

Kimia

Prodotti & tecnologie
per il recupero edilizio

General Catalogue of Works



Anchors, structural connections, precision groutings and structural tying

Anchors of reinforcement

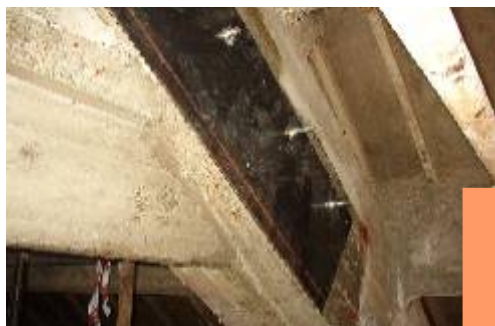
For shallow anchorages or onto coherent and overhead supports it can be used resins in a cartridge **Kimitech F3**



Kimitech EP-IN (fluid epoxy) can be used to fill microcracking and for fastening into inclined downwards holes on supports which don't let the product get dispersed



Betonfix 200 is used for injections and reinforcement fastening even in the case of walls and non-compact supports



Structural connections

Kimitech EP-TX and **Kimitech TX 311** (thixotropic epoxy resins) are used both for structural bonding and beton-plaque

Precision anchoring
For precision anchoring of metal structures or machinery it can be employed **Betonfix AL**



Micropiles and structural tying

Betonfix PL (high resistance against sulphates) can be used for injections of walls of foundations, for micropiles and structural tying onto rocks and soil

Treatment of asbestos

Asbestos, which in the past has lent itself to a wide range of uses in construction, in particular in the production of fiber cement materials, has been revealed dangerous due to the progressive aging or mechanical stresses that causes release and dispersion in the surrounding air of dust which breathing can cause many diseases (asbestosis, cancer etc.). The danger of asbestos depends on the freedom's degree of the fibers, ie, the ability of materials to release fibers potentially inhalable. The presence of asbestos itself, in fact, is not necessarily dangerous, it becomes if the fibers are emitted in the air, due to any stress (handling/processing, vibration, air currents, moisture infiltration, etc.). The italian MD 20.08.99 has regulated the issue, fixing the characteristics required for the products used for the various types of rehabilitation work.

If is necessary to intervene, it can be done after realization of overcoverage and/or encapsulation or removal, using primers (Kimicover FIX) and coating products (Kimicover BLINDO, Kimicover K80) which Kimia has certified according to current regulations.



Encapsulation without removal

Kimia proposes cycles suitable for encapsulations both for that in view and not in view (with overcoverage) that involve the use of primer **Kimicover FIX** and acrylic resin **Kimicover BLINDO**.



Encapsulation and subsequent disposal

Where the level of degradation is such that makes the artefact unrecoverable, it may become necessary the disposal after encapsulation with **Kimitech K8**.

Thermal insulation

External thermal insulation composite systems (ETICS)

Kimia proposes thermal insulation system for outdoor with CE marked Kibitherm, which uses as adhesive and smoothing's product the mortar RS (which compatibility with the various types of support and adhesion over time guarantee the checks that have been conducted in the laboratory) and, as insulation, the EPS (material with values of thermal dilation contained).

Betonfix RS and, in general, the other Kimia smoothing mortars (Betonfix R30, Betonfix R52) lend themselves to be used for the adhesion and smoothing of insulation panels of different nature, in view of the realization of interventions of thermal insulation for buildings of old or new construction, on supports of: bearing walls of bricks and/or stone; plasters on structures CA marked and buffered; concrete.



The Kibitherm system is a certificate system in possession of the European Technical Approval required (ETA n.06/0149) of the type "Adhesion with supplementary mechanical fastening" composed of adhesive; insulating layer, fiberglass armoured net; plaster's undercoat _ (smoothing), finishing; accessory materials (aluminum profiles, polypropylene locking pins, nylon locking pins profiles for the profiles).

To obtain the ETA, the Kibitherm system, with its finishing variants, has been submitted to ITC (CNR) to multiple tests that have verified various properties.

Impact resistance → The system, classified as CLASS II for impact resistance, can withstand impacts without → showing breaking with energies equal to 3J (spherical body of ½ kg dropped from 0.61 m in height).

