



Ceramic tiles were bonded on the interior floors with KERABOND PLUS adhesive. ULTRACOLOR PLUS and KERACOLOR FF high-performance mortars were used to grout the joints.

**TECHNICAL DATA**

**Residential complex,** Milan (Italy)  
**Period of construction:** 2018 - ongoing  
**Period of the Mapei intervention:** 2020-2022  
**Intervention by Mapei:** supplying products for treating and waterproofing substrates and installing

ceramic tiles  
**Design:** Barreca & La Varra; Ariatta Ingegneria dei sistemi Srl; Arching Srl  
**Owner:** Redo Sgr  
**Works director:** Vito De Stefano  
**Main contractor:** Intercantieri Vittadello Spa  
**Installation companies:** RI.PA., Frattini, Tempini

**Waterproofing companies:** Consorzio Dueffe, Tecnovedil  
**Mapei coordinators:** Francesco Di Chiara and Davide Dido, Mapei SpA (Italy)

**MAPEI PRODUCTS**  
Waterproofing substrates: Mapeband PE 120,

Mapelastic AquaDefense, Mapeband Easy, Mapelastic Turbo, Mapenet 150  
Installing ceramic tiles: Kerabond Plus  
Grouting joints: Keracolor FF, Ultracolor Plus

For further info on products: [mapei.com](http://mapei.com)



Milan (Italy)  
**Social housing complex**

AFTER YEARS OF NEGLECT FIVE BUILDINGS WERE REFURBISHED THANKS TO AN INNOVATIVE PROGRAMME

At the end of the 1990's in Via Antegnati, in south Milan, five buildings with internal courtyards were built for manufacturing and service use. The buildings were between three and four storeys high and were completed in 2000, but never actually used. Abandoned and in a state of degradation, the buildings had been defaced and were inhabited by squatters until 2019, the year in which the "5 Square" refurbishment programme was launched to create 500 social housing apartments, a health centre, urban residential services and retail spaces. The architectural design of the complex was by the Milan-based firm, Barreca&LaVarra.

**A complex intervention**

For the first phase of the work all the existing non-structural elements were removed, leaving just the structural skeleton of the complex. The remaining volumes were used to create new surfaces and to align the main perspective in Via Antegnati so that all five buildings were five storeys high on that particular side, but with the end two buildings to the south slightly smaller in size. The ground floor of the complex, made up of a mix of private and public spaces, was

transformed into a large urban-type area with spaces where people can meet up or play games and sports. The exterior is characterised by a new modular grid structure superimposed on the existing façade. The grid is made up of two systems: one featuring a series of parapets and the other with opposing roller-blinds forming a "butterfly" type system. The designers used colour to provide movement and depth to the external surfaces: a light colour for the grid and blinds and a darker colour for the backdrop of the apartments.

**Waterproofing and installation of ceramic tiles in the interiors**

Mapei Technical Services recommended the most suitable systems to waterproof and install ceramic tiles in the apartments and bathrooms. The substrates in the bathrooms were waterproofed with MAPELASTIC AQUADEFENSE flexible membrane and MAPEBAND PE 120 PVC tape. The ceramic tiles for walls and floors in the bathrooms and floors in the apartments were installed with KERABOND PLUS improved adhesion cementitious adhesive, a class C2E adhesive according to EN 12004 standards, while the joints were

grouted with the high-performance mortars ULTRACOLOR PLUS and KERACOLOR FF, class CG2WA according to EN 13888.

**Work on the balconies**

To protect and waterproof the cementitious screeds on the balconies Mapei Technical Services recommended using MAPELASTIC TURBO, a two-component, cementitious mortar which dries very quickly, including at low temperatures. Two layers of mortar were applied, with MAPENET 150 alkali-resistant glass fibre mesh embedded between them. They were then sealed around the edge with MAPEBAND EASY rubber tape bonded to the substrate with, again, MAPELASTIC TURBO. KERABOND PLUS was used in this case, too, to install the ceramic tiles on the floors of the balconies, with ULTRACOLOR PLUS and KERACOLOR FF again used to grout joints.



Find out more  
**KERABOND PLUS**