



ARDCOAT SYSTEM SOLUTION

MANUAL FOR THE RESOLUTION
OF COAT SYSTEM PATHOLOGIES



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INTRODUCTION

Ard Raccanello was the first paint product manufacturer for the building industry in Italy to offer an innovative free on-site consultancy service since the 1960s, effectively moving the gravity center of the business directly into the heart of the work. This allowed the company to intercept sales opportunities before other competitors, and above all to gain direct experience in the field. This trend has established the success and professional vocation of **Ard**, which still characterizes and distinguishes it on the market. The decades of experience on the building site and the continuous dialogue between applicator companies and the company's technicians have cemented several key values such as persistence, innovation and reliability, which lead Ard to be recognized as a leading reference in the exteriors, when situations are more complex and critical.

In 2013, Ard carried out a pioneering and unique survey in its sector together with Tekne Hub, Technopole of the Department of Architecture of the University of Ferrara entitled "**Architectural Heritage of the Twentieth Century - historical investigation - degradation pathologies - restoration/maintenance interventions**". This is the first field research conducted jointly by a company of paint products for construction and a university, aimed at indicating and accrediting the best solutions for degenerative pathologies of the external surfaces of buildings, merging in a structured way experience, theory and innovation with two points of view that had never been brought together on the building site. On this occasion, **Ard** has developed further products to optimize and make the proposed cycles more efficient, particularly those relating to the maintenance of the external insulation system, anticipating once again market trends and reaffirming its leadership in professional construction.

We therefore believe it is useful and in line with our corporate culture to develop this new document, which focuses on the pathologies and treatment cycles that affect the maintenance of external insulation systems. **The problems on construction sites are almost never unique, often multiple ones occur, in most cases correlated with each other. Since there are an infinite number of possible combinations, to simplify the approach to the pathologies that will be listed below, we have opted for an in-depth analysis of single case studies, remaining aware that on construction sites the situations are almost always much more complex and require a specific analysis on site.**

To best address the resolution of these pathologies, **Ard Raccanello**, as per its tradition, offers a free consultancy service managed internally by its own Technical Assistance. Our team of experts will be at your disposal for analysis and inspections, in order to identify the best possible solution with respect to the critical issues in progress.

CONTACT TECHNICAL SUPPORT NOW!

Email assistenza@ard-raccanello.it

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1. BIOLOGICAL COLONIZATIONS

Biological colonizations are algae, molds, mosses and lichens; these are unicellular and multicellular organisms that have different shapes, consistencies and morphologies. They are made up of stratiform proliferations and represent a typical phenomenon of the coat system, since by insulating the walls, the system prevents heat dispersion; consequently, the external surfaces of the coat are cold, thus favoring the condensation of the humidity present in the air (dew point) that wets the outermost layer of the coat, creating the conditions for the proliferation of these organisms. They form an irregular, inconsistent deposit that is poorly anchored to the support, their presence affects the aesthetic appearance and compromises the protective characteristics of the paint product.

During the cold season, the coat insulation system has the objective of maintaining the heat inside the buildings, therefore the external surfaces are colder and subject to greater condensation than traditional masonry; therefore, remaining wet for a long time, they are the ideal environment for the proliferation of microorganisms.

PRE-INTERVENTION SITUATION



INTERVENTION PLAN

SUPPORT PREPARATION

ARDSAN RISANANTE MURALE s. 0.916 in the presence of mold, algae, moss or lichen

Cleaning surfaces by hydro-washing with water at a temperature of 90/100°C
(adjusting the pressure so as not to damage the surfaces)

A. TRADITIONAL SOLUTION

FIXATIVE

ISOLEX W s. 0.085
(properly diluted)

INTERMEDIATE

RASANTE A PENNELLO s. 0.084
one layer, with a similar hue
or the same of the finish

OR

PRIMER RIEMPITIVO COPRENTE s. 0.075
one layer, with a hue similar to the finish

FINISH

ARD FILL s. 0.533
two layers, with the proper hue
for the ETICS system

OR

INTONACLIMA 1,2mm s. 1.635
one layer, with the proper hue
for the ETICS system

B. ELASTOMERIC SOLUTION

FIXATIVE

ISOLEX W s. 0.081
(properly diluted)

INTERMEDIATE

ARDELAST GRANA FINE s. 0.568
one layer, with a similar hue or the same of the finish

FINISH

ARDELAST INTONACHINO 1,2mm s. 1.645
one layer, with the proper hue for the ETICS system

POST-INTERVENTION RESULT



2. SURFACE DEPOSITS

Surface deposits are accumulations of foreign materials above the finish of the walls. They can be of various natures, organic or inorganic, and depending on the nature, their visibility, color, thickness, cohesion and adhesion to the substrate vary. They are due to atmospheric pollution (fine dust or particulate matter, PM10, PM2), and the proximity of industrial, artisanal, productive or agricultural areas that can spread dust, soil, soot, chemical deposits, precipitates and sand into the air. They affect the aesthetic appearance (graying or blackening of the affected surfaces) and can sometimes damage the substrate. Surface deposits are accumulations of foreign materials above the finish of the walls. They can be of various natures, organic or inorganic, and depending on the nature, their visibility, color, thickness, cohesion and adhesion to the substrate vary. They are caused by air pollution (fine dust or particulate matter, PM10, PM2), and the proximity of industrial, artisanal, productive or agricultural areas that can spread dust, soil, soot, chemical deposits, precipitates and sand into the air. They affect the aesthetic appearance (greying or blackening of the affected surfaces) and can sometimes damage the substrate.

