

terrazzo tile making

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architecture 263a
construction experience
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in conjunction with the Center for Environmental Studies

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ARCHITECTURE 263A

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CONTEXT

The course is an introduction to construction. Students work under the tutelage of a supervisor on the site a few hours per week and attend lecture every other week. The program was the production of terrazzo tiles for an outdoor deck in the Berkeley hills. The lead architect was Christopher Alexander with assistance from Katelene and Rob. The five students completed their goal of producing 850 tiles by the 15 of December. The following pages are the steps by which the tiles were constructed.



the process begins with the waxing of pre-made frames to allow for easier removal of the tiles. sheets of plastic also aid in keeping the bond between the frame and tile.

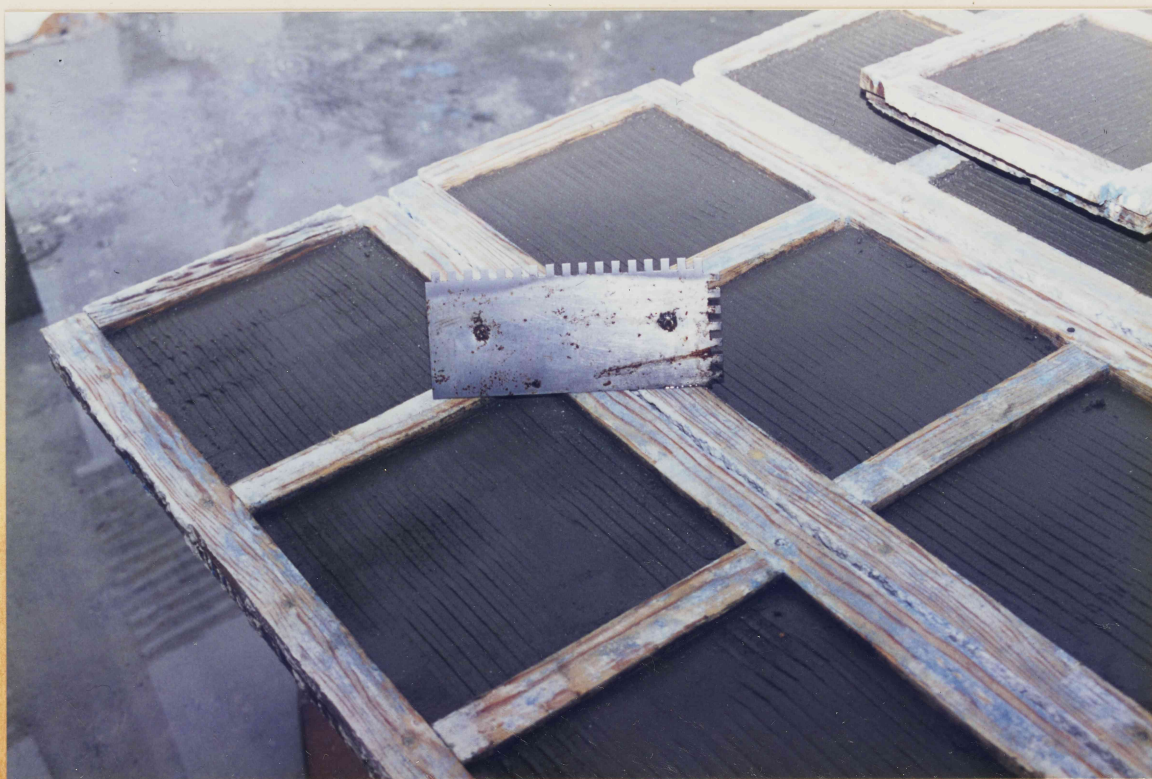
a layer of grey cement is troweled into each frame and roughly leveled by hand.

