

NEW TERRACOTTA  
— PORTUGUESE HANDMADE —

**COTTO SPEC GUIDE**  
Technical & Commercial Support

1<sup>st</sup> Edition 2019

New Terracotta cotto tiles are made by hand using a slow but simple process which has been employed since Roman times. Using only natural raw materials, each tile is hand-moulded, dried on a wooden bat and then wood fired for about 48 hours to well over 1000°C, becoming resistant to very low temperatures. Our full of character cotto is not absolutely uniform, but vary slightly in shape, size and shade. Its natural warm tone and depth of colour will age beautifully, acquiring the attractive patina so much desired for a timeless appearance.

28 Formats | 4 Colours

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This document is intended to provide a user-friendly and informative guide for the best practice selection, preservative treatment, design and installation of New Terracotta Cotto tiles to ensure product fit for purpose and performance over a range of applications, hazard exposures and design lives. The target users would primarily be architects, designers, builders, engineers, specifiers and other users of New Terracotta Cotto tiles.



# We are NEW TERRACOTTA

We are makers of handmade cotto in a human-scale factory, neither too big nor too small.

## The Essence

New Terracotta Cotto is a genuine family heritage project. The premise is simple: to merge the alchemy of simple elements earth, water, air and fire with contemporary aesthetics.



## Our Values

At New Terracotta we stand for impeccable craftsmanship and timeless design.



### **Be Simple.**

We curate Naturalism. We value the simplicity in our tiles, sometimes we even reach out for imperfection.



