




PORCELANOSA[®]

TILE / KITCHEN / BATH / HARDWOOD

THIN PORCELAIN TILE


TPT



TPT

At the end of this program, participants will be able to:

- Understand what is a Thin Porcelain Tile (TPT)
- Know how (TPT) is made and its benefits
- Identify the various types of (TPT) available
- Applications to use (TPT)
- Avoid issues while specifying the product
- Installation and setting materials
- Recommendations and guidelines



LEARNING OBJECTIVES

TPT

Composition:

- Clay + Water + Fire
- (100% Natural Material)
- Ceramic tile has been made by man for over 4,000 years
- From 4x4 to (TPT)



What is a thin porcelain tile (TPT)?

- Thin porcelain tile (TPT) AKA thin porcelain panels, are characterized by their minimal thickness of anywhere between 3 to 6 mm and a dimension of up to 5x10 feet in length and width.
- TPT is structurally reinforced with a 0.5mm glass fiber mesh.







THIN PORCELAIN TILES

TPT

MANUFACTURING



(TPT) Manufacturing Process

Thin porcelain tiles **(TPT)** are made by natural materials including:

- Clays**
- Feldspar**
- Silica**
- Minerals**



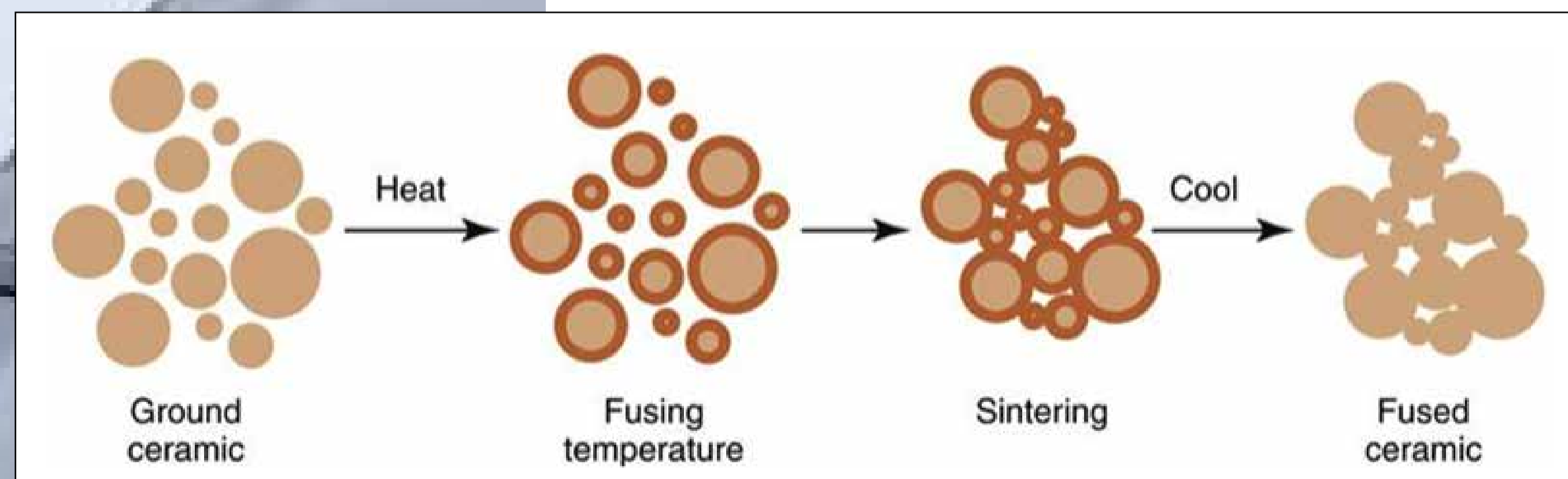
(TPT) Manufacturing Process

TPT is manufactured by using **sinterization** which is the high pressure, high temperature kilning process that creates the panels.