PRE-INTERVENTION SITUATION



INTERVENTION PLAN

SUPPORT PREPARATION

ARDSAN RISANANTE MURALE s. 0.916 in the presence of mold, algae, moss or lichen

Cleaning surfaces by hydro-washing with water at a temperature of 90/100°C
(adjusting the pressure so as not to damage the surfaces)

A. TRADITIONAL SOLUTION

FIXATIVE	ISOLEX W s. 0.085 (properly diluted)	
INTERMEDIATE	RASANTE A PENNELLO s. 0.084 one layer, with a similar hue or the same of the finish	OR PRIMER RIEMPITIVO COPRENTE s. 0.075 one layer, with a hue similar to the finish
FINISH	ARD FILL s. 0.533 two layers, with the proper hue for the ETICS system	OR INTONACLIMA 1,2mm s. 1.635 one layer, with the proper hue for the ETICS system

B. ELASTOMERIC SOLUTION

FIXATIVE	ISOLEX W s. 0.085 (properly diluted)	
INTERMEDIATE	RASANTE A PENNELLO s. 0.084 one layer, with a similar hue or the same of the finish	OR PRIMER RIEMPITIVO COPRENTE s. 0.075 one layer, with a hue similar to the finish
FINISH	ARDELAST GRANA FINE s. 0.568 one layer, with the same hue of the finish	OR ARDELAST QUARZO s. 0.563 two layers, with the proper hue for the ETICS system

POST-INTERVENTION RESULT



3. PRESENCE OF HUMIDITY IN THE BASE

The presence of humidity in the base appears in the form of wet and/or stained areas from the presence of water, subsequent salt outcrops and degradation of the surface layers. It is mainly caused by rainwater, the presence of rising damp by capillarity or by contact with stagnant water. The base area is subject to greater water absorption than the rest of the facades. It is important to take care of the design and installation of the first rows of insulation: the panels must be suitably applied above the walking surface (at least 2 cm), supported and correctly aligned by a starting profile.

In new buildings, a thermal insulation system can be correctly installed under the walking surface using low water absorption panels, protected by suitable waterproofing sheaths, to reduce absorption to a minimum.

Failure to take such precautions will result in water absorption and therefore humidity in the coat, compromising the performance of the thermal system and generating probable swelling and/or detachments of the final stratigraphy (skimming, base, finish).

INTERVENTION PLAN

SUPPORT PREPARATION

Elimination of the causes that generate humidity in the basement and water infiltrations, with suitable interventions under the responsibility of the D.L.

ARDSAN RISANANTE MURALE s. 0.916 in the presence of mold, algae, moss or lichen

Cleaning surfaces by hydro-washing with water at a temperature of 90/100°C (adjusting the pressure so as not to damage the surfaces)

Removal of all layers of old paint, coating, parts of reinforced plaster, inconsistent or detached and relative restoration, with suitable interventions under the responsibility of the D.L., taking care to connect with the existing.

A. TRADITIONAL SOLUTION

FIXATIVE

ISOLEX W s. 0.085
(properly diluted)

INTERMEDIATE

RASANTE A PENNELLO s. 0.084
one layer, with a similar hue or the same of the finish

FINISH

SILIARD INTONACHINO 1,2 mm s. 1.642
one layer, with the proper hue
for the ETICS system

OR

INTONACLIMA 1,2mm s. 1.635
one layer, with the proper hue
for the ETICS system

PRE-INTERVENTION SITUATION



POST-INTERVENTION RESULT



4. CHROMATIC ALTERATIONS OF THE FINISH

Chromatic alterations are variations in the original color of the finish, they usually appear for three different causes: chemical aggression due to the degradation action carried out by the alkalinity of the support on some pigments due to lack of seasoning of the reinforced skim coat; chromatic heterogeneity due to different environmental stresses, application inexperience or performance differences between products of different compositions, applied at different times on the same facade; color change due to sunlight, specifically to the ultraviolet component (U.V.), which alters the chemistry of some types of pigment.

INTERVENTION PLAN

SUPPORT PREPARATION

ARDSAN RISANANTE MURALE s. 0.916 in the presence of mold, algae, moss or lichen

Cleaning surfaces by hydro-washing with water at a temperature of 90/100°C
(adjusting the pressure so as not to damage the surfaces)

A. LOW THICKNESS SOLUTION

FIXATIVE

ISOLEX W s. 0.085
(properly diluted)

FINISH

ARD FILL s. 0.533
two layers, with the proper hue
for the ETICS system

OR

SILIARD FILL s. 0.552
two layers, with the proper hue
for the ETICS system

B. HIGH THICKNESS SOLUTION

INTERMEDIATE

RASANTE A PENNELLO s. 0.084
in the same hue of the finish

FINISH

INTONACLIMA 1,2mm s. 1.635
one layer, with the proper hue
for the ETICS system

OR

SILIARD INTONACHINO 1,2 mm s. 1.642
one layer, with the proper hue
for the ETICS system

PRE-INTERVENTION SITUATION



POST-INTERVENTION RESULT



5. BLEACHING OF DARK COLORS

Whitening of dark colors is that natural fading that occurs early compared to surfaces finished with other colors, due to overheating of the walls due to solar radiation.