Durability → Kibitherm guarantees very high performance in terms of adhesion, even after aging, of absorption of capilarity and vapor permeability. Its features are 3-4 times higher than the limits required by the regulations.

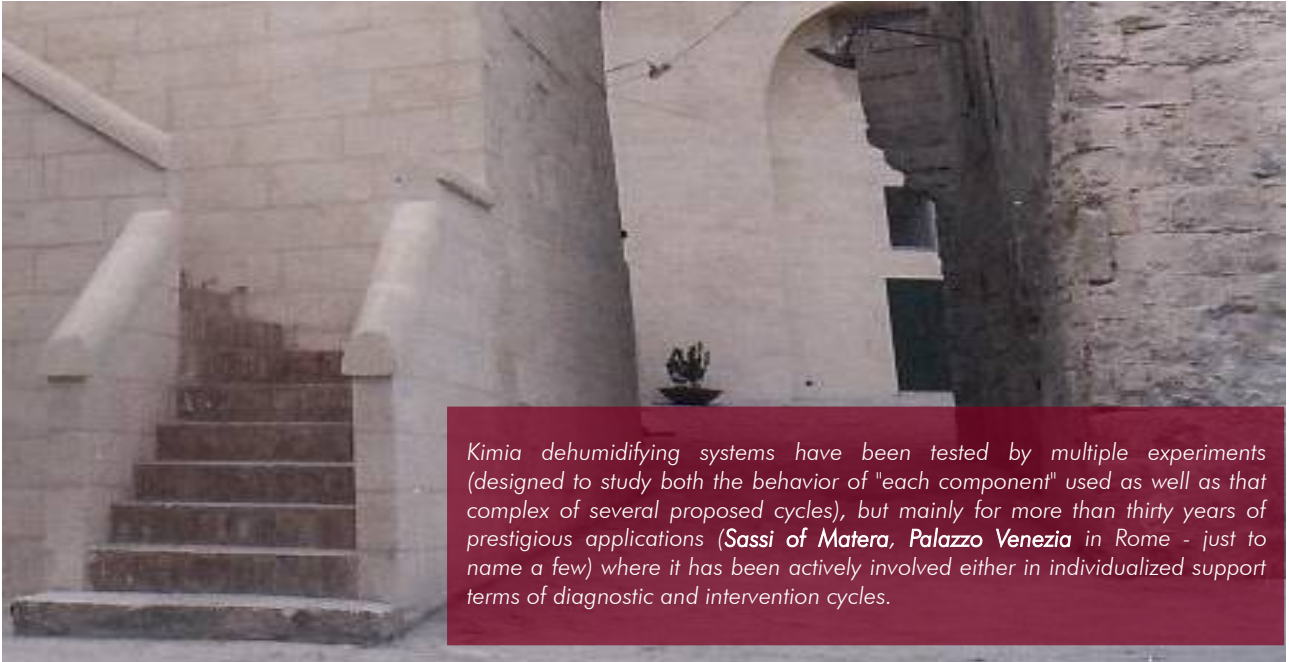


Thermoacoustic relieving layers and thermal screeds
They are realizable with **Limepor TERMOFIX**. The first (relief layers) are employed to equal the irregularities of the ground, so that it can carry out a successive screed with an uniform thickness while ensuring an increase of the thermal insulation and low static load



Thermal Plasters
One of the star products of Kimia is the mortar, ready to be used, for thermal plasters, called **Tectoria TH1**, of white color with brown overtones, made of natural hydraulic lime NHL (CE marked), in possession of CE mark for thermal mortars (Type T) according to UNI EN 998-1 and tested regarding the non-issuance of gamma radiation and/or radon gas

Dehumidifications



Kimia dehumidifying systems have been tested by multiple experiments (designed to study both the behavior of "each component" used as well as that complex of several proposed cycles), but mainly for more than thirty years of prestigious applications (**Sassi of Matera**, **Palazzo Venezia** in Rome - just to name a few) where it has been actively involved either in individualized support terms of diagnostic and intervention cycles.

Chemical barrier with hydrophobizing Kimicover IN, able to cause the meniscus of water inside the capillaries, with subsequent resolution of the ascension of moisture.