### **Honour Origins.**

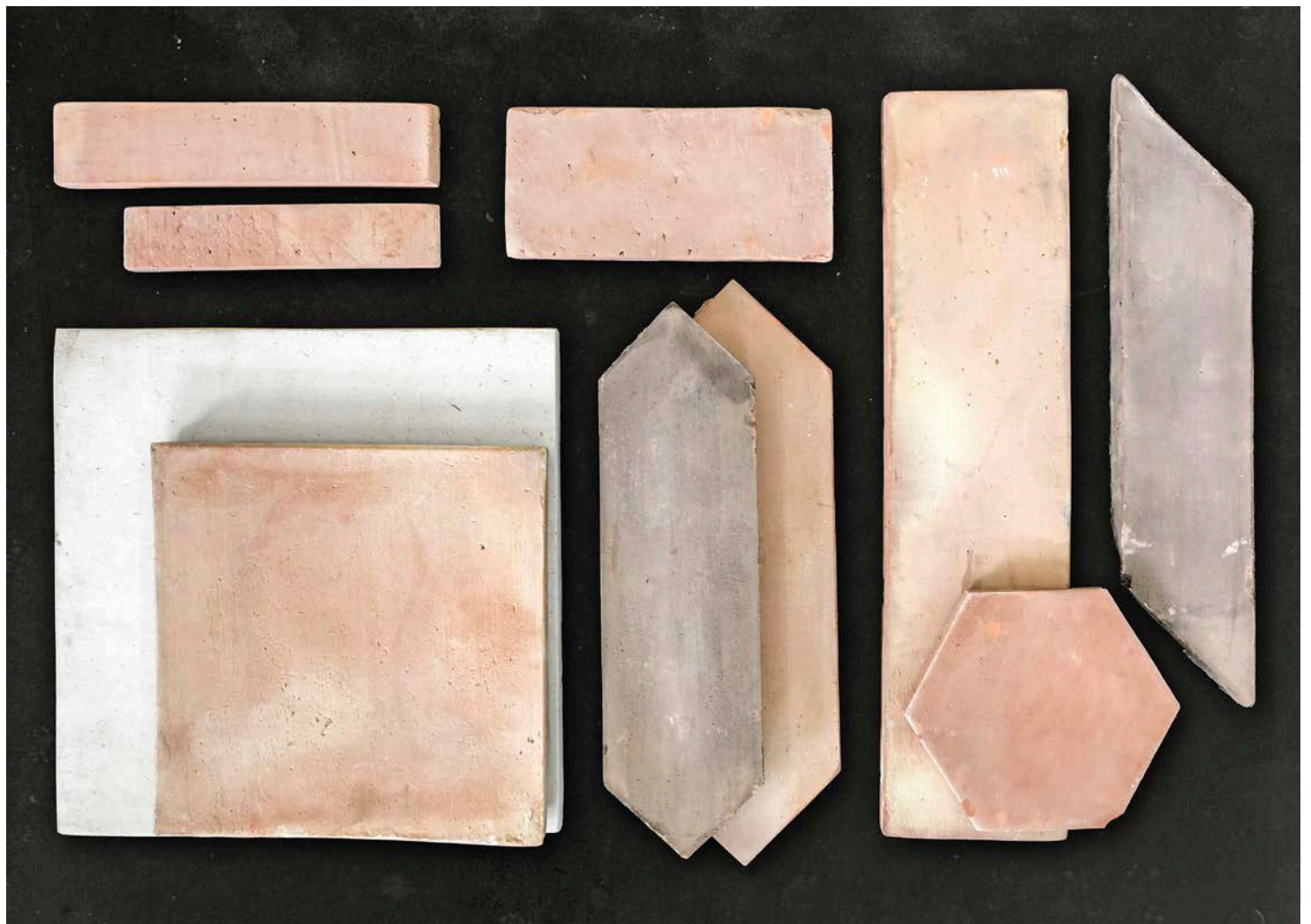
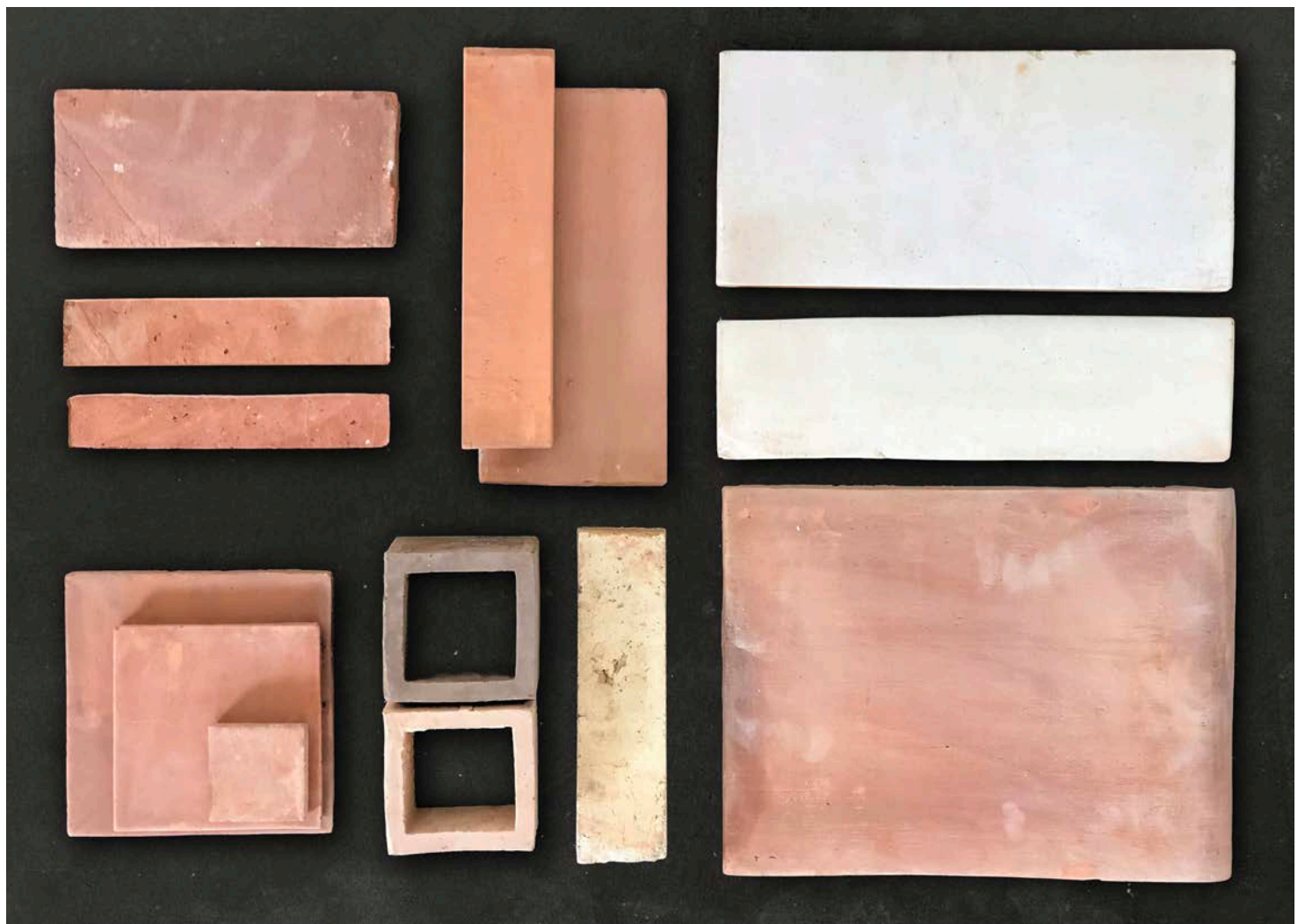
We curate History. We are all about preserving artisanal legacy, as we are heirs of a rich past based on ceramic tradition.