Where exposure to the sun is more direct and prolonged, therefore on walls facing south, east and west, this phenomenon is stronger, on walls facing north, problems of this type do not occur. The overheating of the walls can generate significant thermal expansions in the various components of the system, causing further damage.

PRE-INTERVENTION SITUATION



INTERVENTION PLAN

SUPPORT PREPARATION

ARDSAN RISANANTE MURALE s. 0.916 in the presence of mold, algae, moss or lichen

Cleaning surfaces by hydro-washing with water at a temperature of 90/100°C (adjusting the pressure so as not to damage the surfaces)

A. TRADITIONAL SOLUTION

FIXATIVE	ISOLEX W s. 0.085 (properly diluted)	
INTERMEDIATE	RASANTE A PENNELLO s. 0.084 one layer, with a similar hue or the same of the finish	OR PRIMER RIEMPITIVO COPRENTE s. 0.075 one layer, with a hue similar to the finish
FINITURA	ARD FILL s. 0.533 two layers, with the proper hue for the ETICS system	OR SILIARD FILL s. 0.552 one layer, with the proper hue for the ETICS system

B. ELASTOMERIC SOLUTION

FIXATIVE	ISOLEX W s. 0.085 (properly diluted)	
INTERMEDIATE	RASANTE A PENNELLO s. 0.084 one layer, with a similar hue or the same of the finish	OR PRIMER RIEMPITIVO COPRENTE s. 0.075 one layer, with a hue similar to the finish
FINITURA	ARDELAST GRANA FINE s. 0.568 two layers, with the proper hue for the ETICS system	OR ARDELAST QUARZO s. 0.563 two layers, with the proper hue for the ETICS system

POST-INTERVENTION RESULT



6. THERMAL BRIDGES

Thermal bridges are discontinuities in the thermal conductivity of the building, they favor the dispersion of heat and cause degenerative phenomena of the support or aesthetic defects. They manifest themselves with the formation of clearings concentrated in specific areas, often having geometric shapes and defined perimeters.

They are caused by the reduction in thickness or the absence of insulating panels in correspondence of specific points, not adequately insulated, such as roller shutter boxes, windowsills, incorporations of protrusions, floors, string courses, jambs, pipes, etc. They can be identified using a thermal imaging camera or are visible to the naked eye.

INTERVENTION PLAN

SUPPORT PREPARATION

Evaluation of the anchoring status of the insulating panels and fixing of those that are not perfectly anchored; checking and replacing any damaged insulating panels, those that are not correctly laid or shaped; elimination of thermal bridges and restoration of the missing smoothing parts with suitable materials and interventions **as indicated by our Technical Assistance.**

The joints of the panels must not be aligned with the edges of doors and windows. Sealing of any spaces between the insulating panels (when not perfectly joined) with low-expansion polyurethane adhesive foam compliant with the requirements of the **European technical guide EAD 040083-00-0404**

CYCLE WITH LIGHTENED TRADITIONAL REINFORCED SHAVING

EDGES PROTECTION	EDGE PROTECTORS IN PVC WITH MESH + ARDCOAT L10glass s. 1.967	
ARMOUR and DROWNING	ARDCOAT L10glass s. 1.967 + RETE IN FIBRA DI VETRO* 6.968.0005. In correspondence with all openings (windows, doors, holes) positioning the mesh on the edges in an oblique direction (dimensions approximately 20 by 40 cm).	
SHAVINGS	ARDCOAT L10glass s. 1.967	
DROWNING	FIBERGLASS MESH* 6.968.0005 With 10 cm overlaps at the joints. Apply to the still damp substrate.	
SHAVINGS	ARDCOAT L10glass s. 1.967	
INTERMEDIATE	PRIMER RIEMPITIVO COPRENTE s. 0.075 one layer, with a hue similar to the finish	OR RASANTE A PENNELLO s. 0.084 one layer, with the same hue or similar to the finish
FINISH	ARD FILL s. 0.553 two layers, with the proper hue for the ETICS system	OR INTONACLIMA 1,2 mm s. 1.635 one layers, with the proper hue for the ETICS system

* compliant to the **040083-00-0404 EAD European technical guide requirements**

PRE-INTERVENTION SITUATION



POST-INTERVENTION RESULT



7. LEOPARD SPOTS - DOWELS

Leopard-dowel spots are circular spots with a diameter of about 6/8 cm, lighter or darker than the finish color of the coat, located in correspondence with the fixing dowels.

