

# CAST STONE FLOORING GUIDE

#### **ESSENTIAL INFORMATION**

The purpose of this booklet is to outline the basic principles of installing your Rudloe Flooring.

For more detailed technical information, refer to British Standard BS 5385 Wall and Floor Tiling.

On receipt of the product we recommend they are removed from their packaging and thoroughly inspected prior to installation to ensure the products purchased are suitable for the application.

We recommend that you treat a spare tile with the appropriate sealer and/or finisher prior to installation to ensure you have achieved your desired appearance.

Read the instructions on the packaging of Adhesives, Grouts and Sealants very carefully. Keep everything meticulously clean and orderly as work progresses.

No complaints regarding the appearance of the product will be accepted by the company once the tiles have been installed.

#### **Product:**

Rudloe flagstones are manufactured using cast stone, which is a blend of natural materials. Whilst every effort is made to ensure consistency some shade variation will be evident as we replicate the character of natural stone. The stones are of a random design and mimic the appearance of natural quarried stones.

#### Website:

www.rudloe-stone.com

#### **Contact information:**

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#### Disclaimer:

The specifications and technical information in this document are based on practical experience and are given in good faith as an initial indication of factors you need to consider. Although they are to the best of our knowledge correct, they are given without warranty.

The preparation of the surfaces, and the laying and sealing of the stones remain the responsibility of the installer. We cannot accept any responsibility for reliance placed upon the advice contained herein since practical expertise and site conditions are outside of our control. Neither do we accept liability for the performance of the product arising from such use. This does not affect your statutory rights.

#### **DELIVERY AND STORAGE**

#### **Delivery:**

Unless otherwise stated all products will be delivered to the kerb side where clear and safe access must be available. Products will arrive on 18 ton vehicles, roughly the size of a refuse collection lorry. The driver will endeavour to offload as close as possible to the required spot but it is essential that we are informed of any access issues (eg: narrow lanes, overhead restrictions, difficult site conditions, restricted parking). If we do not have prior warning we cannot be held responsible for an aborted offload.

# Handling and storage:

Please ensure that the flagstones are protected from the weather immediately upon receipt and move them inside as soon as possible. On receipt any wrapping and packaging (excluding the spacers) should be removed and all items should be inspected for quantity and quality.

Before laying the stones they should be transferred to the area in which they are to be laid to allow them to acclimatise for 2-3 days at room temperature. All heat sources in the room should be turned off during the drying and laying process, however a minimum background temperature of 15 degrees will be required for sealing.

Store in such a way to allow an even air flow around the stones, and do not store flagstones on top of each other, or lean them against the face of other stones. Laying should not commence until the stones are completely dry.

#### **Defects:**

Please check all items immediately upon receipt, and within a maximum of 24 hours. Notify any shortage or defect immediately by telephone, and confirm in writing within 3 days.

Please note however that all stone samples are subject to variation in colour, texture and pattern, and can therefore only give an approximate example of the general appearance of the stone.

Small 'pin holes' not initially evident in the flagstones may appear over time. This will not affect the strength or durability of the product.

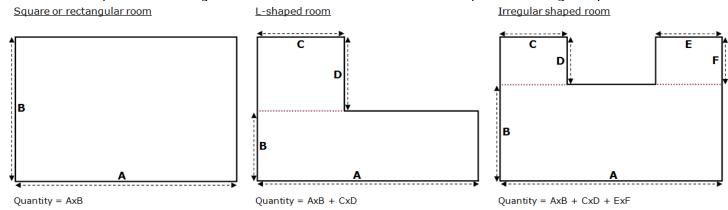
Please note that we are unable to accept any complaints once the product has been fixed, unless the fault was not apparent at the time of installation.

#### **MEASURING YOUR ROOM**

# Calculating quantity of stones required:

Our flagstones are sold in square meter quantities. The ease of calculating the quantity required is really dependant on the layout of your room.

Rectangular or square rooms can be calculated easily by multiplying the length by the width. However, if your room is L-shaped, or has alcoves or bay windows, things do become slightly more complicated. See our examples below for guidance on how best to calculate the square meterage of your floor:



It is always important to add at least 10% to your final quantity to allow for any wastage that comes from trimming and awkward layouts. The more complex your room layout the more wastage you will produce, so remember to accommodate for this with a little extra.

# **Surface preparation:**

If your flagstones are to last it is essential that the surface onto which they are laid is sound and able to support the additional weight. Careful consideration must be given to the floor surface to confirm that the surface is level, clean, and dry, plus free of movement, dust, grease and loose material.

