FLAT ROOF TILE

Versatility & Simplicity for today’s buildings

A versatile and easy-to-fit roof tile. As there are bigger pieces, the installation and material costs are consequently reduced, enhancing the elegance and durability of this kind of roof tile.

*This low profile is also known as Allentina or French/Italian En Tile.
Double interlocking
The double side and upper interlocking, allows the roof to be extremely watertight, ensuring its impermeability.

Cost reduction
Its large format (11 units/m²) and strapping every 5 units, as well as its packaging on pallets of 180 and 240 units, reduce installation costs.

Easy and quick fixation
Its traditional shape together with its installation by crossbond, allows a great adaptation to restoration.

High breakage resistance
The clay’s composition and its perfect press performance make flexion rates even higher than Standard.
# FLAT ROOF TILE

This low profile is also known as Alicante or French tile.

<table>
<thead>
<tr>
<th>Dimensions*</th>
<th>a: 456 mm; b: 260 mm; c: 55 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>a: 18.34”; b: 10.24”; c: 2.16”</td>
</tr>
<tr>
<td>Pieces per m² sq.</td>
<td>11 - 37</td>
</tr>
<tr>
<td>Weight piece</td>
<td>3,600 gr / 793 lbs</td>
</tr>
<tr>
<td>Longitudinal fit**</td>
<td>403 mm (45 mm) / 15.86” (1.80”)</td>
</tr>
<tr>
<td>Transversal fit**</td>
<td>225 mm (41 mm) / 8.85” (1.64”)</td>
</tr>
<tr>
<td>Units per pallet</td>
<td>180 / 240</td>
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</tbody>
</table>

*The tile dimensions indicated in this chart allow a tolerance of approximately 2%.
**Theoretical values; this should be recalculated on site with the tiles that are to be used.

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<table>
<thead>
<tr>
<th>Guarantee 35 YEARS</th>
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<tr>
<th>Application Standard</th>
<th>Requirements</th>
<th>FLAT Roof tile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexural Strength test</td>
<td>EN 538</td>
<td>Resistance &gt; 1200N</td>
</tr>
<tr>
<td>Water Impermeability</td>
<td>EN 539-1</td>
<td>Complies with level 1</td>
</tr>
<tr>
<td>Frost Resistance</td>
<td>EN 539-2</td>
<td>Complies E150 cycles</td>
</tr>
<tr>
<td>Geometric Characteristics</td>
<td>EN 1024</td>
<td>Flatness ±1.5%</td>
</tr>
</tbody>
</table>

*First course batten should be 20 mm (7/8”) higher than all succeeding course battens to provide a vertical alignment and to assure a symmetrical installation.
**Straight bond pattern**
Continuous joints laying

**Broken bond pattern**
Opposite joints laying

The names of the colours shown in the photos, only represent the finishes of the models identified as Flat Roof tile.
LAID METHOD

This interlocking low profile tile can be laid on a continuous frame or deck, or on battens which will be fixed by building a batten counter batten deck or by fixing them directly to the frame.

La Escandella Flat roof tile are laid from right to left and can be installed either straight or in a half bond pattern.

All side course (rake) tiles shall be installed with fasteners typical of the field tile installations.

Straight Bond Pattern:

The starter course will begin with a full tile from the eave to the ridge, allowing a 3 15" (8cm) overhang at the eave. The tiles structuring the eave will have to overlap the side course (rake) and fit together one to another. The second course of the tile will lay up directly over the previously installed field tile to the proper exposure and overlapping.

See Figure for sequence of installation for first and succeeding courses of tiles from the eave to the ridge.

The left section (vertical terminating end) of the roof can be closed by using a half (1/2) tile (end band) - Q18 to overlap the left side course (rake) - Q24.

Cross Bond Pattern:

The starter course will begin with a full tile (allowing a 3 15" (8cm) overhang at the eave). The tiles structuring the eave will have to overlap the side course (rake) and fit together one to another.