They form when dowels with an insulating cap are not used, as dowels without a cap are heat conductors and therefore generate small thermal bridges.

When the humidity in the air condenses on the cold surface of the coat, wetting it (dew point), the stains become evident on the walls facing north. The heads of the dowels overheat more than the plaster, melting the frost first or causing the corresponding surface to dry first and generating the stain. On surfaces facing south, the phenomenon can occur in the opposite way. The surface of the insulating panel heats up, not allowing heat to enter and the color degrades more quickly than the color in correspondence with the dowels, which maintain a darker color than the rest of the facade.

This phenomenon is accentuated if the heads of the dowels are not coplanar with the panel (inserted too much or too little), and if the thickness of the reinforced plaster including the finish is less than 4.5 mm.

PRE-INTERVENTION SITUATION



INTERVENTION PLAN

SUPPORT PREPARATION

Evaluation of the anchoring status of the reinforced plaster, fixing the areas that are not perfectly anchored by means of dowels, with suitable materials and interventions **as indicated by our Technical Assistance**, taking care to make the head of the dowels coplanar with the surrounding surfaces, after removing the thick coating layer. This intervention can only be carried out on localized portions of the surface.

If detachments are found that affect large surfaces of the walls, it will be necessary to proceed with the total removal of the old, reinforced plaster and the insulating panels and the total redoing of the system **as indicated by our Technical Assistance**.

CYCLE WITH LIGHTENED ELASTOMERIC REINFORCED SHAVING

FIXATIVE	ISOLEX W s. 0.081 (properly diluted)	
ARMOUR and DROWNING	REBUILD FONDO L s. 1.614 + RETE IN FIBRA DI VETRO* 6.968.0005 In correspondence with all openings (windows, doors, holes) positioning the mesh on the edges in an oblique direction (dimensions approximately 20 by 40 cm).	
SHAVINGS	REBUILD FONDO L s. 1.614	
DROWNING	FIBERGLASS MESH* 6.968.0005 With 10 cm overlaps at the joints. Apply to the still damp substrate.	
SHAVINGS	REBUILD FONDO L s. 1.614 with a hue similar to the finish	
FINISH	ARDELAST GRANA FINE s. 0.568 two layers, with the proper hue for the ETICS system	OR REBUILD INTONACLIMA L s. 1.624 one layers, with the proper hue for the ETICS system

* compliant to the 040083-00-0404 EAD European technical guide requirements

POST-INTERVENTION RESULT



8. MECHANICAL BREAKAGES AND DENTS (HAIL)

Mechanical breakages and dents are all those damages that compromise the integrity of the layers protecting the insulating panel.

They are caused by accidental events such as impacts (external bodies) or by atmospheric agents (hail) that compromise the aesthetic appearance and reduce the thermal insulation capacity of the coat.

INTERVENTION PLAN

SUPPORT PREPARATION

Removal of all layers of old paint, coating, parts of reinforced plaster, inconsistent or detached and relative restoration or filling of the affected parts with polyurethane foam or suitable filler **as indicated by our Technical Assistance**. The restorations must be carried out taking care to connect with the existing.

Wait for the complete drying and hydration of the restorations.
The support must be compact, solid, and load bearing to avoid detachment of the reinforced plaster.

CYCLE WITH LIGHTENED ELASTOMERIC REINFORCED SHAVING

FIXATIVE	ISOLEX W s. 0.081 (properly diluted)	
ARMOUR and DROWNING	REBUILD FONDO L s. 1.614 + FIBERGLASS MESH* 6.968.0005 In correspondence with all openings (windows, doors, holes) positioning the mesh on the edges in an oblique direction (dimensions approximately 20 by 40 cm).	
SHAVINGS	REBUILD FONDO L s. 1.614	
DROWNING	RETE IN FIBRA DI VETRO* 6.968.0005 With 10 cm overlaps at the joints. Apply to the still damp substrate.	
SHAVINGS	REBUILD FONDO L s. 1.614 with a hue similar to the finish	
FINISH	ARDELAST GRANA FINE s. 0.568 two layers, with the proper hue for the ETICS system	OR REBUILD INTONACLIMA L s. 1.624 one layers, with the proper hue for the ETICS system

* compliant to the 040083-00-0404 EAD European technical guide requirements

PRE-INTERVENTION SITUATION



POST-INTERVENTION RESULT



9. PARTIAL DETACHMENTS OF FINISH AND REINFORCED SKIM COAT

Partial detachments of finishing (coating or paint) and reinforced skim coat are characterized by falling and loss of parts that occur due to the lack of adhesion between the layers involved. They are localized in specific points and can be caused by problems during the application phase (dirty surface, gaps in the base, non-homogeneous mix, non-uniform spreading, incorrect positioning of the reinforcement mesh, etc.), or by internal and external factors that occur subsequently (cracks, water infiltrations, presence of rising damp, salts, etc.).

INTERVENTION PLAN

SUPPORT PREPARATION

Perform a preliminary assessment of the actual degree of adhesion of the old finish by means of a "tear test" by drowning a glass fibre reinforcement mesh weighing 150 g/m² of at least 30x30 cm in the coat skim coat, after thoroughly cleaning the substrate.