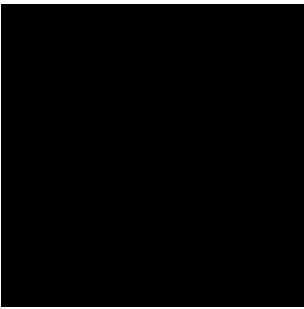


### **Make Extraordinary.**

We curate Quality. We pride ourselves on our attention to detail and going the extra mile to ensure that our tiles are truly unique.







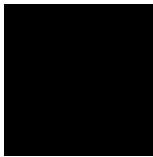
SQUARE  
40 x 40 x 2



SQUARE  
30 x 30 x 2



SQUARE  
25 x 25 x 2\*



SQUARE  
20 x 20 x 2\*



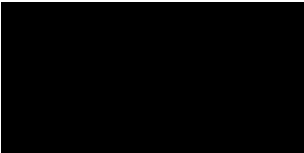
SQUARE  
15 x 15 x 2\*



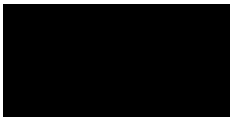
SQUARE  
11 x 11 x 2\*



SQUARE  
7 x 7 x 2\*



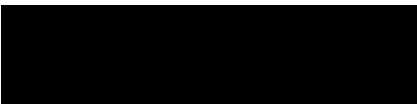
RECTANGLE  
40 x 20 x 2



RECTANGLE  
30 x 15 x 2



TRAP M  
44 x 14 x 2\*



LONG  
55 x 13 x 2



LONG  
30 x 7 x 2\*



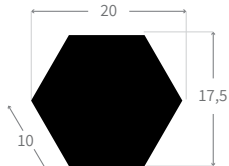
TRAP S  
40 x 10 x 2\*



CHEVRON A  
40 x 10 x 2\*



CHEVRON B  
40 x 10 x 2\*



HEXA  
side 10 x 2\*

BRICKS



24 x 11 x 2



24 x 5 x 11



24 x 6,5 x 4 rect.



24 x 4 x 2



24 x 5 x 2



24 x 6,5 x 2 rect.

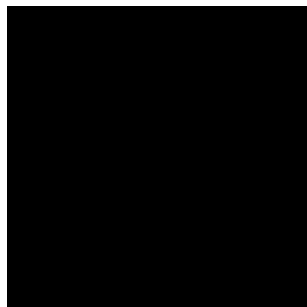
NOTES

\*Lower thickness available by request (minimum 1,5 cm).  
Drawings not to scale.  
Measurements denoted L x H x W in cm.  
Tiles are handmade, size and shape variation can be expected.