Dehumidifying plasters:

- make disappear the moisture thanks to a structure characterized by interconnected porosity
- avoid that eventual present salts create damage to the overlying finishing

Salts shall be blocked:

- To the interior of the macroporous plaster (as in the single-product cycle Limepor MONO).
- Behind the rough coat blocking-salt realized with Limepor RZ, in where is applied the dehumidifying plaster Tectoria DF (Pluri-product cycle).



Waterproofing

Balconies, terraces & coverings

Kimia proposes waterproofing cycles applied on balconies, terraces and on new or already existing coverings, even without removing old ceramic coatings or waterproofing sheathing. Depending on: the extension of the surface to be treated, the kind of the support (screed, waterproofing sheath, tiled surface), the requirements of the surfaces' uses (e.g. occasional or regular pedestrian traffic). Our technical network and our trusted applicators will identify the best intervention technique according to the specific characteristics of the building site, directing the choice of the most suitable products among those proposed by Kimia.



All waterproofing are realized with the materials below finished with acrylic varnish (Kimicover BLINDO) when is requested occasional pedonabilità or by tiling (if necessary, grant carrabilità e/o piena pedonabilità). They are applied on screeds and old tiles (without removing them). Other supports to work on: guaine and metallic coverings (with resin Kimicover 501 or Kimicover GUAINA + Kimicover BLINDO); tetti rovesci, tetti giardino e pensili (con Kimicover 115).

Balconies, terraces	Terraces	Coverings
< 50 mq	50 mq - 100 mq	> 100 mq
Betonfix GS UNO or Betonfix GS5 al 33%	Betonfix GS5 at 50%	Kimicover GUAINA <i>(Applicable even in autumn)</i> Kimicover 501 <i>(Not recommended for works to be performed in autumn/winter)</i>

Kimia mette a disposizione tutto l'occorrente per una impermeabilizzazione a regola d'arte: specific primers (Kimicover FIX MV); backer rods (Ethafom), sealants (Tecnoseal), self-adhesive strips (Kimicover JOINT) and propylene mesh Kimitech 120 specific for the reinforcement of the preliminary localized waterproofing in corrispondenza di risvolti, joints e scarichi; reinforce meshes to use with waterproofer Betonfix (Kimitech 350) or Kimicover (Kimitech TNT).

Structures in permanent or prolonged contact with liquids

Osmotic cementitious systems using Betonfix 300 are used to waterproof:
 → tanks and pipes of water supply for drinking water and not;
 → the internal side of under pressure structures, even in case of water see page, to be infilled with Betonfix WW.



Structural interventions with lime products

"Studying the typical mechanisms of physical, chemical and biological degradation of brickwork structures, Kimia has optimized the formulations of Limepor and Tectoria products used for decades in interventions that still today demonstrate durability, effectiveness and compatibility to the previously existing.

Both mortars from the Tectoria line (CE marked according to the UNI-EN 998-1 and tested regarding the nonemission of radon gas or gamma radiation in accordance with OSNRM S5200 and the CP112 of the EC), than all the Limepor products present a low / zero content of hydrosoluble salts and employ, such basic binders, natural hydraulic limes with CE marked (according to the UNI EN 459).

Injections

For the injections of brick faced wall is possible to employ the grout with no salt content Limepor IZ8 (in the case of curtain walls even with frescoes) and Limepor 100 (which is used in the regeneration or in the preconsolidation of brick or stone faced walls).



Wall works

Traditional wall works (break-fill work, and pointing of terracotta facades) are carried out with mortar prepared on site (with the use of the binders Limepor NHL-Z, Limepor NHL, Limepor LGS) or prepackaged (Limepor MT in beige-light brown colours, Tectoria PMP available in different chromatic varieties).

Plasters and collaborative castings

The mortar Tectoria M15 is suitable to be used to make plasters and collaborative castings: by virtue of the high resistance values associated to an adequate breathability and compatibility with the previously existing materials, it can replace more rigid and incompatible traditional cement plasters.



Structural interventions with resins, fabrics and pultruded

Kimia S.p.A. is among the few companies with over thirty years of experience in the use of resins and composites systems for structural applications.