After three days, proceed with the test. If only the mesh is torn, the result is positive; if the adhesive is also torn together with the old finish, the result is negative, so it is necessary to proceed with the complete removal of all the inconsistent parts.

Following restoration of the missing skim coat and finish parts. The repairs must be made as similar as possible and coplanar with the remaining surfaces in order to avoid them being visible once the finish is complete. Wait for the repairs to be completely dry and hydrated: the substrate must be compact, solid and load bearing to avoid detachments of the painting cycle.

ELASTOMERIC SOLUTION

FIXATIVE

ISOLEX W s. 0.081 (properly diluted)

INTERMEDIATE

ARDELAST GRANA FINE s. 0.568
one layer, with the same hue or similar to the finish

FINISH

ARDELAST INTONACHINO 1,2mm s. 1.645
one layer, with the proper hue for the ETICS system

PRE-INTERVENTION SITUATION



POST-INTERVENTION RESULT



10. DETACHMENTS OF REINFORCED SKIM COAT OVER LARGE AREAS

Detachments of reinforced plaster over large areas are characterized by falling and loss of parts in large areas where the reinforced plaster has detached from the insulation. They can be visible if the underlying panels are visible, or appear as swellings that are barely perceptible visually, but audible as a dull noise amplified if the surface is struck. They are caused by problems attributable to the application phase (unsuitable plaster, unsuitable insulation, oxidized insulation, dirty insulation, dark overheated insulation, application in the sun, "burnt" plaster, insufficient thickness of the plaster layers, lack of anti-alkaline primer on the mesh, etc.).

PRE-INTERVENTION SITUATION



INTERVENTION PLAN

SUPPORT PREPARATION

Removal of all layers of old paint, coating, parts of reinforced plaster, inconsistent or detached and their restoration, with suitable interventions **as indicated by our Technical Assistance**, taking care to connect with the existing.

Removal of all completion accessories not installed in a workmanlike manner and their restoration, with suitable materials and interventions **as indicated by our Technical Assistance**.

Wait for the complete drying and hydration of the restorations.

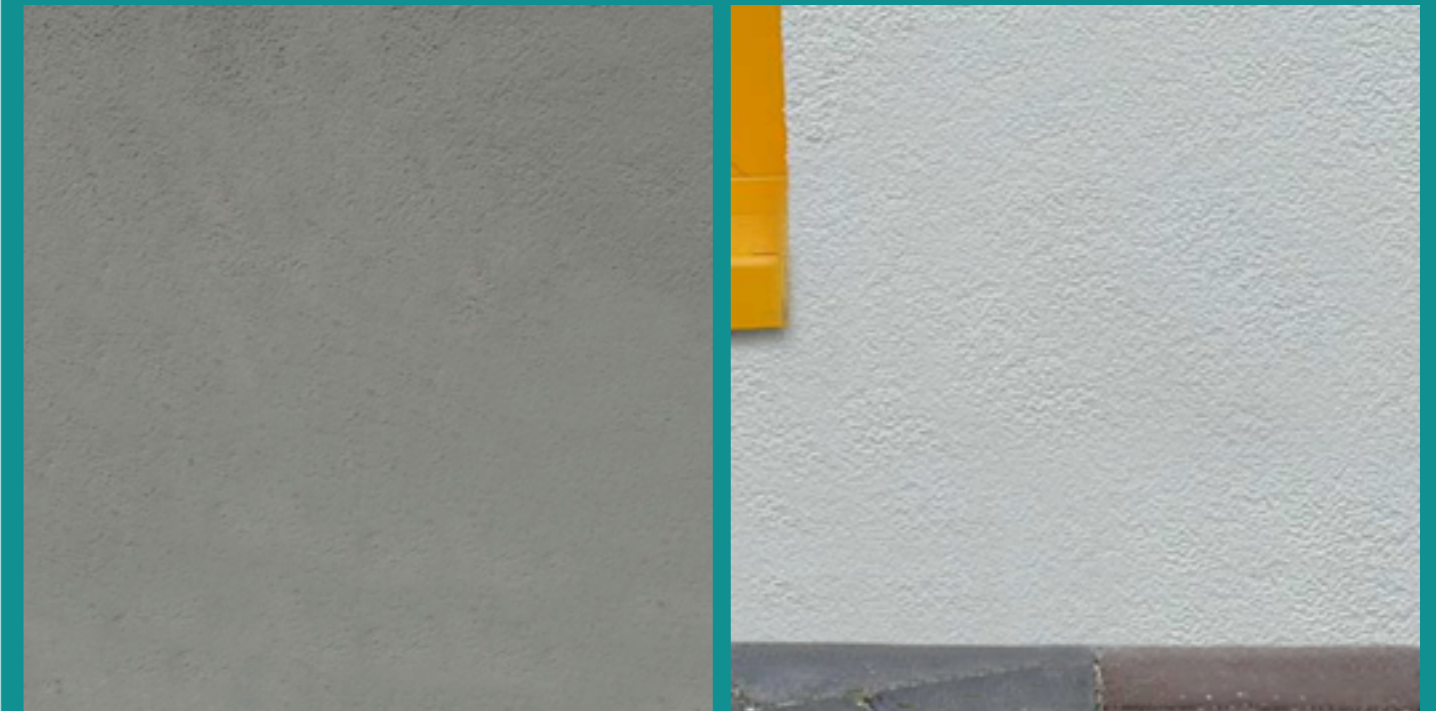
The support must be compact, solid and load bearing to avoid detachments of the painting cycle.