Flagstones can be laid on various substrates:

- <u>Concrete/sand and cement screeds</u>. New concrete floors must be allowed to dry for a minimum
  of 6 weeks. If applying a screed on top allow a minimum of a further 3 weeks (further drying
  time may be required depending on weather and site conditions). Residual traces of laitance
  and curing agents should be mechanically removed.
- <u>Anhydrite or fast setting screeds</u>. The screed must be fully dry in accordance with the manufacturer's recommendations, lightly sanded to remove all traces of laitance/dust, and then primed until the surface is no longer absorbent.
- <u>Bumps and hollows in screeded floors</u>. Where bumps or hollows exist in the sub-floor that exceed the chosen adhesives recommended fixing bed a levelling compound must be used.
- <u>Suspended timber floors</u>. The floor should be rigid, non-flexing, and stable enough to bear the additional load. In order to minimise the damaging effect of lateral movement in the floor surface it is recommended that the floor is prepared using a de-coupling membrane.
- <u>Floating insulated floors</u>: Floating insulated floors (polystyrene with water resistant chip-board over) are subject to vertical movement, and your installer should be consulted for advice on this.
- <u>Vinyl sheet and floor tiles</u>. Thoroughly clean the existing floor to remove all contaminants such as oil, wax, and grease, using and appropriate cleaner. Following this use a primer and allow to dry before laying the stones.
- <u>Cork and woodblock floors</u>. Cork and woodblock floors must be removed, and any bitumen or adhesive residues left on the sub-floor should be scraped away and all loose materials removed. We recommend priming the floor, and when dry applying a levelling compound.
- <u>Under-floor heating.</u> The majority of our flagstones can be used over most under-floor heating systems, ideally waterborne rather than electric matting. However, electric under-floor heating manufacturers sometimes extend their warranty to cover flooring; please check if this is the case with your installation. The heating should be correctly commissioned prior to laying the stones, and switched off or lowered to a maximum of 15°C during laying and for a minimum of 14 days after installation. The temperature can then be increased at a rate of 5°C per day to the maximum temperature, and then reduced by 5°C per day to the required working temperature. A de-coupling membrane should always be used when laying over under-floor heating.

In all cases, removal of the skirting prior to laying the flagstones will make your installation easier, provide a better expansion gap, and give a professional clean look to your new floor.

# 'Practice' laying:

Prior to installation we strongly recommend that you 'dry lay' the stones to establish a laying pattern you are comfortable with. Careful selection will allow you to create a random and gently undulating pattern. Each flagstone should be brushed clean at this point to remove any dust.

# **Cutting the tiles:**

It is recommended that a good quality diamond tipped wet wheel cutter is used to cut the stones. During cutting the surface of the tile may become wet and/or dirty; wipe clean immediately after cutting.

Rough edges and chips should be smoothed and finished with a sanding block, or in severe cases by rubbing the tile edge with a broken piece of another tile.

# Impregnating and sealing:

We recommend that you treat your flagstones with an impregnator (such as Lithofin Stainstop) to prevent penetration of accidental spills such as oil, grease and water, and a sealer (such as Lithofin Multiseal) to produce a resistant soft sheen finish, and strengthen the colour of the stones. Prior to laying (so at the 'dry lay' stage), apply at least two coats of

impregnator with a colourless sponge or towel to the top and sides of each stone, followed by one coat of sealer; this will help prevent the adhesive being 'sucked into' the stones.

We recommend that you treat a spare tile with your chosen impregnator and sealer prior to installation to ensure you have achieved your desired appearance.

Always follow manufacturer's instructions and health & safety guidelines; ensuring adequate ventilation is available during the sealing process.





Porcelain

& Stone Adhesive

# Laying the stones:

When your flagstones are ready for their final installation we would recommend using a minimum thickness of 8-10mm of flexible thick bed adhesive (we would suggest using Norcross), although more adhesive may be required depending on site conditions. Adhesives generally have a working time of around 30 minutes, so it is important to make sure that you only mix the quantity that can be used in this time.

Fix whole stones first, leaving any cut stones around the perimeter of the room, or around the fixtures, until last. Use a large format or notched trowel to comb out a full bed of adhesive, making sure that it is trowelled out in straight lines. Using a twisting motion, firmly push the flagstones into place - positioning can be adjusted up to 10 minutes after laying, but attempts at adjustment after this time are discouraged, as this will seriously weaken the bond. To check complete coverage of adhesive, remove a stone from time to time to assess actual coverage – the whole of the back of the stone must be in good contact with the adhesive. A spirit level is essential in order to ascertain that the finished floor is level. Ensure at least three hours have elapsed before allowing light foot traffic on the flagstones laid in the hardening adhesives. Always follow the guidelines stated on your chosen adhesive product.

# Pointing/grouting

We would recommend the pointing method rather than grouting per se, in order to minimise the amount of grout that will settle on the surface of the stones. This process can begin as soon as the adhesive used to lay the stones is thoroughly dry, which will normally be after 24 hours.

We would recommend a flexible wide joint grout (such as BAL Superflex) and would encourage you to ensure that the manufacturers stated ratio of grout/water is followed; too much water can produce a grout with a greater risk of shrinking, too little can result in a grout prone to crumbling. Push the grout firmly into the joints, ensuring that no air pockets exist – the more the grout is compacted, the stronger it will be. Then draw a clean, damp sponge across the surface of the stone to produce a grout that finishes about 1mm below the surface.



Follow guidelines on product used and ensure any grout residue is cleaned immediately from the stones using a squeezed out sponge to prevent staining.

# Final sealing:

Once flagstones are laid and the pointing is complete we would suggest one further application of sealer (such as Lithofin Multiseal) to stones and grout, which will give your flooring a clean and professional finish, together with providing a protective barrier.

Always follow manufacturer's instructions and health & safety guidelines; ensuring adequate ventilation is available during the sealing process.

## **Care & maintenance**

Flagstone flooring is practical and easy to maintain. We recommend regular washing with Lithofin Easy-Care. Your new floor will need resealing (again, we would recommend using Lithofin Multiseal) from time to time depending on the level of traffic.