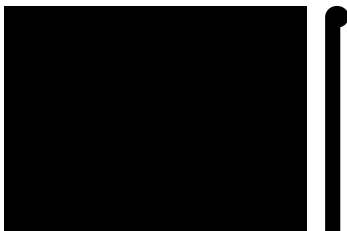
SPECIAL TILES



FULL BULLNOSE CORNER  
40 x 40 x 2



RADIUS BULLNOSE  
40 x 40 x 2



RADIUS BULLNOSE  
30 x 40 x 2



SKIRTING - CUT EDGE  
40 x 10 x 2



SKIRTING - CUT EDGE  
30 x 7 x 2



SKIRTING - BULLNOSE EDGE  
30 x 9 x 2

FIELD TILES			
in cm	number of tiles per sqm	in cm	number of tiles per sqm
<b>Square</b>		<b>Chevron</b>	
40 x 40 x 2	6,25	A 40 x 10 x 2	24
30 x 30 x 2	11	B 40 x 10 x 2	24
25 x 25 x 2	16	<b>Trap</b>	
20 x 20 x 2	25	M 44 x 14 x 2	21
15 x 15 x 2	44	S 40 x 10 x 2	25
11 x 11 x 2	81	<b>Hexa</b>	
7 x 7 x 2	198	side 10 x 2	33
<b>Rectangle</b>		<b>Brick</b>	
40 x 20 x 2	12,5	24 x 11 x 2	36
30 x 15 x 2	22	24 x 4 x 2	95
		24 x 5 x 11	75
<b>Long</b>		24 x 5 x 2	75
55 x 13 x 2	14	24 x 6,5 x 4 rect.	58
30 x 7 x 2	47	24 x 6,5 x 2 rect.	58

SPECIAL TILES			
in cm	number of tiles per linear m	in cm	number of tiles per linear m
<b>Step &amp; Pool Edge</b>		<b>Skirting</b>	
Full Bullnose Corner 40 x 40 x 2	—	Cut Edge 40 x 10 x 2	2,5
Radius Bullnose 40 x 40 x 2	2,5	Cut Edge 30 x 7 x 2	3,3
Radius Bullnose 30 x 40 x 2	3,3	Bullnose Edge 30 x 9 x 2	3,3







New Terracotta produces handmade Cotto tiles according to ancient traditions, thus creating a selection of unique pieces whose sizes and shades can change, resulting in an unique pattern.

It is important to understand that the differences in colour, shape, size, texture and moisture absorption are the unique characteristics that distinguish each of these tile products.

REFERENCES			
<div>V1</div> <div></div> <div>N002      Terra Sand</div>	<div>V3</div> <div></div> <div>N004      Terra Firing</div>	<div>V2</div> <div></div> <div>N006      Terra Classic</div>	<div>V1</div> <div></div> <div>N008      Terra Brown</div>

COLOUR SHADE VARIATION GRADING

Variation in colour and shade texture is an inherent characteristic of any fired Cotto and certain tiles will show greater variation within their lots. Regardless, this can actually enhance the character and beauty of the project.

V1

**Uniform Appearance**  
Minimal to no difference among pieces from the same production run.





V2




**Slight Variation**  
Distinguishable differences in texture and shades within similar tiles.

V3

**Moderate Variation**  
Random colour variation from tile to tile, so that one tile may have a different colour from that on other tiles. Thus, the final installation will be unique.