Natural raw materials and minerals are placed through a kiln and exposed to **high pressure** and temperatures reaching 1,500°C

(TPT) Manufacturing Process

Sintering is the process of **compacting** and forming a solid mass of material by heat or pressure without melting it to the point of liquefaction.



(TPT) Manufacturing Process

Continuous press is an innovative compaction technology that breaks through productivity barriers for **large size** tiles.

Continuous press allows the manufacture of porcelain slabs and tiles within a wide size and thickness range, personalized both on the surface and in-body, at higher output rates than those attainable with traditional products.



(TPT)
Manufacturing
Process

Compaction occurs because of two very stiff motor-driven belts. The powder is deposited on the lower belt and carried inside the machine, where the combined action of the two belts with two compaction rollers allows the material to form.

The lower belt has a length that allows the use of decoration systems prior to the compaction stage, while the upper belt can be specially engraved to imprint relief structures on the slab. The machine is designed so that the decorations can be replaced quickly.

THIN PORCELAIN TILES

(TPT) Manufacturing Process



 VIDEO

THIN PORCELAIN TILES

(TPT) Manufacturing Process

Continuous Compaction Process



(TPT) Manufacturing Process

Stratification

Raw materials of different types and colors can be mixed in a wide variety of combinations



(TPT) Manufacturing Process

Continuous compaction of the powder layer directly on the conveyor belt.



THIN PORCELAIN TILES

(TPT) Manufacturing Process

The compacted ceramic slab is cut as it moves



TPT



BENEFITS

(TPT) Features



FROST
RESISTANT



FIRE
RESISTANT



WATERPROOF



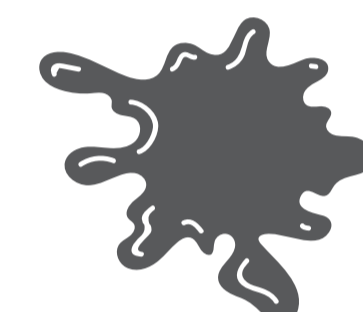
RECYCLABLE



RESISTANT
TO
CHEMICALS



FAST
ASSEMBLY



STAIN
RESISTANT



FROST
RESISTANT

(TPT) Features

Some of its features are:

Lightweight and bendable. Only 8kg/m²

Seamless look.