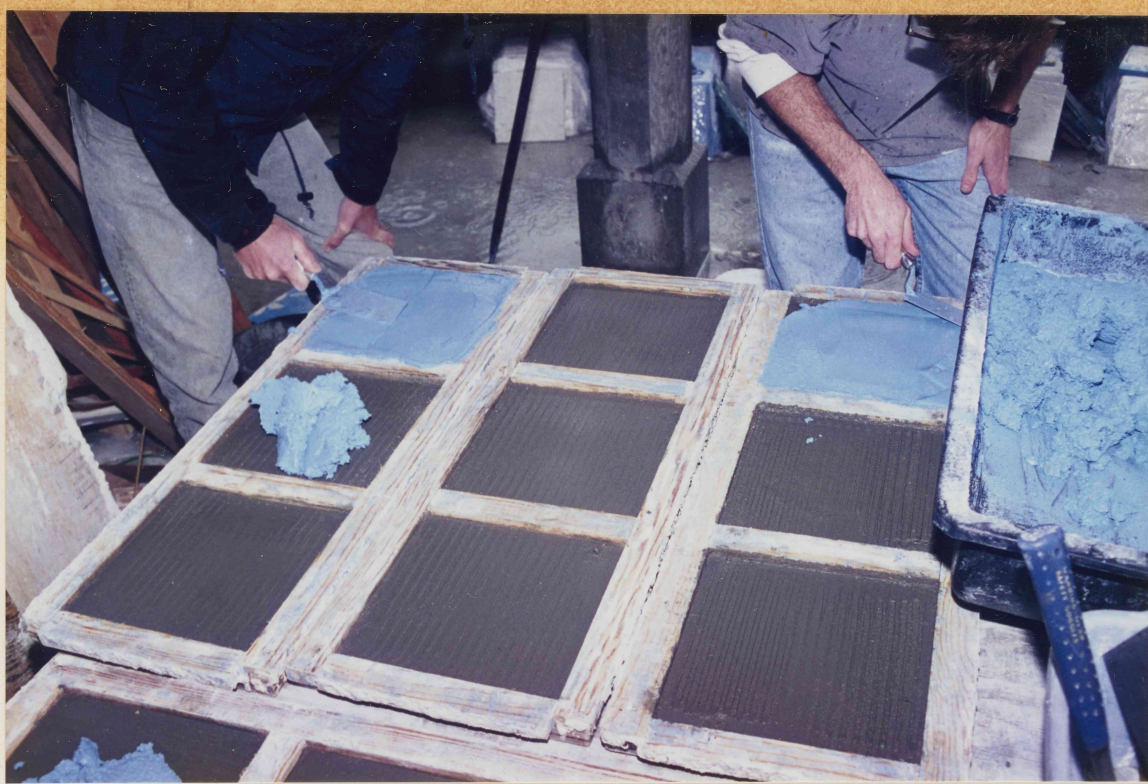




each tile is screeded off to a common depth.

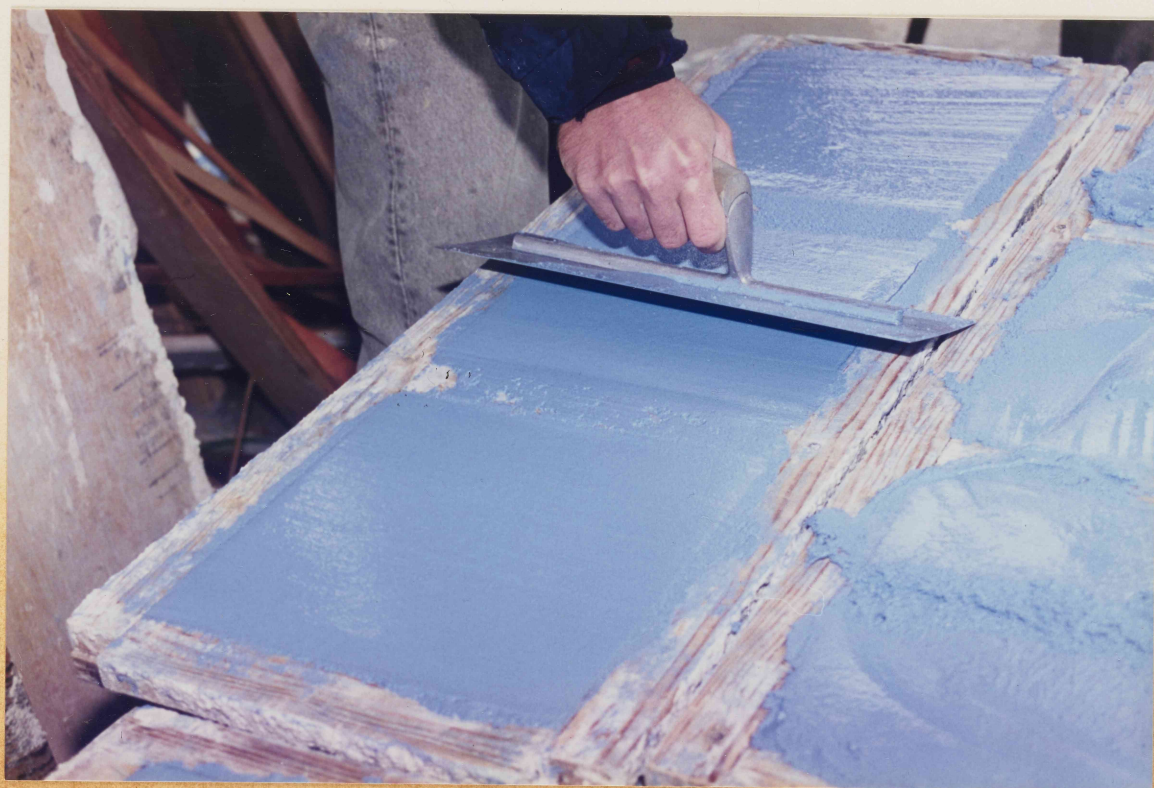
the grey layer is scored for better strength between layers.