FIELD TILES			
Technical Features	Standards	Test Results	Compliance
 <b>Determination of water absorption</b>	EN ISO 10545-3	<u>Terra Classic</u> 21%  <u>Terra Sand</u> 25%	YES
 <b>Determination of module of rupture</b>	EN ISO 10545-4	<u>Terra Classic</u> R = 6 N/mm <sup>2</sup> S = 1680 N  <u>Terra Sand</u> R = 6 N/mm <sup>2</sup> S = 1590 N	YES
 <b>Determination of resistance to deep abrasion</b>	EN ISO 10545-6	<u>Terra Classic</u> 2137 mm <sup>3</sup>  <u>Terra Sand</u> 2390 mm <sup>3</sup>	YES
 <b>Determination of slip resistance (Pendulum)</b>	ENV 12633	<u>Terra Classic</u> 83 USRV  <u>Terra Sand</u> 90 USRV	YES

BRICKS			
Technical Features	Standards	Test Results	Compliance
 <b>Determination of water absorption</b>	EN ISO 10545-3	<u>Terra Firing</u> 19%  <u>Terra Sand</u> 22%	YES
 <b>Determination of compressive strength</b>	EN 772-1	<u>Terra Firing</u> 30,6 N/mm <sup>2</sup>  <u>Terra Sand</u> 19,7 N/mm <sup>2</sup>	YES
 <b>Determination of frost resistance</b>	UNE 67-028-97	Not affected (limit at -5°C)	YES

Please note these tips are guides only and should be used in addition to the relevant industry standards for cotto tiles. Note that installation may vary from site to site with varying conditions experienced on site (i.e. soil conditions, pool surrounds, driveways, wet areas etc.). The contractor and specifier should decide if these suggestions are suitable for their application or require further adjustment.

## ? TILE UNDERSTANDING

### Size and Length Variation

Our tiles shrink during the production process.  
You can expect some variation, especially on longer tiles.

### Lengthwise Bowing and Surface Undulation

Clay is an elastic material; therefore it will attempt to regain its original shape as it moves through the production process. For this reason, you can expect both an acceptable amount of lengthwise bowing and a surface undulation. Undulation can occur anywhere on the surface and could include a slightly raised corner or edge.

### Shade Variation

Shade variation is inherent in all fired ceramic products and certain tiles will show greater variation within their fired lots.

## ! TILE PREPARATION

Meticulously plan your layout. The time you take for preparation and placement will greatly impact the finished result.

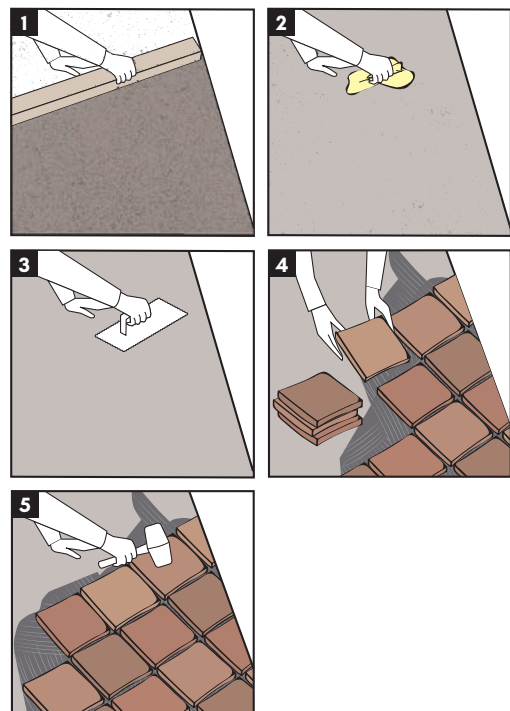
- Pre-sort your tile by shade and size so you can distribute the range of variation throughout the installation.
- Blending is recommended.
- Inspect each tile deformities that make its use inappropriate for the application intended.

## 🔪 TILE LAYING

The laying of New Terracotta Cotto can be carried out with many patterns also by mixing different formats, using a mixture of sand and cement screed, dusted with wet cement or by using adhesive, a more reliable and simple method. The most recent developments in technology in the field of adhesives offer biocompatible materials, excellent for combining with our organic products.