Minimal grout joint

Colors are permanent - add info
from DWT



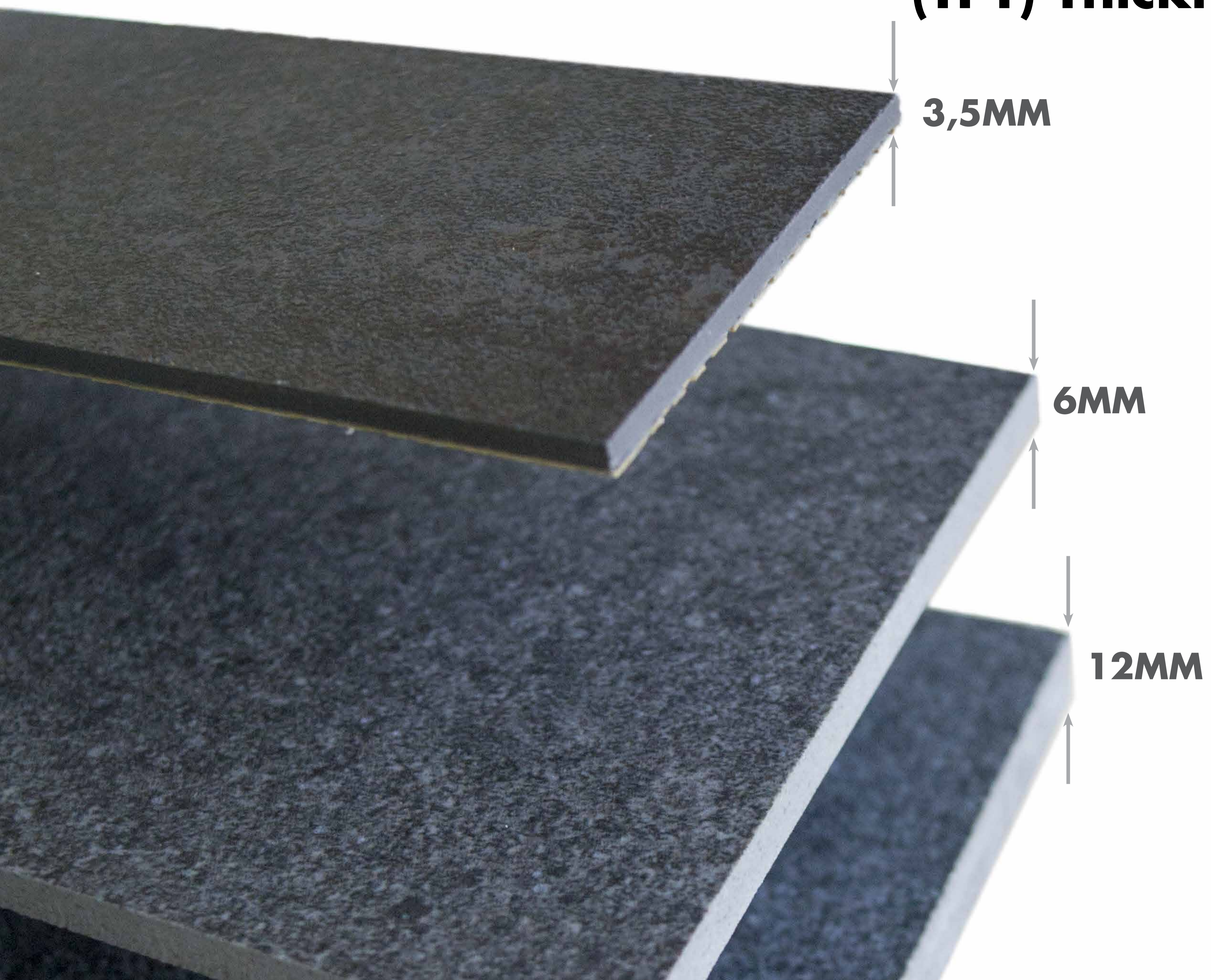
(TPT) Features

Green benefits:

- TPT can be laid over existing floors and walls reducing the materials removed and trashed
- **Lightweight:** less fuel is required to transport them
- Low Maintenance
- Some colors can be made from recycle materials



(TPT) Thicknesses



THIN PORCELAIN TILES

(TPT) Dimensions

Also available for custom orders



150x320

120x250

120x120

(TPT) Dimensions

OES

100x300



(TPT) Possibilities

Finishes

- Multiple colors and styles available:

- **Natural Stone**
- **Wood**
- **Concrete look**

- **Matte**

• **Recommended for floor and wall applications**

- **Polished**

- **Recommended for walls only**



THIN PORCELAIN TILES

TPT

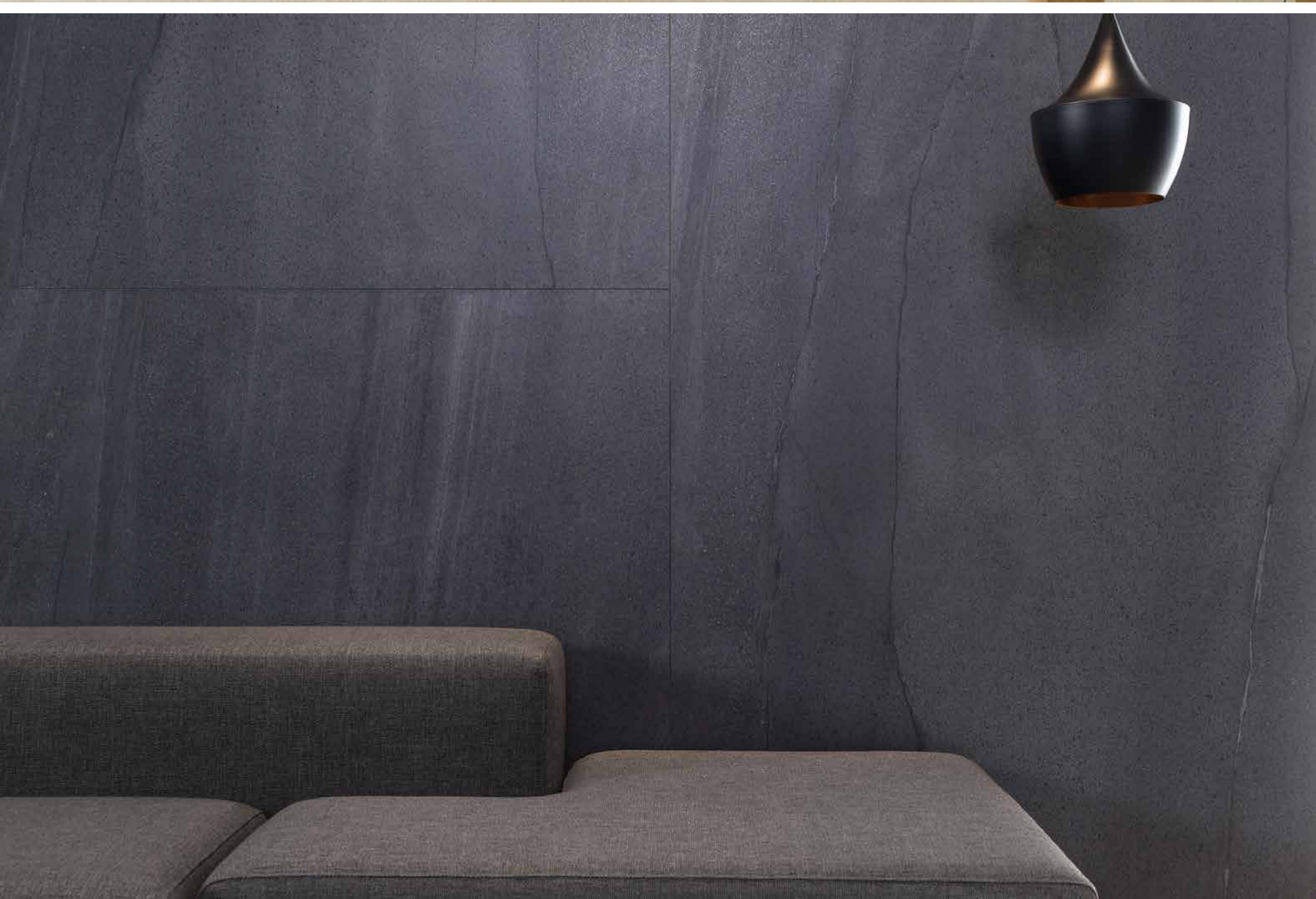


TYPES



THIN PORCELAIN TILES

STARTING FROM
DECORATED



**THROUGH BODY
PORCELAIN TILE**

THIN PORCELAIN TILES

TPT

APPLICATIONS





(TPT) Applications

There are various recommendations depending on the thickness including:

- 3 mm
 - Furniture and door veneer
 - Walls, fireplaces
- 6 mm
 - Wall cladding
 - Flooring (up to 48x48")
- 12 mm
 - Countertops, all of the above



INDOOR



INDOOR



OUTDOOR



OUTDOOR



OUTDOOR



OUTDOOR

 FONTENLA

swatch



REDESIGNING



COUNTERTOPS

A close-up photograph of a modern countertop. The countertop features a dark, textured surface on the right side and a light-colored, textured surface on the left side. The two surfaces meet at a sharp, diagonal edge. The background is blurred, showing a light-colored wall and a dark, curved object, possibly a sink or a piece of furniture. The overall aesthetic is clean and contemporary.