The second course will be started with half (1/2) tile (end band) - Q18 and will be laid to provide the proper vertical exposure. All joints of the second course and succeeding courses should be at the center line of the previous course, alternating half tiles and full tile at the start and at the end of each course. This is continued through each successive course.
INSTALLATION DETAILS

RIDGE
- Ridge tiles must be installed lap facing away from the prevailing winds, in order to assure water tightness.
- Field tiles at top course should be secured directly either into the deck or top batten with stainless ring screw nails or similar.
- All ridges and hips shall be covered with self adhesive Alu-Roll (La Escandella Aluminum roll for hip and ridges
- CAMon) or similar approved breathable waterproof underlayment. Underlayment should be secured over the ridge and ridge area. Be sure not to close these off with mortar or similar. Closing them off could result in cracks, peeling off... in freezing and thawing cycles.

HIP
- Hip tiles must be installed in the same way as in the ridge.
- Field tiles must be miter cut parallel to the hip line and secured.
- All ridges and hips shall be covered with self adhesive Alu-Roll (La Escandella Aluminum roll for hip and ridges
- CAMon) or similar approved breathable waterproof underlayment.

VALLEY
- Both valley and eave line channels are particularly vulnerable to water migration and leakage, valleys should have a clear and unobstructed pathway for quick water drainage.
- Install valley batters on each side of the valley crease. Alu-roll Valley (CAM8), or similar approved adhered waterproof valley underlayment, shall be laid vertically up all valleys in addition to other required underlayment that should be fixed by using glue, resin or similar.
- Where valley intersects with ridge line, apply Alu-roll Valley (CAM8), or similar approved underlayment, which should be covered by the ridge tile. Valley should be extended along the eaves to overhang the fascia board by 5cm (2") or over the gutter.
- Tiles should be laid parallel to the valley line, at same relative angle and should overhang the valley batters by at least 10 cm (4").
- Tiles at each side of the valley crease should be laid to provide a minimum 15 cm (6") width gap (tiles should field back minimum 75 cm (3") from the center of the valley each way).
- Valley tiles must be secured.
- Proper Valley flashing installation is required to ensure water tightness in order to avoid cracks, peeling off...
ACCESSORIES

La Escandella offers a complete line of Flat roof tile accessories, available in any standard color, to customize your roof.
SLOPES / PITCHES

The minimum pitch standard recommendations should always be followed (see values in the referral table). On all pitches below the standard recommended minimums, or in regions where ice dams may occur, a waterproof underlayment on the entire deck MUST be applied.

Most problems with water-shedding roof installations occur from water that migrates through the joints of the tiles through capillary action, wind-driven rain, and runoff or ice damming. Because of this possibility, the underlayment is critical to the success of the roof.

<table>
<thead>
<tr>
<th>Gables</th>
<th>6.5m</th>
<th>6.5m - 9.5m</th>
<th>9.5m - 12m</th>
</tr>
</thead>
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<tr>
<td>5.5m - 7.5m</td>
<td>21.34°</td>
<td>21.34° - 31.34°</td>
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**Without Underlayment**
- Protected: 30% / 10°, 35% / 16°, 50% / 25°
- Normal: 60% / 22°, 50% / 17°, 60% / 25°
- Exposed: 60% / 30°, 70% / 35°, 80% / 39°

**With Underlayment**
- Protected: 30% / 10°, 30% / 15°, 40% / 24.5°
- Normal: 35% / 15°, 45% / 24.5°, 50% / 26°
- Exposed: 50% / 26°, 60% / 30°, 70% / 35°

**Protected Locations:** hollow area which is surrounded by hills that protect the hollow from the winds in all directions.

**Normal Locations:** Flat area, plateau with minimal elevation changes.

**Exposed Locations:** Places open to strong winds, coastal areas (up to 5 km / 3 miles from the shoreline), islands or narrow peninsulas, estuaries or closed bays, narrow valleys, isolated mountains, mountain passes and earthquake zones.

Note: For hills greater than 12m (39.4') long, a waterproof underlayment on the entire roof deck MUST be applied.