### Laying General Methods:

1. Prepare a sub floor (screed) that is perfectly flat to make it easy to keep the cotto tiles leveled with each other (therefore offering the necessary laying tolerances).
2. Clean the laying surface (remove debris, dust oil, etc), once the screed is completely dry.
3. Prepare a uniform layer of adhesive (8 to 10 mm thick) using a notch trowel and back butter the base of the tile as well.
4. Lay the cotto tiles so the timing corresponds to the drying time required for the adhesive used.
5. Compact the cotto tiles evenly on the adhesive with a rubber mallet to ensure consistent contact. Consistent open joints should be allowed for at 4 to 6 mm spacing.



## TILE GROUTING

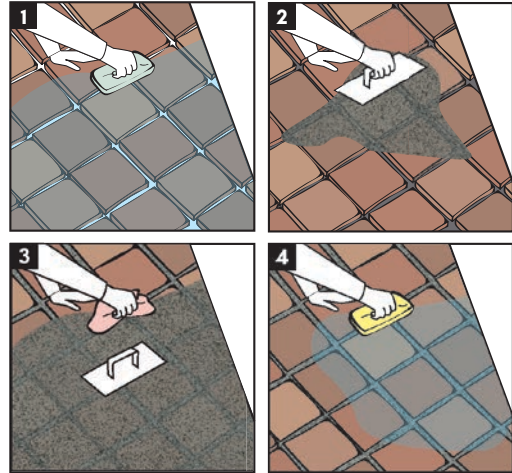
It is recommended to use a high-grade pre-bagged grouting compound suitable for the application. Grout joint width can be varied to adjust tile alignment with adjacent tiles or other architectural elements.

### Before Grouting

Before beginning to grout a terracotta floor, a pre-waterproofing treatment must be given in a uniform and light manner, in order to prevent the soiling or staining.

#### Grouting General Methods:

1. Dampen grout joints and tile with a sponge.
2. Place grout into joints, ensuring no voids, to the full depth of the paving tiles.
3. Remove any excess grout with a trowel. If any residue remains on the face of the tile a scouring pad or a fine-grained sandpaper can be used to gently remove it.
4. Sponge clean the paving surface with water, ensuring all excess grout has been removed.



## SLOPE

For laying outdoors we recommend to keep the correct slope to prevent water stagnation.

When dealing with outdoor flooring, special attention must be paid during planning in order to respond adequately to rainwater run-off. This is done by dividing the floor field into different drainage surfaces, giving them effective slope and perfect levelness.

This will avoid trapping water and moisture on the floor surface since they cause undesirable and unsightly effects due to rings, saltpetre efflorescence and dirt build up.

## EFFLORESCENCE

The term efflorescence means the migration of salts to the surface of the cotto tiles.

Efflorescence originates from the terracotta itself, from the ground, concrete, polluted rain or by poorly executed acid washes. Since the clay we use is 100 % natural, different efflorescence is likely to appear after the laying process.

In order to remove efflorescence, possible remains of sand and stucco smears, a floor washing is needed before any kind of floor treatment. The washing is made through a specific buffered acid followed by a rinse with clean water. Once the floor is dry, traditional treatment can be applied.





## CLEANING AFTER GROUTING

New Terracotta Cotto should be cleaned when grouting material has set. Cleaning will enable any grouting residue to be removed.

### Cleaning General Methods:

1. Sweep excess dirt from surface.
2. Use a pH neutral cleaner and apply to surface in liberal quantities and in manageable sections.
3. Gently agitate the surface with a stiff broom and/or nylon pad.
4. Remove residue from surface with a wet-vac or squeegee. It is important that no acidic cleaners are used.



## SEALING

Sealing is an essential step in protecting the beauty and ensuring the longevity of any cotto tile, as it accentuates the inherent clay colour.

The protection phase is done by applying specific water repellent and oil repellent products to the floor.

New Terracotta prefers and recommends the use of water based products, which are more natural and chemically less invasive and are therefore in line with organic products.



## FINISHING

The finishing completes the protection against wear and dirt. It gives the cotto tile the desired final appearance, as it revives the colours of the natural cotto.

Mostly used are natural bee waxes either liquid or paste, or specific floor oils. There are various sheens; brilliant gives a shiny appearance, matt keeps the look natural or satin gives a coating between the two.