CYCLE WITH TRADITIONAL REINFORCED SHAVING

FIXATIVE	ISOLEX W s. 0.081 (properly diluted)	
CORNER PROTECTION	CORNER PROTECTORS MADE OF PVC WITH MESH + ARDCOAT C8* s. 1.967	
ARMOUR and DROWNING	ARDCOAT C8* s. 1.967 + FIBER GLASS MESH* 6.968.0005 In correspondence with all openings (windows, doors, holes) positioning the mesh on the edges in an oblique direction (dimensions approximately 20 by 40 cm).	
SHAVINGS	ARDCOAT C8* s. 1.967	
DROWNING	FIBER GLASS MESH* 6.968.0005 With 10 cm overlaps at the joints. Apply to the still damp substrate.	
SHAVINGS	ARDCOAT C8* s. 1.967	
INTERMEDIATE	PRIMER RIEMP. COPRENTE s. 0.075 one layer, with a hue similar to the finish	OR RASANTE A PENNELLO s. 0.084 with the same hue or similar to the finish
FINISH	ARD FILL s. 0.553 two layers, with the proper hue for the ETICS system	OR INTONACLIMA 1,2 mm s. 1.635 one layer, with the proper hue for the ETICS system

* compliant to the 040083-00-0404 EAD European technical guide requirements

POST-INTERVENTION RESULT



11. DEFECTS DUE TO THE LACK OR INCORRECT INSTALLATION OF ACCESSORIES

The lack or incorrect installation of accessories can compromise the functionality of the system. The thermal insulation system, in fact, in addition to being composed of standard elements (panel, adhesive/skim coat, dowels, reinforcement mesh and finishing), is made up of a variety of accessories necessary for completing specific points (closures, guides, profiles, drip traps, self-expanding sealing tapes, expansion joints, fixing inserts, sheet metalwork, etc.).

PRE-INTERVENTION SITUATION



INTERVENTION PLAN

SUPPORT PREPARATION

Removal of all incorrectly installed accessories and any affected parts of reinforced plaster, installation of the new accessories and their restoration with suitable materials and interventions, taking care to install them **as indicated by our Technical Assistance.**

Wait for the complete drying and hydration of the restorations.
The support must be compact, solid and load bearing to avoid detachments of the painting cycle.

CYCLE WITH LIGHTENED ELASTOMERIC REINFORCED SHAVING

FIXATIVE

ISOLEX W s. 0.081 (properly diluted)

ARMOUR and DROWNING

REBUILD FONDO L s. 1.614 + FIBERGLASS MESH* 6.968.0005

In correspondence with all openings (windows, doors, holes) positioning the mesh on the edges in an oblique direction (dimensions approximately 20 by 40 cm).

SHAVINGS

REBUILD FONDO L s. 1.614

DROWNING

FIBERGLASS MESH* 6.968.0005

With 10 cm overlaps at the joints. Apply to the still damp substrate.

SHAVINGS

REBUILD FONDO L s. 1.614

with a hue similar to the finish

FINISH

ARDELAST GRANA FINE s. 0.568

two layers, with the proper hue for the ETICS system

OR

REBUILD INTONACLIMA L s. 1.624

one layers, with the proper hue for the ETICS system

* compliant to the 040083-00-0404 EAD European technical guide requirements

POST-INTERVENTION RESULT



12. SPIDERWEB CRACKS

Spiderweb cracks are hairline cracks in the finishing layers or the last layer of the reinforced plaster and appear with a reticular pattern.

They depend on the low mechanical resistance of the layer of material involved, which has poor solidity and a consequent loss of cohesion. They can appear shortly after application for various reasons (poor material, application errors, low thickness of plaster, exposure to atmospheric agents, etc.) and can also arise subsequently due to weakening of the material over time. This pathology occurs more frequently in external insulation systems completed with painting, in cases of inadequate stratigraphy.

INTERVENTION PLAN

SUPPORT PREPARATION

ARDSAN RISANANTE MURALE s. 0.916 in the presence of mold, algae, moss or lichen

Cleaning surfaces by hydro-washing with water at a temperature of 90/100°C
(adjusting the pressure so as not to damage the surfaces)

ELASTOMERIC SOLUTION

FIXATIVE

ISOLEX W s. 0.081 (properly diluted)

INTERMEDIATE

ARDELAST GRANA FINE s. 0.568
one layer, with the same hue or similar to the finish

FINISH

ARDELAST INTONACHINO 1,2mm s. 1.645
one layer, with the proper hue for the ETICS system

PRE-INTERVENTION SITUATION



POST-INTERVENTION RESULT



13. CRACKS IN THE CORNERS OF WINDOWS AND DOORS

Cracks at the corners of windows and doors are cracks or crazing - even thin ones - that originate at the corners of openings (windows, doors). They form linearly diagonally, vertically or horizontally and affect all layers of the reinforced plaster and finish.

