to be done, a water-cooled diamond cutter should be used which will make the job much easier, and leave a very clean cut. Tiles can also be cut using an angle grinder; this may leave a rough edge but is ideal if curved cuts are needed. Both of these may be purchased from a DIY store or can be rented from a hire shop.

4.3 Fixing

Although a subjective decision, it is suggested that a minimum grout joint of approximately 2mm is allowed when laying stone, a wider joint may be used if required depending on the type of stone and edge profile – such as tumbled.

The adhesive should be spread over a small area (e.g. one square metre) of the floor to a depth of between 6 - 12mm thickness, using a square notched adhesive trowel. Such a depth should be sufficient to account for and even out varying height levels of tiles. Deep lugs or keys on the back of the tiles should also be filled with adhesive before the tiles are fixed. It is also advisable to butter the back of the tile to ensure a good key. Mosaics require a smaller bed of adhesive approx 3 - 6 mm thickness. **We would always recommend using a White Coloured Adhesive with a pale stone, Grey Adhesives whilst being cheaper and fine for Dark Slate etc, does introduce the possibility of colour leaching and can result in staining or picture framing of pale coloured stone tiles.**

The tile should then be firmly bedded into the adhesive on the subfloor, using a small twisting-like motion to ensure that there are no air pockets under the tile. This process should be repeated, remembering to leave a gap for the grout joints. It is important to ensure that the tiles are laid evenly which can be done using a spirit level. Any adhesive that is accidentally placed on the surface of the tile should be removed using a grout sponge.

Always ensure the tiles are cleaned using Lithofin Wexa, before Grouting and prior to each coat of sealant being applied.

5. GROUTING & SEALING THE TILES

5.1 Introduction

As the tiles are natural, it will be necessary to apply a Primary Seal before the floor is grouted. A Secondary Seal should then be applied after the grouting process is completed. It is very important that the floor is clean, dry and completely free from grout stain or grease before the secondary coat is applied.

For best results the temperature in the room should be between 10-25°C; humidity of the air in the room is not too high and strong sunlight should be avoided.

Please Note In some instances the fumes from certain sealants may be unpleasant and cause breathing difficulties for the young and old. It is important to ensure that there is good air-circulation and that an appropriate respirator is worn. (See manufactures guidelines on the reverse side of all products).

5.2 Grouting

The grouting process should commence approximately 12 to 24 hours after the tiles have been treated with a Primary Seal of Lithofin MN Stain Stop. This will reduce the porosity of the tiles and discourage staining.

Prior to grouting the joints should be filled by either using a pointing process or by making up a slurry grout mixture and working the grout into the joints using a squeegee. In the case of unfilled or tumbled travertine, a slurry grout is recommended so as to fill in any holes in the surface of the tile.

Please note that only a small area (e.g. one or two square metre) should be grouted at a time before any surplus grout is removed and the grouted area cleaned using a wet grout sponge. Care should be taken not to spread the grout unnecessarily over the tiles, as it may be difficult to remove the residue when dried.

On completion of the grouting, the floor should be wiped over again to ensure that all grout residues has been removed. Once the grout has dried, the floor should be brushed to remove any dust particles. If any excess grout remains on the floor after it has been cleaned, Lithofin Wexa may be used to remove any stubborn marks.

5.3 Sealing Natural Stone

5.3.1 Matt Finish

In most cases, Lithofin MN Stain-Stop can be used to seal all natural stone. (FILA FOB is, however, required when sealing Schistaceous Slates otherwise a colour change will occur). As Lithofin MN Stain Stop will not change the colour of the material, a product such as Lithofin Colour Intensifier should be used where one wishes to intensify the colour of the stone. Depending upon the material being treated, it may be necessary to apply more than two coats of the Lithofin MN Stain-Stop to the floor to achieve saturation.

5.3.1.1 Primary Seal

The primary seal should be applied as evenly as possible before the floor is grouted. It is important to ensure that the tiles are completely dry, clean and stain free. The coat should be applied using a brush, roller or cloth. It is most important that all the Lithofin MN Stain-Stop is absorbed into the tile. Any excess sealant should be wiped off before it is allowed to dry on the surface.

5.3.1.2 Secondary Seal

The secondary seal should be applied in the same way as the primary seal, but at right angles. Again, it is most important that all the Lithofin MN Stain-Stop is absorbed into the tile. Any excess sealant should be wiped off before it is allowed to dry on the surface. The tiles should be grouted to saturation to ensure complete coverage of the sealant. (Apply as many coats as is necessary to achieve saturation).