COUNTERTOPS



COUNTERTOPS



COUNTERTOPS



(TPT) Applications

- Most TPT can be installed indoors and outdoors. **Follow the manufacturer recommendations**

TPT can be used in:

- Residential Applications
- Feature Walls
- Countertops and backsplashes
- Fireplaces
- Bathroom walls and floors (5mm)
- Exterior cladding

(TPT) Applications

Commercial Applications:

- **Feature walls for lobbies and common areas**
- **Bathroom walls and floors (5mm)**
- **Wall protection**
- **Elevators**
- **Exterior cladding**
- **Countertops**
- **Front Desk**





(TPT) Applications

Commercial Projects:

- **Restaurants**
- **Retail**
- **Hotels**
- **Multifamily**
- **Office buildings**
- **Healthcare**
- **Education**
- **Government**

THIN PORCELAIN TILES

TPT

INSTALLATION



(TPT) Avoid issues while specifying

Follow the manufacturer guidelines for each application (Thickness matters)

(TPT) placement requires **qualified personnel.**

Using the appropriate tools for each type of work is essential.



(TPT) Installation guidelines

Surface Preparation – The maximum allowable variation in the substrate not to exceed 1/8" in 10 feet or 1/16" in 1 foot



(TPT) Installation guidelines

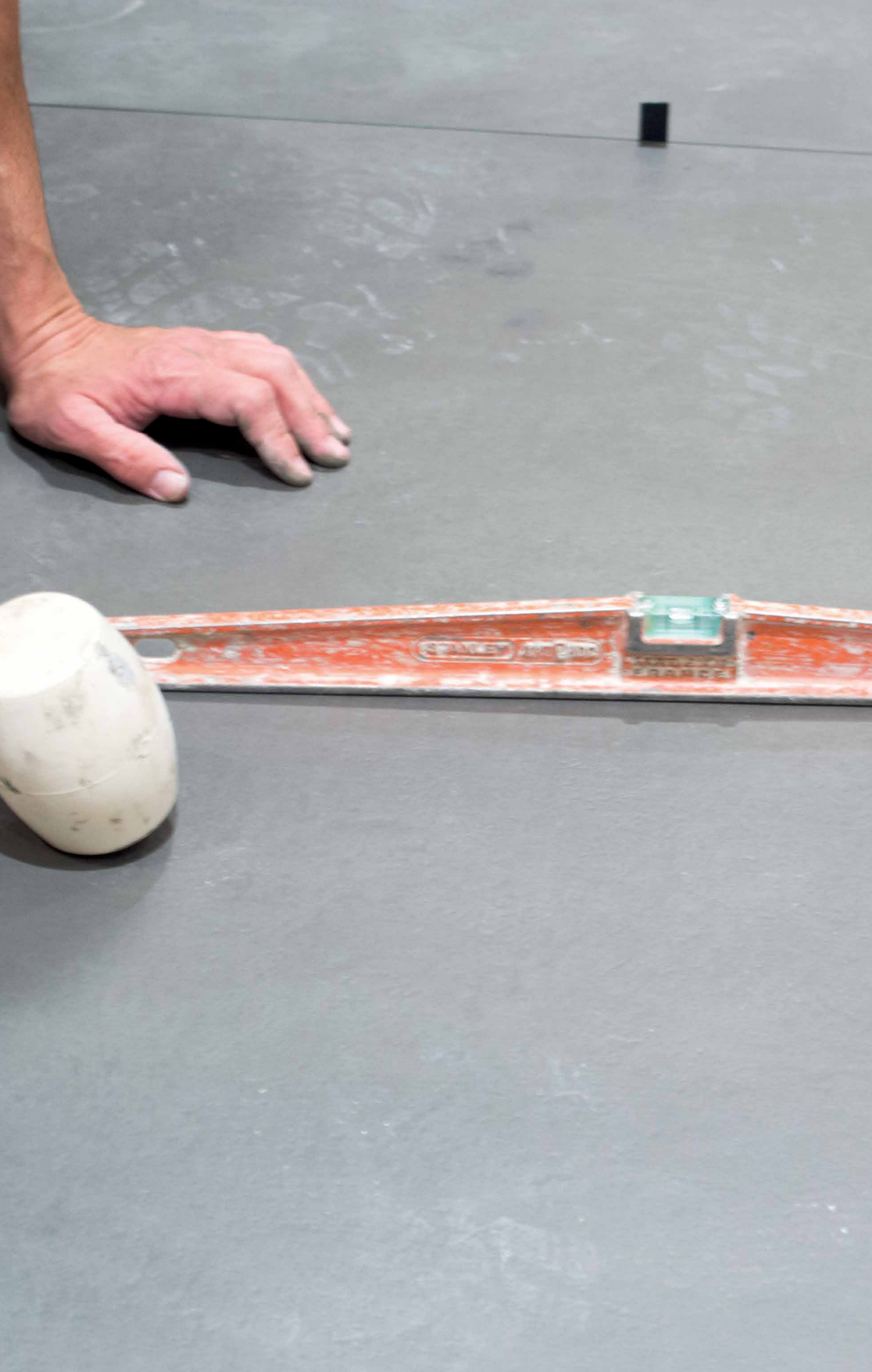
100% thin set contact between the tile and the substrate is recommended, especially near the grout joints.