They are called “structural” cracks because they are caused by tensions and stresses present in the structures of buildings or coats. They appear when the coat has been made without all the necessary precautions to counteract them (presence of joints between the panels in the corners instead of entire shaped panels, absence or incorrect installation of the 45° reinforcement mesh strips at these corners, insufficient thickness of plaster).

PRE-INTERVENTION SITUATION



INTERVENTION PLAN

SUPPORT PREPARATION

ARDSAN RISANANTE MURALE s. 0.916 in the presence of mold, algae, moss or lichen

Cleaning surfaces by hydro-washing with water at a temperature of 90/100°C (adjusting the pressure so as not to damage the surfaces)

CYCLE WITH LIGHTENED ELASTOMERIC REINFORCED SHAVING

FIXATIVE

ISOLEX W s. 0.081 (properly diluted)

ARMOUR and DROWNING

REBUILD FONDO L s. 1.614. + FIBERGLASS MESH* 6.968.0005

In correspondence with all openings (windows, doors, holes) positioning the mesh on the edges in an oblique direction (dimensions approximately 20 by 40 cm).

SHAVINGS

REBUILD FONDO L s. 1.614

DROWNING

FIBERGLASS MESH* 6.968.0005

With 10 cm overlaps at the joints. Apply to the still damp substrate.

SHAVINGS

REBUILD FONDO L s. 1.614

with a hue similar to the finish

FINISH

ARDELAST GRANA FINE s. 0.568

two layers, with the proper hue for the ETICS system

OR

REBUILD INTONACLIMA L s. 1.624

one layers, with the proper hue for the ETICS system

* compliant to the 040083-00-0404 EAD European technical guide requirements

POST-INTERVENTION RESULT



14. CRACKS IN THE JOINTS BETWEEN PANELS

Cracks in the joints between panels are horizontal or vertical cracks at the adjacent of the insulating panels. They are caused by technical application errors, such as failure to stagger the insulating panels, insufficient thickness in the smoothing layers, use of unsuitable reinforcement mesh, poor bonding surface of the panels, insufficient number of dowels, instability of the insulating panels, adjacency or insufficient overlapping of the reinforcement mesh, creation of dark-colored finishes.

In addition to compromising the aesthetic appearance, these cracks favor water infiltration which accelerates degradation and compromises the durability and optimal functionality of the thermal insulation system.

INTERVENTION PLAN

SUPPORT PREPARATION

ARDSAN RISANANTE MURALE s. 0.916 in the presence of mold, algae, moss or lichen

Cleaning surfaces by hydro-washing with water at a temperature of 90/100°C
(adjusting the pressure so as not to damage the surfaces)

CYCLE WITH LIGHTENED ELASTOMERIC REINFORCED SHAVING

FIXATIVE

ISOLEX W s. 0.081 (properly diluted)

ARMOUR and DROWNING

ARDELAST RASANTE s. 1.561 + ARDELAST FIBERGLASS MESH 9.968.0010
In correspondence with all openings (windows, doors, holes) positioning the mesh on the edges in an oblique direction (dimensions approximately 20 by 40 cm).

SHAVINGS

ARDELAST RASANTE s. 1.561

DROWNING

ARDELAST FIBERGLASS MESH 9.968.0010
With 5 cm overlaps at the joints. Apply to the still damp substrate.

SHAVINGS

ARDELAST RASANTE s. 1.561
with a hue similar to the finish

FINISH

ARDELAST GRANA FINE s. 0.568
two layers, with the proper hue
for the ETICS system