The company has certified by a wide range of experimental tests the overall performance of the reinforcing systems themselves, correlating the results with the characteristics of specific substrates.

Since 1983, our solutions are used successfully in prestigious works for interventions that still today are subject of study and analysis.

The compatibility with structures of any type and effectiveness in time of Kimia reinforcement systems are documented by many experimental investigations carried out in collaboration with universities and research institutes in Italy.

The validity of our solutions has been verified by the optimal behavior that have shown the reinforcing structures carried out by Kimia systems against seismic events occurred in Italy during the last decade, none of which has suffered any damage.



Epoxy reconstructions

Fluid epoxy resins, such as Kimitech EP-IN properly loaded with Kimifill inerts, are used for epoxy collaborating reconstructions of damaged structural elements.



FRCM

For reinforcements where high performance is not required, we propose carbon fabrics (Kimitech ST 160 R) to apply together with mortar Kimisteel LM.

The net Kimitech 550 globalized with Betonfix AQM GG matrices is used for non structural interventions for adhesion by filling to pillars and reinforced concrete beam.



FRP

FRP reinforcement systems (Fiber Reinforced Polymer) are made by adhering and impregnating fibers of different types (glass, carbon, aramid) with epoxy resins.



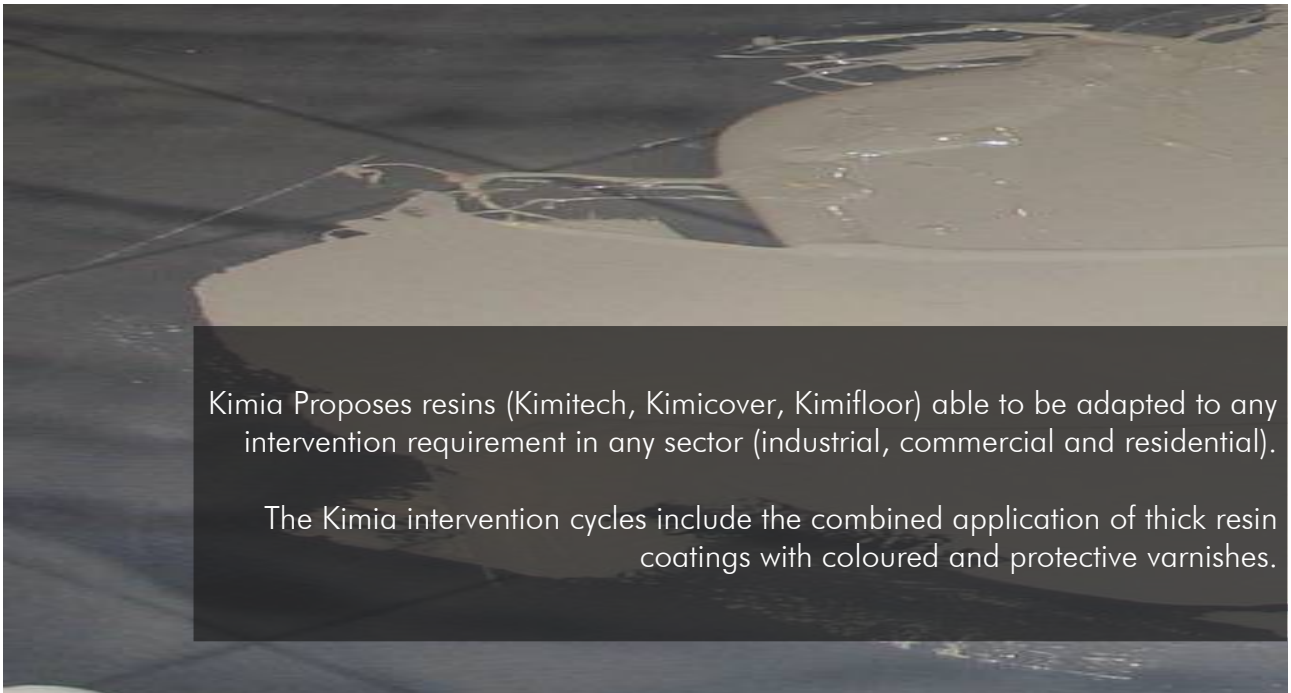
SRG

The experience acquired in traditional composite systems, combined with the know-how got in the production of mortars for restoration of both concrete and brickwork structures of, has recently allowed the company to market innovative unidirectional fabrics based reinforcements of steel Kimisteel INOX.

