INSTALLATION GUIDE

INTRODUCTION

Parkay Floors HD Porcelain Collection has drafted a series of recommendations for the correct installation of ceramic products.

A correct installation will not only enhance the beauty of the tile itself, but it will also ensure its durability and avoid the possible falling off or breakage of the tiles.

In the same way that it is necessary for ceramic tiles to have certain professional features, it is common sense that these requirements should be applicable to construction professionals, so that the execution of each installation is carried out in line with their particularities and requirements, and so ensuring, in addition to proper laying, the use of the most suitable fixing materials for the various kinds of tiles and sites, enhancing the beauty of the floor and ensuring its durability.

PLEASE NOTE !

"IT IS NECESSARY, WHEN PLACING, TO MIX PIECES FROM DIFFERENT BOXES"

THIS RULE IS ESSENTIAL NOT ONLY FOR UNSHADED MODELS BUT FOR ALL CERAMIC TILES.

Our recommendations are grouped in the following:

1. Bonding Material
   Wall tiles
   Floor tiles
   Bonding Material
2. Tiling Joints
3. Cleaning of ceramic tiles
4. Advice on use

Nevertheless, in the event of any doubts if any other issues arise, please do not hesitate to contact us.

BONDING MATERIALS

Bonding materials are used to guarantee the correct union of the tile to the supporting material. Therefore, the final finish of the installation will depend, to a great degree, on the appropriate selection and use of the bonding material.

WALL TILES

The porous wall tiles in large and medium format should be applied on a thin layer of paste cement with polymer additives. For small formats, a thicker layer of traditional mortar can be used.

In the event that the wall tile is to be installed in bathrooms or in places with direct water exposures, installation of waterproof joint is absolutley necessary.

FLOOR TILES

Nature and state of supports.

The planning and execution of the works must include proper design and preparation and implementation of the support base (usually slabs and concrete floors) of the intermediate layers (regularization layer, thermal and acoustic insulation, waterproofing or under floor heating) and the laying surface, which must be compatible with the bonding materials employed in the process.

To ensure the durability of the coverings, the following factors must be taken into account:

- Use cement based substrates, well proportioned and cured (must respect drying and curing times), water resistant, and that prevent the capillary rise of moisture from the subsoil. A damp surface is unstable and can cause adhesion problems and deformations and contractions that can cause rupture or lifting of tiles over time.
- When working on thermal or acoustic insulation we should know what is the expected behaviour of these materials with respect to the ceramic positioning system, as usually the fitting supports which have intermediate layers can behave in an unstable way, so it is advisable to prepare a compression layer that allows for the sharing of burdens.
- To ensure good adhesion for the surface placement, a true and firm surface must be found, which will require a thorough cleaning. The existence of powdered residues, greases, paints, efflorescences, slurries, gypsum debris, etc., weaken the adhesion.
- Because adhesive mortars see benefits reduced with less than 5 mm of thickness, a thin layer placement cannot correct the unevenness of the support with an excess of adhesive, so it is essential to have perfectly flat surfaces. However, there are adhesives that allow placement in middle layer thicknesses of up to 15 mm, which would enable the correction of deviations from the plane of 10 mm measured with a ruler of 2 m.

In case of major deviations, correction would be necessary by applying a leveling layer. The certainty that the paving will only reproduce every manifest irregularity of the surface must be considered before ignoring this rule.

- The roughness of the surfaces to be bonded contributes to enhancing the adhesion by mechanical anchoring. For this reason, it is advisable to alter mechanically the smooth substrates, such as, excessively-vibrated concrete, precast concrete, or the levelling layer itself.

Gluing operation.

Laying this paving requires the technique of using a thin layer of bonding materials appropriate to their characteristics (see CE Mark). As a general rule, we suggest the use of C2-type Cementitious Adhesives according to specifications of the European standard EN 12004 "Adhesives for tiles. Definitions and specifications.

To get a good fixing and long life, the following factors should be taken into account:

- Carefully follow the manufacturer's recommendations in the preparation of adhesives.
- Prepare the mixture using mechanical beating elements, so as to achieve a homogeneous and smooth product.
- Placement with double bonding (both of the workpiece and support) ensures the perfect adhesion to the ceramic piece and avoids the formation of gaps between them and the support.
- "Combing" of the glue on the support, with a toothed trowel of appropriate size, ensures a regular thickness and a good distribution of the glue over the entire surface.
- Once installed, give a vigorous shake, piece by piece, so as to achieve a good placement. Lift up periodically to check that the adhesive has prefectly filled in.

All joints should be cleaned of any traces of adhesive to allow for proper pointing of joints later. The newly-paved areas should be marked appropriately to prevent the flooring being stepped on before the time recommended by the adhesive manufacturer.

JOINTS

Keep in mind that the base support is usually subjected to continuous surface expansion and contraction caused by temperature changes, structural movements, the effect of water or moisture, chemical reactions, or shrinkage of the cement itself. For this reason, a perfect execution of the joints ensures that these natural movements of the support base will not be transmitted to the surface of the tile.

Structural joints.

The size of the structural joints must be detailed fully in the building project, and must be set by the architect or engineer. They are placed in relation to structural joints which are needed in the construction. Usually they are topped-off by filling them with permanently-elastic materials.

Perimeter joints.