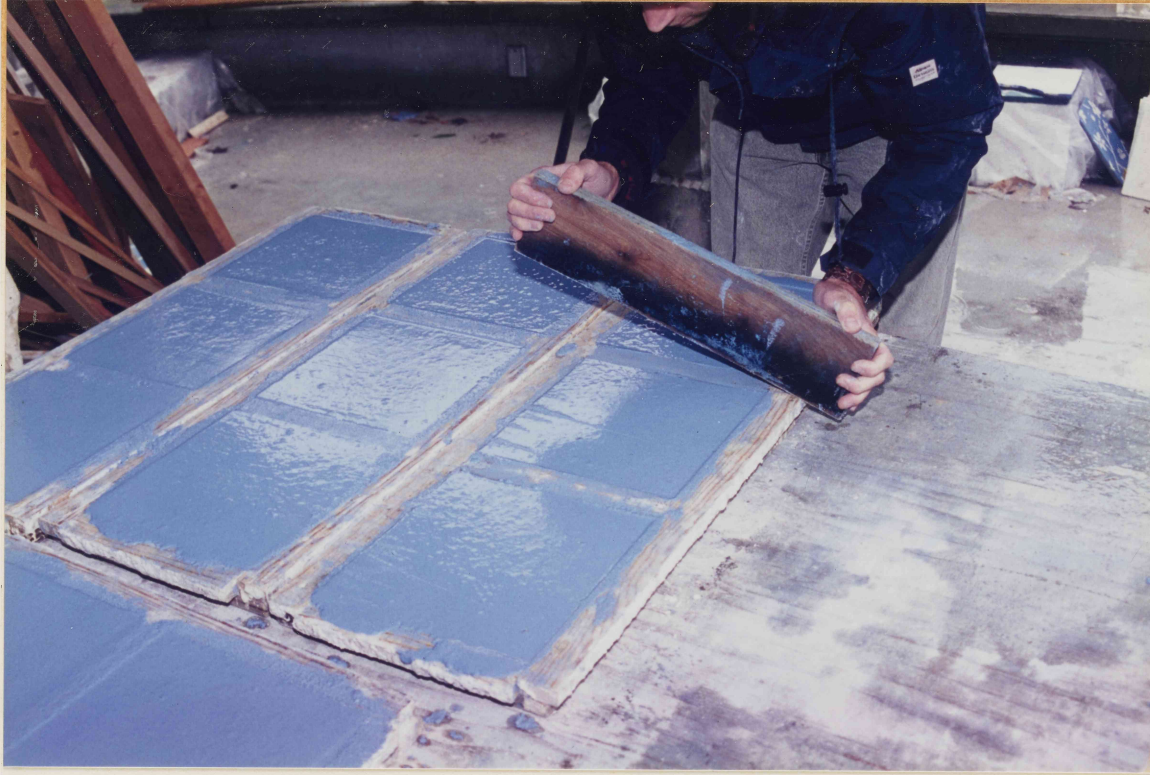




the grey layer is then allowed to set for fifteen minutes. blue tinted cement is troweled onto each tile and roughly leveled by hand.