The system, done like this, especially if used with inorganic matrixes (Kimisteel LM) mixed with acrylic latex Kimitech B2, guarantees: hygrometric transpirability and compatibility, high temperature resistance, ease of setting in work.

In order to get pushed mechanical strength, it can be taken mixed matrix (Kimisteel LM mixed with Kimicover FIX) or epoxy (Kimitech EP-TX).

Resin floorings and coverings



The different cycles which can be done with Kimia resins are presented to the customers collected in different aesthetic ranges (COLLECTIONS).

The collections of the TECHNO family include floorings and coatings in which the aesthetic function goes together with very high expectations in terms of technical performance, as in the case of manufacturing activities, commercial and public spaces intended for an intense pedestrian and vehicular traffic, chemical aggressions and wear.

The DESIGN collections are mainly dedicated to residential and commercial constructions.

Screeds maintenance, realization and tiling

Maintenance

Kimia offers products to restore damaged joints to be rebuilt (with Betonfix mortars or with charged epoxy castings) and/or sealants (with backer rod Ethafoam and sealant Tecnoseal 130 or Tecnoseal 88).

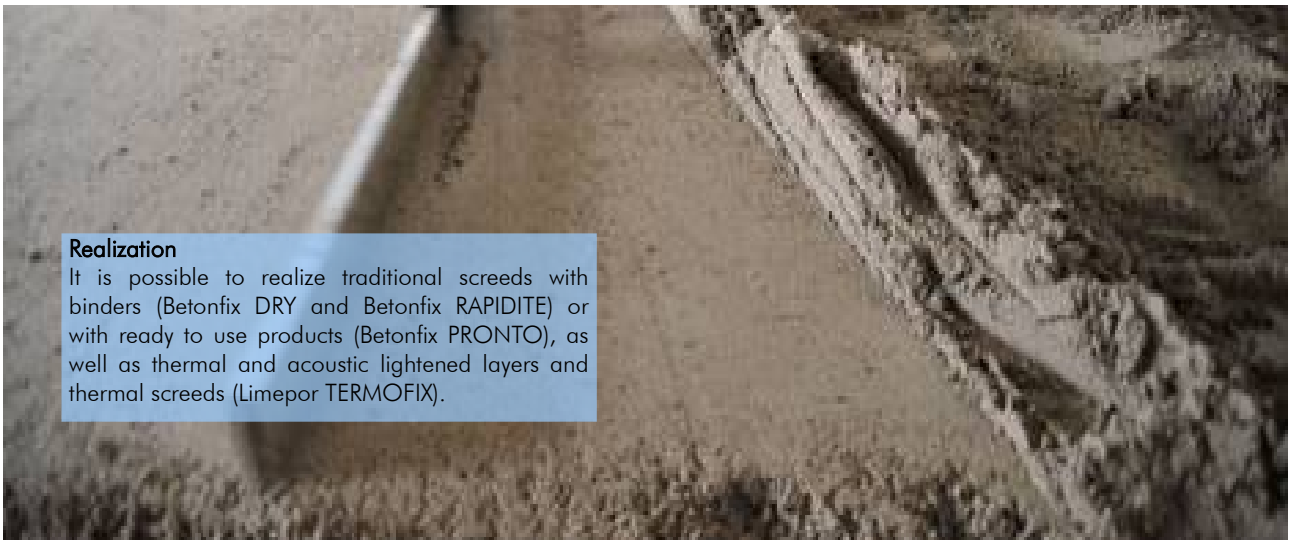
When it is necessary regularize/correct small defects or deficiencies of slope, it is possible to operate with suitable smoothing mortars from Betonfix line.

In case it is necessary a preparatory smoothing before laying of the parquet or vinyl floorings it is possible to use the mortar Betonfix RA.