Their mission is to insulate the floor tiles, along with their corresponding adhesive layer, against coated or other paved surfaces, such as, wall-floor meetings or meetings with other building elements like columns, window and door racks. The objective is to prevent the accumulation of stresses, both of the ceramic material and the adhesive in contact with said elements. The joints between walls and floors are always needed for areas larger than 7 m2. The recommended joint width is 5 to 10 mm, which is hidden by the skirting, or by the adjacent coating.

Perimeter joints must be properly executed and function as such, ie. they must be clean of debris and building materials and reach the sliding layer, support base, or asphalt material, so this must be done prior to placing the layer regularization or otherwise it will be impossible to execute properly. Analysis of the most common problems reveals that poor performance or omission of perimeter joints is one of the most common causes of lifting tiles.

Expansion joints.

They are intended to allow the differential deformations caused by thermal and hygroscopic variations between the tiles, the adhesive layer and the support. The design of expansion joints is usually done on site, so it can be useful to have minimum standards for sizing, such as the following:

- The minimum width is 5 mm, usually 8 mm.
- It is advisable to divide the laying surfaces in areas not exceeding 50 -70 m2 in indoor sites.
- They should also be placed in linear dimensions that exceed 8 m.
- Expansion joints must be properly executed and function as such, ie must be flexible, waterproofed, well-bonded and must reach the sliding layer, support base, or asphalt.
- They can be filled with profiles or elastic materials.

Installation Joints.

Installation joints play an important aesthetic function, enhance the inherent beauty of ceramic tiles and compensate for their small dimensional variations. They involve regularly repeated mutual separation between the individual tiles, recommending the use of crosspieces and wedges for a perfect alignment of the tiles and the constancy of the thickness of the joints.

They help to absorb the deformations of the support and moderate the stress generated when subjected to load. If the pieces are placed close-fitting or bone-like, and where therefore there is no moderating action of the joints, accumulating pressure can produce tile lifting.

They are especially necessary when rectangular tiles are placed INTERLOCKING or PIN-LIKE, as this minimizes the flanges that this technique generates.

On the market a wide variety of pointing materials for joints are available which can suit different types of tiles and environments: waterproofing, deformable materials, anti-acids, etc. As a general rule, J2 type materials are recommended, according to specifications of the European standard EN 12004.

Each manufacturer should specify, depending on the type of product, the waiting time before pointing work on joints can start.

WARNING:

Laying without joints is inadvisable from a technical viewpoint due to the risks of producing problem states in coatings.

THE CLEANING OF CERAMIC PIECES

After installation, it is recommended to remove all residues of bonding and pointing of joint materials with a commercial acidic cleaner, but the following considerations should be taken into account:

- Use products which are suitable to eliminate the remains of mortar, cement, etc.
- Never use an acidic cleaning agent on newly installed flooring because the acid reacts with the unset cement and can damage the seals, or insoluble compounds can be deposited on the surface of the paving.

It is a good ideas to cover the surface with clean water prior to any chemical treatment, thus preventing the possible absorption of agents used in the pointing of joints material, and rinse with water immediately after treatment.

Parkay Floors recommends the cleaning product Bona for its floors and walls, post-installation.

- Do not use metal scrapers or abrasive pads.
- This type of activity should be carried out by experienced personnel, and should take into account the characteristics of the paving / coating and the manufacturer's recommendations.

Daily cleaning, after use, will be made particularly easy as it only requires clean water and a very well-wrung cloth. In areas where the tile could be especially messy (kitchens), a detergent with bleach or ammonia can be added to water, although in this case we always recommend giving a final rinse with clear water.

Do not use waxes, oils or similar products, which produce a marred effect on the surface which is visible against light.

In some cases, we can find ourselves in the situation of having to clean very dry and specific stains, which cannot be removed with a damp cloth, but that will disappear if we apply concentrated bleach (the one for floors, not the one used for clothes) and leave it to dry. For especially resistant stains, it may be necessary to repeat the process.

Finally, as the paving is not the final element to be installed in construction works, it is necessary to give adequate protection against damage that can be caused by later works; therefore it should be covered with cardboard, thick plastic or a layer of sawdust.

GROUTING MATERIAL

	PORTLAND	PASTE MORTAR	LATEX MORTAR	EPOXY	FURAN	SILICONE
PAVIMENTO FLOOR TILE	SI / YES (*)	SI / YES	SI / YES	SI / YES (*)	SI / YES	NO / NO
REVESTIMIENTO WALL TILE	SI / YES (*)	SI / YES	SI / YES	NO / NO	NO / NO	NO / NO
EXTERIORES EXTERIORS	NO / NO	NO / NO	SI / YES	SI / YES	SI / YES	SI / NO
RESISTENCIA A MANCHAS RESISTANT TO STAINS	POCA LITTLE	POCA LITTLE	ACEP. ACCEP	BUENA GOOD	BUENA GOOD	BUENA GOOD
POSIBLE COLORACIÓN POSSIBLE COLOURING	SI / YES	SI / YES	SI / YES	SI / YES	S.N. / B.O.	RES. / LIM.
ELASTICIDAD ELASTICITY	POCA LITTLE	POCA LITTLE	REG. / REG.	REG. / REG.	REG. / REG.	BUENA GOOD

(*) NO RECOMENDADA · ACEP. ACEPTABLE · S.N. SÓLO NEGRO · RES. RESTRINGIDA · REG. REGULAR
(*) NOT RECOMMENDED · ACCEP. ACCEPTABLE · B.O. BLACK ONLY·LIM. LIMITED· REG. REGULAR

MINIMUM JOINT