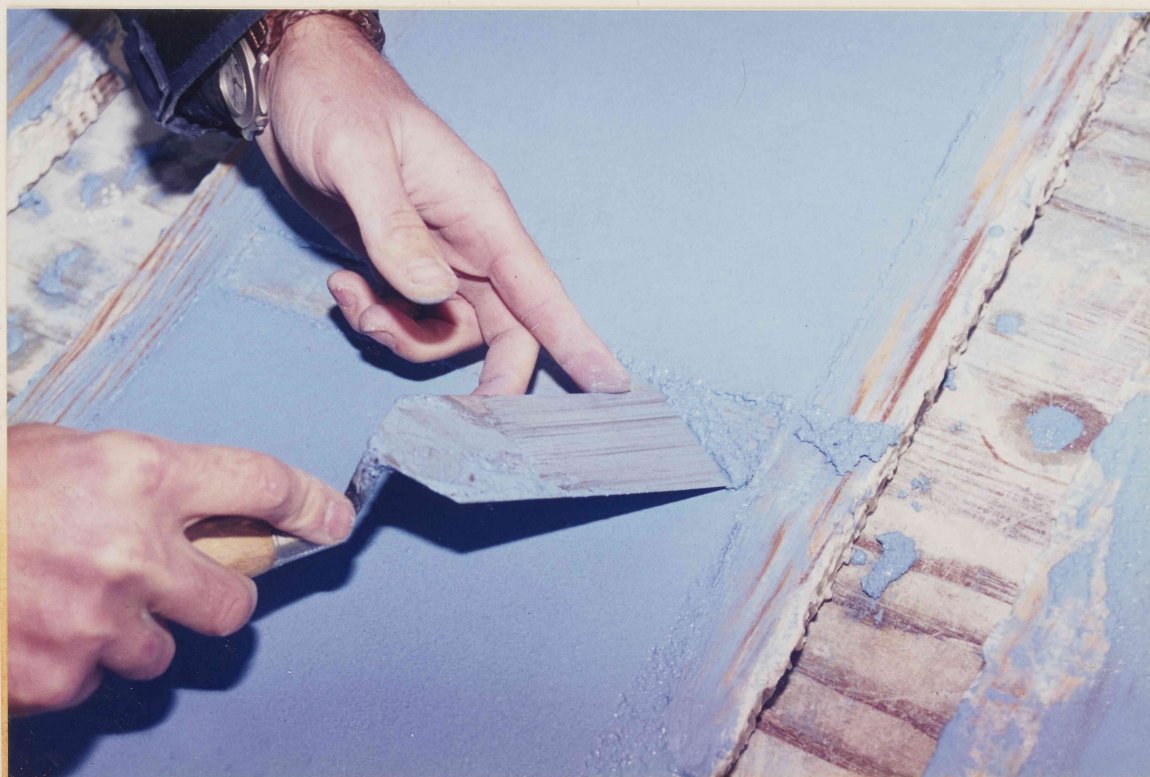
the tiles are screeded off even with the frame surface.





each frame is vibrated by hand to allow air bubbles to rise and escape.

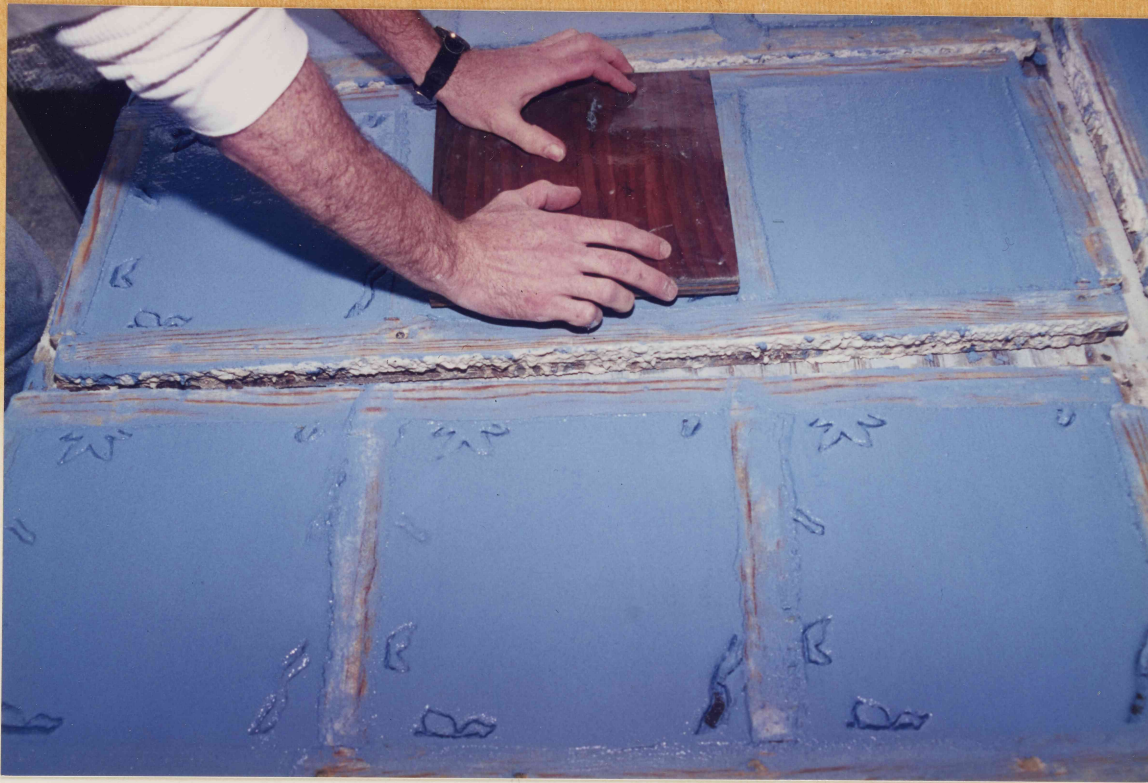
frames are kept as free of buildup as possible during the process.