Generally a finishing wax or oil is not applied on external floors as it would not last long when exposed to weathering. In these situations a water repellent or oil repellent is usually applied.



## MAINTENANCE

Keep the surface as free as possible of loose dust and grit with regular vacuuming or sweeping. This will reduce the sandpaper effect of dirt getting compacted into the surface and joints.

Wash the floor using a pH neutral cleaner (ideally biodegradable and environment friendly) to remove the dirt that a vacuum won't pick up and for hygiene purposes.

We strongly recommend avoiding the use of bleach based cleaners, washing-up liquids or any other acid cleaners.

New Terracotta always recommends using a cleaning and sealing professional after the natural cotto has been installed to achieve best results.

Research and development of sealing products are continually improving. There are many reputable companies with a wide range of products available.









## ■ PRODUCT UNDERSTANDING

### **IS CLAY A NATURAL MATERIAL?**

Clay is a natural and biocompatible material that naturally embodies extraordinary thermal and structural performances.

### **WHY IS THE NOMINAL SIZE BIGGER THAN THE REAL?**

Clay shrinks both during the drying process and the firing process. Cotto tile will shrink on average by 5% to 10% in size, depending on the clay body formulation and by the firing time and temperature.

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## ■ PLACING AN ORDER

### **CAN I BUY ONLINE?**

We are not prepared to sell directly through our website. For ordering tiles, custom requests, pricing, lead times or other needs please email or call us so one of our Design Consultants can offer personal assistance.

### **DO YOU SHIP INTERNATIONALLY?**

We have successfully supplied tiles for projects all over the world. We are happy to provide a shipping quote for international orders.

### **CAN I GET SAMPLES?**

Yes, we understand the importance of coordinating all the elements for your project and are happy to provide samples during your selection process. Multiple samples can be ordered to give a sense of colour range.

### **ARE THERE ANY MINIMUM ORDER QUANTITIES? DO YOU CHARGE A SET-UP FEE FOR SMALLER ORDERS?**

There is a 3 sqm minimum order per reference. Because each order is custom made, a set-up procedure is required.

### **SHOULD I ORDER EXTRA TILES?**

Yes, we advise a 10% contingency on top of the minimum quantity needed. This overage allows for the possibility of breakage during installation, for greater range selection, and extras in case of damage in the future. Always refer to your installer when determining quantities.

### **CAN I RETURN MY TILES?**

Because we make our tiles specially for you, returns are not accepted unless they are defective or damaged in shipping.

### **ONCE AN ORDER IS PLACED CAN I CHANGE IT?**

Because each order is custom made, we cannot change it once it has gone into production. If you do have a change, please contact us immediately to see if we can help resolve the matter quickly.

### **WHAT WOULD BE THE MINIMUM LEAD TIME FOR EMERGENCY ORDERS?**

If you need materials sooner for a rush order or job completion, please call and ask for a lead time specifically for you. Although we keep a limited quantity of our most popular products on hand we operate on a first come first served policy without discrimination. When your order is placed check with us what is the estimated lead time.

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## ■ INSTALLATION & MAINTENANCE

### **ARE ALL YOUR TILES SUITABLE FOR ALL PURPOSES?**

No. High porosity is one of the cotto tile characteristics. For this reason we do not recommend cotto tiles for pools, fountains nor shower flooring.

### **WHERE CAN I USE NEW TERRACOTTA COTTO TILES?**

Fired to extremely high temperatures, the tiles are resistant to frost and excellent to store heat, making them suitable for both indoor and outdoor applications. Being non-slip and hardwearing they are also ideal for conservatories, patios and swimming pool areas.

### **CAN I USE YOUR TILES AROUND THE FIREPLACE? ARE THEY HEAT-RESISTANT?**

Our tiles are wood fired at very high temperatures. They can be used in fireplace installations and will not be damaged by heat.

### **CAN I USE UNDERFLOOR HEATING WITH NEW TERRACOTTA COTTO TILES?**

One of the major advantages of terracotta tiling is that they are the highest recommended floor covering to use in conjunction with underfloor heating. During tiling, appropriate expansion gaps should be left between tiles by the edges of the wall, at certain intervals to cover up shrinkage and expansion caused by the floor.