Placement **joints** shall be of at least 1 mm. The use of spacers that facilitate wall tile leveling is recommended.



(TPT) Installation guidelines

Apply the joint material with a rubber trowel, avoiding the formation of bubbles, cracks, or gaps.





(TPT) Floor



(TPT) Wall

(TPT) Setting Materials



- The right choice of adhesive must be used. It is important to bear in mind the properties of the substrate to be tiled. It is recommended using a high-performance cement-based adhesive, suitable for placing all (TPTs).

- Line of type CG 2 technical mortars for sealing joints, suitable for all ceramic tile types. Characterized by their fine finish, suitable for sealing joints of up to 4 mm.

- For outdoors environments it is recommended to mix with latex.

(TPT) Setting Materials

Profiles

Currently on the market, there is a wide variety of profiles, including sizes that are suitable for ceramic pieces that are slightly larger than 3 mm thick.



(TPT) Setting Materials

Profiles

Neutral silicone for sealing joints. Highly recommended for sealing perimeter and movement joints. Can be used in both indoor and outdoor applications.



(TPT) Tools



Cutting Guide



Rubber Trowel



Notched Trowel



Pincers

Follow the manufacturer guidelines for each application (Thickness matters)

(TPT) placement requires **qualified personnel.**

Using the appropriate tools for each type of work is essential.

THIN PORCELAIN TILES

How to Install (TPT)

 VIDEO



Installation and setting materials recommendations and guidelines

References

Follow the TCNA manual for modern installation methods



Handbook for
Ceramic, Glass, and
Stone Tile Installation



2016

Installation and setting materials recommendations and guidelines

References

ANSI A108 Series – American national standards for installation of ceramic tile

ANSI A137.1 - American national standards for installation of ceramic tile (TPT don't meet breaking standard requirements)

TCNA (HB) – Handbook for ceramic, glass and stone tile installation; Tile Council of North America

ISO 13007 – International Standards Organization: classification for grout and adhesives

<http://www.sacmi.com/en-US/Product-and-Services/Ceramics/Business-Units/Tiles/Continua-Technology.aspx?idC=62083&LN=en-US>

<http://www.stoneworld.com/articles/88134-the-growing-popularity-of-thin-porcelain-tile>



THANK YOU FOR YOUR TIME.

ANY QUESTIONS?



PORCELANOSA[®]
TILE / KITCHEN / BATH / HARDWOOD

This concludes The American Institute of Architects Continuing Education Systems Program.