FASTENING METHODS

The manner in which roof tiles are installed makes them a highly effective water shedding assembly that affords years of service and protection. The effectiveness of a tile roof system as a weather resistant assembly however depends on the proper installation of all the tile roof components, and installing them properly is critical to the performance of the installed system.

- **A:** Every tile should be securely fastened (Nailed, screwed, clipped...) (60° / 2034/12).
- **B:** As a minimum, each tile in every five proportion, should be secured with (to gauge) non-corrosive ring shank nails or screws (45° / 12x12).
- **C:** Each tile hangs on the batten (held by the nib) (45° / 12x12).
- **D:** Each tile hangs, batten, held by the nib. When mortar is used, back bed and face point with color matched mortar. Clean off all excess mortar from the face of the tiles. For Foam Adhesive, refer to local building codes.
- **E:** La Escandella recommended minimum slope requirements is 30% (212).

Note: The locking function is performed by the metal clamps / hooks. Polyurethane foam acts only as a positioner. Any fastening done with screws, nails, dlogs etc., must be sealed in order to prevent water entering. All fasteners must be non-corroding.

VENTILATION

Ventilation is one of key elements to assure a good hygrothermal behavior of the roof and preservation of the roof structure. The key to a good and well preserved roof is a good ventilated roof. Proper installation of Ventilation tiles combined with ventilated roof can result in energy savings, in a more energy efficient home.

Air should be able to flow through the eave and ridge, be sure not to close these off with cement, mortar or similar. Eave and ridge areas should be protected to help minimize the access of birds and vermin infiltration.

A free flowing ventilation area must be provided through the roof deck. This ventilation should be evenly distributed throughout the roof space to eliminate any dead air space.

La Escandella recommends a minimum of 1 Flat/Alicantina ventilation tile (Q21) for every 7 m² (1.32 vent tiles per 100 sq ft) and with a minimum of 2 ventilation tiles per roof surface, installed on the upper part of the roof.

Using a proper ventilation system is the best way to avoid moisture in a roof, that could cause peeling, cracking and other defects on the tile.

La Escandella warranty will be honored when installation is in strict accordance with local building codes, particularly to those referring to the ventilation of the deck and minimum slope requirements. Clay roof tiles should always be installed in full compliance with the local building codes and good tiling practice. For each country, please refer to local building codes.
ROOFING COMPONENTS

La Escandella offers a wide range of non-ceramic accessories which help finish off any type of roof. From waterproofing to ventilation, fixing and batten installing, safety implementation and multiple profiles can be found here. (Ask for our full range).

CAM01 / CAMF1
Alu-Roll With Micro Cut

Width: Several sizes.
Colours: Red, grey, brown, black.

CAM08 / CAMF8
Alu-Flex

Width: Several sizes.
Colours: Red, grey, brown, black.

CAM09 / CAMF9
Alu-Roll Membrane

Width: Several sizes.
Colours: Red, brown, black.

CAM18
Alu-Valley Tape

Width: 50 mm / 1.96".
Colours: Red, brown, black.

CAM65 / CAM21 / CAM92 / CAM53
Waterproof membrane

Dimensions: 1.5 m x 30 m / 1.64 yd x 33.06 yd.
Weight: several weights.

CAM07 / CAM27
Ridge Tile Hooks (Q01 / Q02)

Colours: Red, brown, black.

CAM05 / CAM10 / CAM51
Ridge Batten Brackets

Dimensions: Several sizes.

CAM14
Eaves Ventilation Comb

Dimensions: 6 cm x 11 m / 2.36 x 39.37"
Colours: Red, brown, black.
La Escandella
www.laesecandella.com

Colour shall be Marmellato but clay tiles are a natural product and some shade variations between individual pieces enhance their beauty and should be expected. All titles should be mixed regardless of the number of colours supplied. As the titles shown in this catalogue cannot faithfully reflect the colours of the ceramic titles,

On their products, La Escandella has right to make changes in dimensions, fillings, weight & units per pallet, without previous notice. For more information, please contact your Sales Representative or our Customer Care Service.

This catalogue, printed in January 2018, replaces the existing ones.