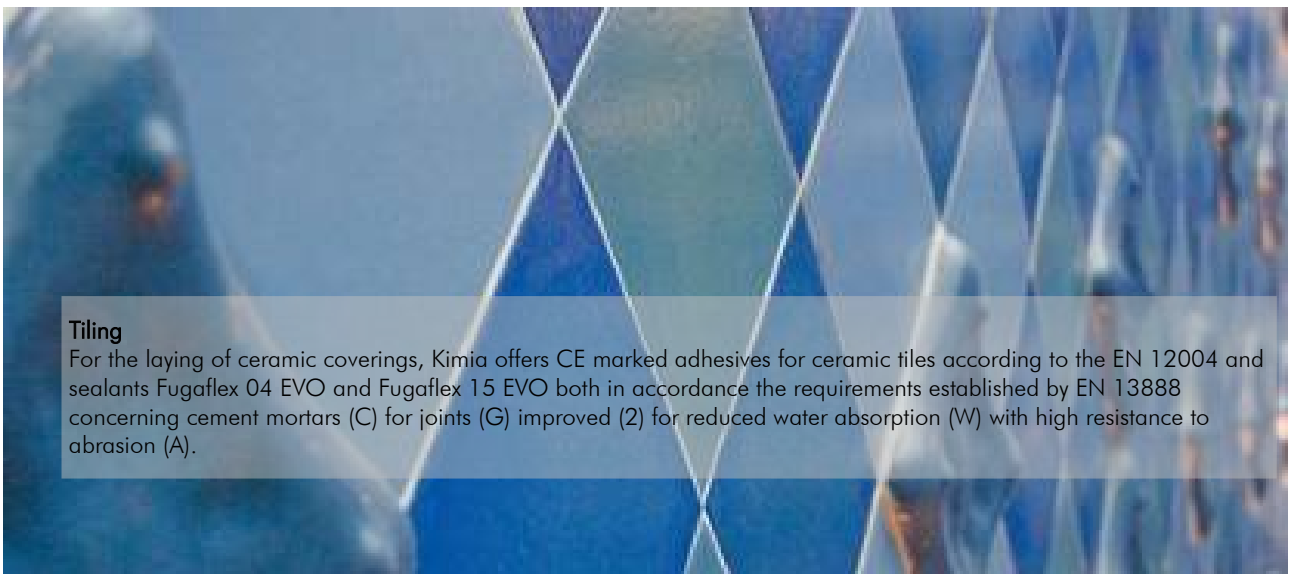
Realization

It is possible to realize traditional screeds with binders (Betonfix DRY and Betonfix RAPIDITE) or with ready to use products (Betonfix PRONTO), as well as thermal and acoustic lightened layers and thermal screeds (Limepor TERMOFIX).



Tiling

For the laying of ceramic coverings, Kimia offers CE marked adhesives for ceramic tiles according to the EN 12004 and sealants Fugaflex 04 EVO and Fugaflex 15 EVO both in accordance the requirements established by EN 13888 concerning cement mortars (C) for joints (G) improved (2) for reduced water absorption (W) with high resistance to abrasion (A).



Repairing and protection of concrete

Kimia has optimized the composition of its cement mortars to ensure their adequate durability and effectiveness, working in 4 directions:

- Studying the behavior over time of its products/application cycles;
- Ensure, through high skills of application, a quick laying and "foolproof";
- Certify in accordance with current regulatory standard the products proposed;
- Optimize the products by guaranteeing performances (such as adhesions after 1 and 7 days already compliant with regulatory requirements usually required after 28 days of curing, improved expansive properties, volumetric stability) which, although not strictly required by the norms, allow greater security and better success of interventions.

The best evidence of the reliability of our cycles is given by the many yards which remain, decades later, in perfect conditions.

Repairing and reinforcement

For cortical repairing Kimia proposes an operating cycle that, after removal of damaged and/or carbonated parts, provides (in the repairing cycles in which MONOLITE products are not foreseen) the application of the passivating mortar for reinforcement rods Betonfix KIMIFER. The subsequent volumetric reconstruction can be performed with

- castable mortars (Betonfix CR, Betonfix MONOLITE C)
- normal curing thixotropic mortars (Betonfix FB, Betonfix RCA, Betonfix MONOLITE N),
- fast curing thixotropic mortars (Betonfix TX, Betonfix TX GG, Betonfix MONOLITE R).