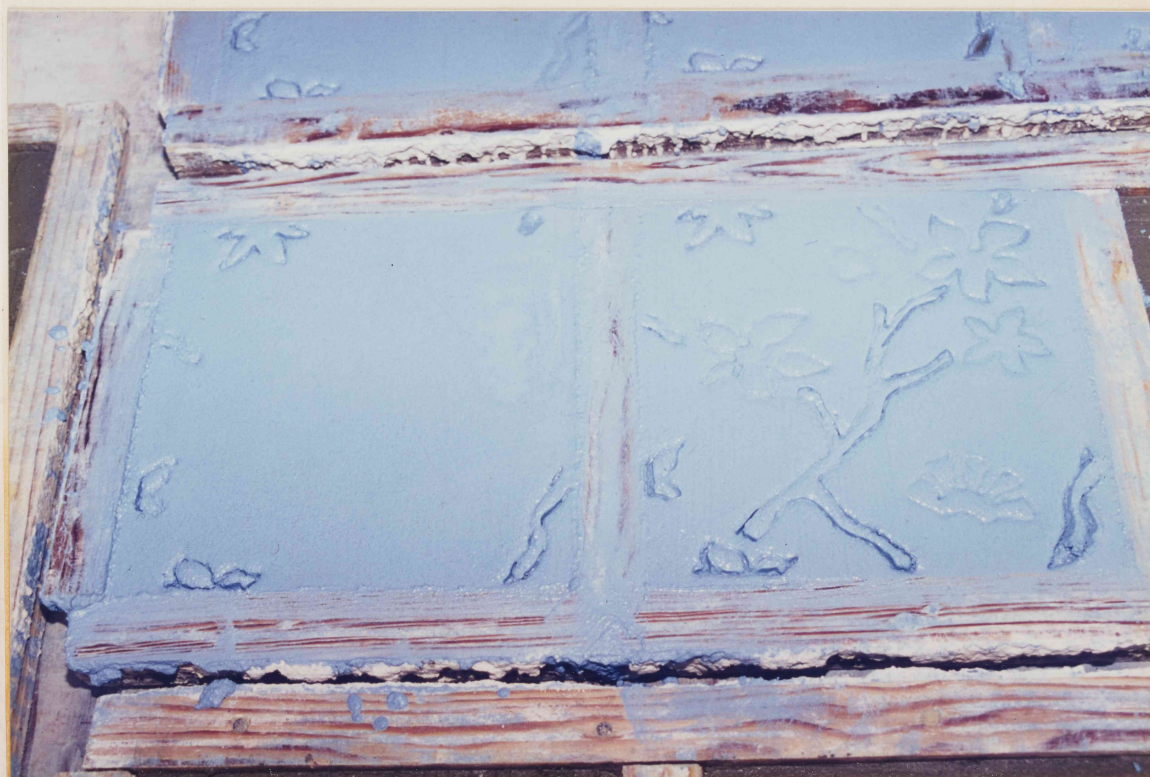
the tiles are allowed to set for 10-20 minutes until the blue cement is stiff enough to hold the imprint of the pattern cutters.