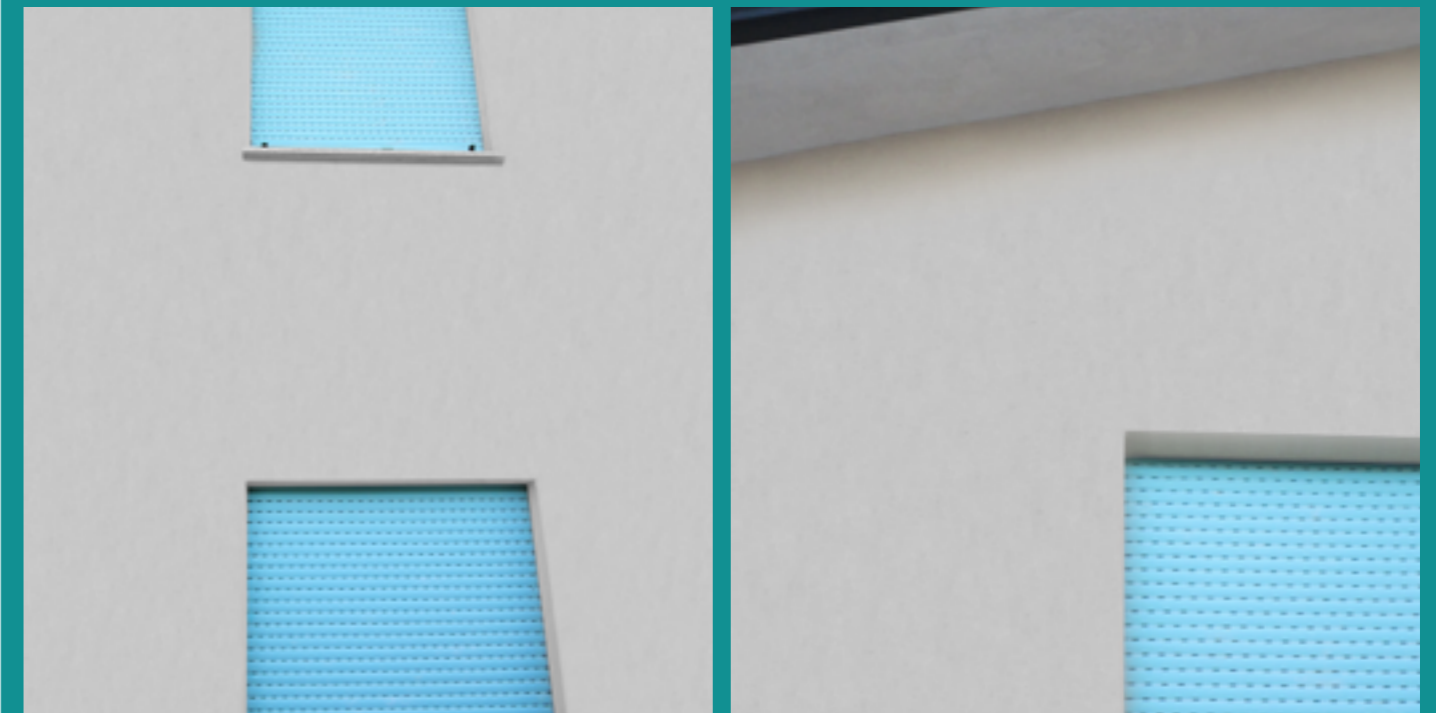
OR

ARDELAST INTONACHINO 1,2mm s. 1.645
one layers, with the proper hue
for the ETICS system

PRE-INTERVENTION SITUATION



POST-INTERVENTION RESULT



15. WAVY SURFACE (MECHANICAL, NOT AESTHETIC)

The wavy surface is a deformation of the planarity of the facades due to the arching of the insulating panels outwards (cushion effect) or inwards (mattress effect).

The deformation occurs when the quantity and distribution of the applied glue are not suitable to guarantee full and correct adhesion of the panel to the support. The minimum gluing surface of the insulating panels must be equal to 40% of the surface. Unsuitable gluing makes the system less resistant to wind stress, since it allows the passage of air between the support and the insulation itself (chimney effect) which can lead to the detachment of the insulation from the wall.

It is also of fundamental importance, after gluing the panels, to anchor them mechanically with doweling using suitable materials and systems. These deformations are unsightly and compromise the efficiency of the thermal insulation.

PRE-INTERVENTION SITUATION



INTERVENTION PLAN

SUPPORT PREPARATION

Evaluation of the anchoring status of the insulating panels and fixing of those that are not perfectly anchored; check and replace any damaged insulating panels, those that are not correctly laid or shaped, eliminate any thermal bridges, with suitable materials and interventions **as indicated by our Technical Assistance**. The joints of the boards must not be aligned with the edges of doors and windows to avoid the formation of cracks in these critical points; furthermore, elements smaller than 30 cm should be avoided at the edges. Seal any spaces between the insulating boards (when not perfectly joined) with low-expansion polyurethane adhesive foam compliant with the requirements of the European technical guide EAD 040083-00-0404.

ARDSAN RISANANTE MURALE s. 0.916 in the presence of mold, algae, moss or lichen

Cleaning surfaces by hydro-washing with water at a temperature of 90/100°C
(adjusting the pressure so as not to damage the surfaces)

CYCLE WITH LIGHTENED ELASTOMERIC REINFORCED SHAVING

FIXATIVE

ISOLEX W s. 0.081 (properly diluted)

REBUILD FONDO L s. 1.614 + FIBERGLASS MESH* 6.968.0005

ARMOUR and DROWNING

In correspondence with all openings (windows, doors, holes) positioning the mesh on the edges in an oblique direction (dimensions approximately 20 by 40 cm).

SHAVINGS

REBUILD FONDO L s. 1.614

DROWNING

FIBERGLASS MESH* 6.968.0005

With 10 cm overlaps at the joints. Apply to the still damp substrate.

SHAVINGS

REBUILD FONDO L s. 1.614

with a hue similar to the finish

FINISH

ARDELAST GRANA FINE s. 0.568

two layers, with the proper hue
for the ETICS system

OR

REBUILD INTONACLIMA L s. 1.624

one layers, with the proper hue
for the ETICS system

* compliant to the 040083-00-0404 EAD European technical guide requirements

POST-INTERVENTION RESULT





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