Treatment irons



Reparation with thixotropic mortar



Pilars (increase section)



Smoothing

Among the products offered by Kimia for smoothing of structures in reinforced concrete, are included cement mortars such Betonfix RS, Betonfix R30, Betonfix R52, and multi-purpose mortars suitable for applications in both millimeters and centimeters thickness (Betonfix RR, Betonfix MONOLITE N, Betonfix MONOLITE R).



Protection

Depending on the type of degradation expected and operating conditions, it is possible to use elastic acrylic anticarbonation varnishes with CE mark (Kimicover BLINDO), elastic cementitious systems Betonfix, epoxy-cementitious solutions Kimitech.

Pointing of joints, plasters and smoothing

Kimia has formulated specific products for the consolidation, realization and smoothing of the plasters.

All Limepor and Tectoria products proposed for this kind of applications are particularly appreciated for their qualities of durability and versatility in adapting to the most varied aesthetic needs as well as compatibility with the current materials on site, guaranteed by the use of CE marked natural hydraulic limes; particularly pure and selected (as demonstrated by the tests about non-emission of radon gas nor gamma radiation); respecting the requirements of the EPA for the materials with low environmental impact (reduced use of energy in production and limited carbon dioxide emissions into the atmosphere; total recyclability; total absence of toxic compounds for humans and harmful for the environment).

In the case of smoothing or protection of plasters or concrete structures interventions, the Betonfix line proposes an extensive range of smoothing mortars.



Bonding

For bonding of frescoed plasters detached from the support, the company proposes **Limepor IZ4** that does not give rise to efflorescence and with a hydrosoluble salts content virtually nil.



Pointing of joints and traditional plasters

The company offers a variety of solutions, all characterized by maximum breathability and compatibility with the supports (especially if masonry) of both mechanical and hygrometrical kinds, to realize pointing of joints as well as plasters of hydraulic lime based traditional mortars, both internal and external.



Thermal plasters

A Kimia star product in the field of thermal plasters is the mortar, ready to use, called **Tectoria TH1**, white with shades of light brown, composed of NHL natural hydraulic lime (CE marked), holding the CE mark for thermal mortars (Type T) according to UNI EN 998-1 and tested regarding the non-emission of gamma radiation and/or radon gas.

Dehumidifying plasters

Kimia offers multi-product dehumidifying solutions (ideal in the case of historical buildings, which are subject to significant phenomena of capillary rising, in presence of salts) realizable using the anti-salt rough coat **Limepor RZ** and the dehumidifying plaster called **Tectoria DF** (CE marked as rehabilitation mortar) and, in the case of most standard situations, a single-product dehumidifying solution with **Limepor MONO**.



Smoothing

In case lime-based smoothing, of plasters of new limes or existing, becomes necessary, Kimia allows to adequately cover the various needs through specific products that differ in granulometry and coloration. **Limepor FN** (beige-light brown), **Tectoria TFT** (White) both are lime-based smoothing mortars of maximum granulometry of 1 mm. **Limepor EDO** (white) is a lime-based smoothing mortar of maximum granulometry of 0.6 mm. **Limepor SK** (white) is a lime-based stucco.