### **IS TILING WITHOUT GROUTING POSSIBLE?**

Tiling without grouting is not recommended.

### **WHAT SIZE DO YOU SUGGEST FOR GROUT SPACING?**

New Terracotta Cotto tiles are sized to accommodate a 4 to 6 mm grout space. Many factors determine the size of a grout joint. It is important to discuss this with both your architect and installer and follow a jointing scheme.

### **ARE NEW TERRACOTTA COTTO TILES PRE-SEALED?**

We always send our tiles in a natural state, therefore they must be always sealed upon installation. When needed, the necessary treatment products can be sent along with the material but they would have to be applied on site.

### **DO I NEED TO SEAL THE COTTO TILES?**

Yes. Sealing is essential to protect the beauty and ensure the longevity of any cotto tile.

New Terracotta products are available worldwide through showrooms, retailers and direct from us.

## ■ PLACING ORDERS

Please order carefully.

- Check the product specification. Samples may be requested.
- Check the quantities. Ordering proper quantities is essential, as we cannot guarantee an exact match between batches. We recommend ordering 10% extra tiles.
- Check delivery requirements and delivery costs.
- Once production has begun, orders cannot be cancelled.
- There is a 3 sqm minimum order per reference.

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## ■ PRICES

- Prices are subject to change without notice according to cost variations.
- All product prices quoted exclude the cost of delivery and taxes.
- VAT rate is 23%.

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## ■ DELIVERY

- We can arrange delivery anywhere in the world. Please contact us to request a freight quote.
- Tiles are packed in cardboard boxes, loaded on a protected and sealed pallet. Pallets are delivered on the pavement.
- Freight quotes are passed on at cost with a 15€ pallet charge per pallet used.
- Delivery terms are to be considered indicative. Eventual delivery delays do not entitle customers to claim indemnity.

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## ■ PAYMENT TERMS

- A 50% deposit is required to confirm your order.
- The balance is due before order released. The goods will be released immediately after the payment has been received and cleared in full.

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## ■ LEAD TIMES

Nearly every New Terracotta product is made to order. Our lead times vary from product to product and may also be extended at certain times of the year. Nevertheless, we try to follow these timelines:

- In-stock tiles: 1 week to ship.
- Made to order tiles: 4 to 5 weeks to ship.
- Exceptionally large quantities: quoted on an individual basis.

All lead times will be quoted on purchase order. Please contact us for stock checks.

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## ■ TOLERANCE TO DIMENSIONS AND SHADES

- Tiles are referred to its nominal size, not its actual size. Due to the handcrafted nature of our products, dimensions are approximate and may be subject to a degree of inaccuracy.
- The number of tiles supplied per square meter is approximate and depends upon the suggested grout joint.
- A possible variation in shades is considered as a particularity of such products. Tiles may exhibit variations from samples and within a shipped lot.



## CUSTOM PROJECTS

Please inquire us about custom developments.

- Custom projects are priced accordingly.
- Custom sizes are available for an additional charge.

## RETURNS

Please order carefully as we cannot accept returns.

Please check your products carefully on delivery.

- Any problems with quality, quantity and kind of material supplied must be reported to NEW TERRACOTTA within 7 working days of receipt of the order.
- In case of claim the buyer should put the disputed material at NEW TERRACOTTA 's disposal for any defect checking. No claim will be accepted once the material has been installed.
- Damage caused by inappropriate installation, accident, misuse or improper maintenance is not covered by NEW TERRACOTTA products warranty.
- Variations in colour, shade, tonality, texture are inherent characteristics of NEW TERRACOTTA tiles and are not defects.
- Variations in facial dimensions and thickness will be allowed as per handcrafted products standards.
- Although NEW TERRACOTTA provides Installation and Maintenance guidelines, its liability is strictly limited to the supply of products.



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**CENTRO** 2020

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