patterns are pressed into the cement. edge pattern is done first as the edges of each tile set faster than the interiors.

after setting further, the middle patterns are pressed into the cement.





the pattern is next tediously removed with small ceramic tools.

tiles are kept damp and covered and allowed to set overnight.





excess blue cement is scraped off frames and blown clean with compressed air.





white cement is then troweled onto each frame.

a roto-hammer is used to vibrate the tiles to release air bubbles.





the white layer is troweled off even with the edge of the frame.

excess cement is scraped off to reduce the amount of build-up on the frames.





the tiles are covered and kept damp overnight to allow for setting.

one edge of the frame is removed.





each tile is carefully removed from the remainder of the frame.

the edges are then scraped clean.



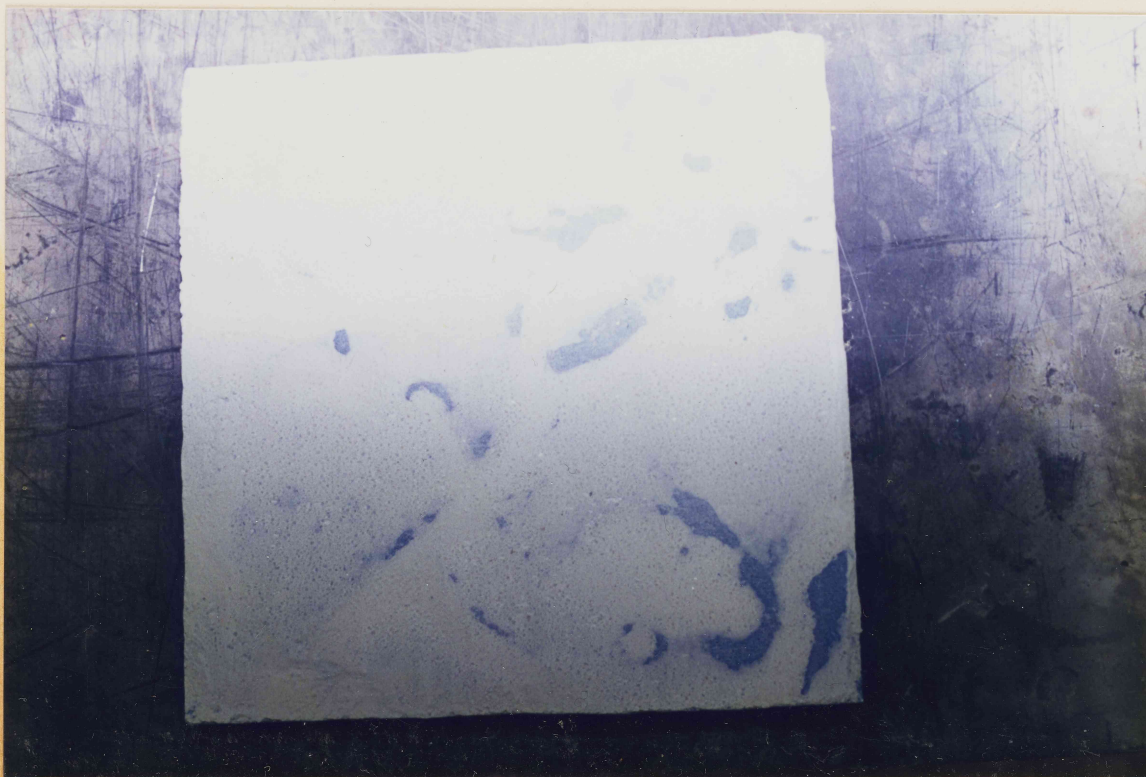


tiles are submerged in water for five minutes to ensure proper overnight curing and are covered in plastic until they can be taken to the shop for final grinding.



at the shop, tiles are passed through a time-saver equipped with a belt specifically designed for grinding cement.

slowly the true pattern of the tile begins to emerge. the tile is passed through the time-saver seven or eight times before the final finish is achieved.





after the final grinding, the tiles are sealed with a waterproof finish.



CONCRETE MIX

GREY

Portland Grey Cement

1 gallon of grey

3 gallons of graded sand

WHITE

1 gallon of white cement

1 gallon of dolomite powder

1 gallon of dolomite chips

BLUE

1/3 cup of blue to 1 gallon of white mixture

Davis color #418

Acryl 60 is added to the final white