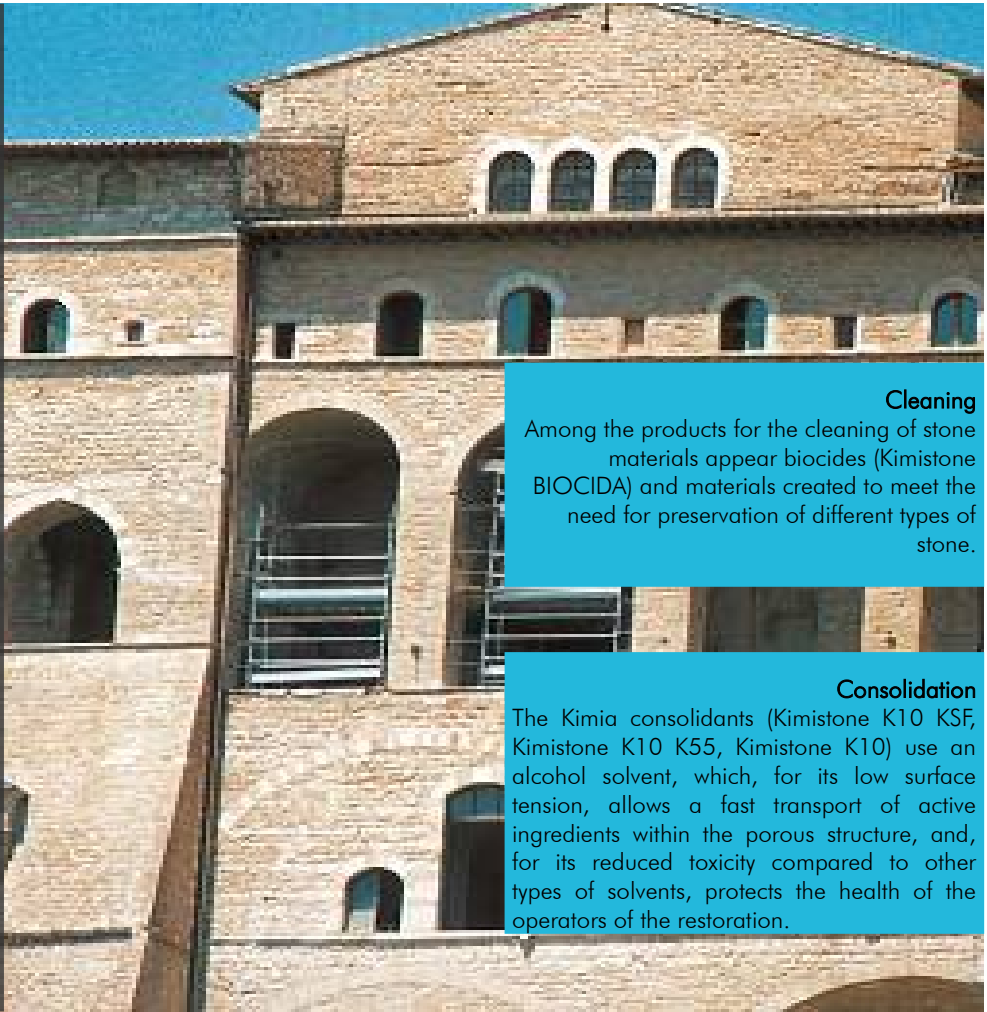
In the case of cement plasters, the smoothing can be carried out with cement mortars from the **Betonfix** line (**Betonfix RS, Betonfix R30, Betonfix R52, Betonfix RR**).

Surface treatments of stone materials

The stone material, in all its architectural applications suffers daily attacks from many degradation factors, which should be neutralized with decision, in order to avoid an irreparable deterioration.

Kimia has developed a series of products and application cycles for cleaning, consolidation and protection of stone materials, with the goal of preserving and protecting "the stone" with effective methods, compatible, capable of acting selectively on the causes of degradation, while safeguarding the structure.

The Kimia laboratories carry out regular spectrophometric evaluations, useful to verify the total absence of chromatic changes as a result of the application of the products, and are formulated to optimize functionality while fully respecting the health of the applicators.



Cleaning

Among the products for the cleaning of stone materials appear biocides (Kimistone BIOCIDA) and materials created to meet the need for preservation of different types of stone.

Consolidation

The Kimia consolidants (Kimistone K10 KSF, Kimistone K10 K55, Kimistone K10) use an alcohol solvent, which, for its low surface tension, allows a fast transport of active ingredients within the porous structure, and, for its reduced toxicity compared to other types of solvents, protects the health of the operators of the restoration.



Protection

The pure protectives from the Kimistone line include water based products (Kimistone ANTISMOG, Kimistone IBASIL) and solvent based (Kimistone IDROREP).

Anti-graffiti treatments

To meet the need of cleaning and protection of stone materials against contamination caused by paints and markers, today, more and more common frequently in the historic downtowns of large cities, Kimia has formulated, within the Kimistone line, specific products.



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