5.3.1.3 Colour Intensifier

It is most important to apply the Lithofin Colour Intensifier (Apply up to three coats or as is necessary to ascertain the required depth of colour. Coats should be applied using a brush, roller or cloth). prior to sealing the stone using Lithofin MN Stain-Stop.

5.3.1.4 Maintenance

Natural Stone sealed with Lithofin MN Stain-Stop should be cleaned using Lithofin Easy-Care. Lithofin Wexa may be used to remove any grease, oil or ingrained dirt.

5.4 Sealing Slate

There are two options available: a Matt Finish, or a Gloss Finish.

5.4.1 Matt Finish

For a matt finish, Lithofin MN Stain-Stop should be applied. Depending upon the material being treated, it may be necessary to apply more than two coats of the Lithofin MN Stain-Stop to the floor.

5.4.1.1 Primary Seal

The primary seal should be applied as evenly as possible before the floor is grouted. It is important to ensure that the tiles are completely dry, clean and stain free. The coat should be applied using a brush, roller or cloth. It is most important that all the Lithofin MN Stain-Stop is absorbed into the tile. Any excess sealant should be wiped off before it is allowed to dry on the surface.

5.4.1.2 Secondary Seal

The secondary seal should be applied in the same way as the primary seal, but at right angles. Again, It is most important that all the Lithofin MN Stain-Stop is absorbed into the tile. Any excess sealant should be wiped off before it is allowed to dry on the surface. The tiles should be sealed to saturation to ensure complete coverage of the sealant. (Apply as many coats as is necessary to achieve saturation).

5.4.1.3 Maintenance

Slate sealed with Lithofin MN Stain-Stop should be cleaned using Lithofin Easy-Care. Lithofin Wexa may be used to remove any grease, oil or ingrained dirt.

5.4.2 Gloss Finish

For more of a gloss finish, Lithofin Slate-Seal should be used. In most cases, two coats of Lithofin Slate-Seal should be sufficient.

5.4.2.1 Primary Seal

The primary seal should be applied as evenly as possible before the floor is grouted. It is important to ensure that the tiles are completely dry, clean and stain free. A reasonably thick coat should be applied using a brush, roller or cloth. On less absorbent surfaces, just a thin coat should be applied. It is important not to walk on the floor until it is completely dry.

5.4.2.2 Secondary Seal

The secondary seal should be applied in the same way as the primary seal, but at right angles.

5.4.2.3 Maintenance

Slate sealed with Lithofin Slate-Seal should be cleaned using Lithofin Easy-Care. Lithofin Wexa may be used to remove any grease, oil or ingrained dirt.

For further technical information or general support with sealing enquiries contact our Lithofin technical helpline on 01962 732 126. www.lithofin.com

6. DEEP CLEANING & PROBLEM SOLVING

6.1 Deep Cleaning Problem Solving

After some years, if the floor has become particularly dirty, Lithofin Stainaway may be used to remove grease and grime and to strip off old coats of sealants.

6.2 Problem Solving

Should anything be spilt on the tiles during their day to day use, it should be quickly removed using a damp cloth and may be cleaned using Lithofin Wexa. Any remaining stubborn grease related marks may be removed using Lithofin Oil-Ex.

6.3 Damaged Areas

Caution should be taken to avoid dragging furniture over the floor, as this may damage the tiles. Where this does occur, the damaged area should be re-sealed to prevent further damage.

7. EXTERNAL USE

7.1 Introduction

Where tiles are being used outside, their compatibility should be thoroughly checked and reference should be made to the specific product notes. It is recommended that the tiles be laid in such a way as to allow water to run off the surface.

Where natural stone is being used outside, Lithofin MN Stain Stop should be used as a sealant.

8. TROUBLE SHOOTING

8.1 Possible Problems

Do not use a deeper bed of adhesive than is recommended by the manufacturer (normally up to 10 mm). If a thick bed of adhesive is required alternative adhesives are available.

Do not dot and dab the back of the tiles as this may result in shadow lines being visible behind the tile.

Do not use grey adhesive on light coloured tiles.

Do not grout the tiles before applying the primary seal.

Always use flexible adhesive and grout with under floor heating and wooden substrates.

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