English version

ard collezioni

ardcoat system

ETA CE

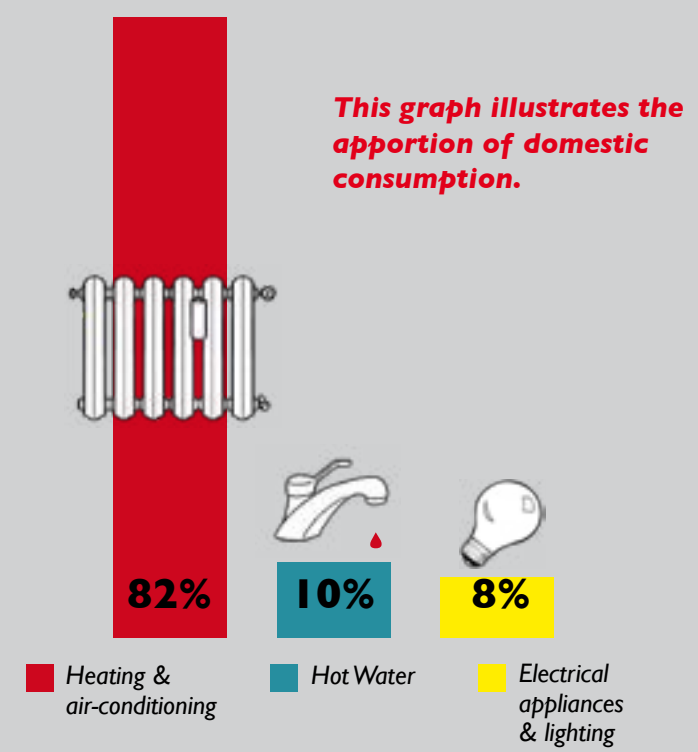
External Thermal Insulation Composite System

ENERGY SAVING IN BUILDINGS

Energy saving is an increasingly topical issue. The increase in energy supplies has huge limitations and the only solution is to limit consumptions. Energy saving is a winning strategy on all fronts: it reduces running costs, the environmental impact and improves many qualitative aspects of our lives. This brochure illustrates how the building industry is employing avant-garde systems to guarantee a better future. Renewable energy - in particular sunlight - which can be easily transformed into thermal energy or electricity, is the best way to limit pollution & energy consumption.

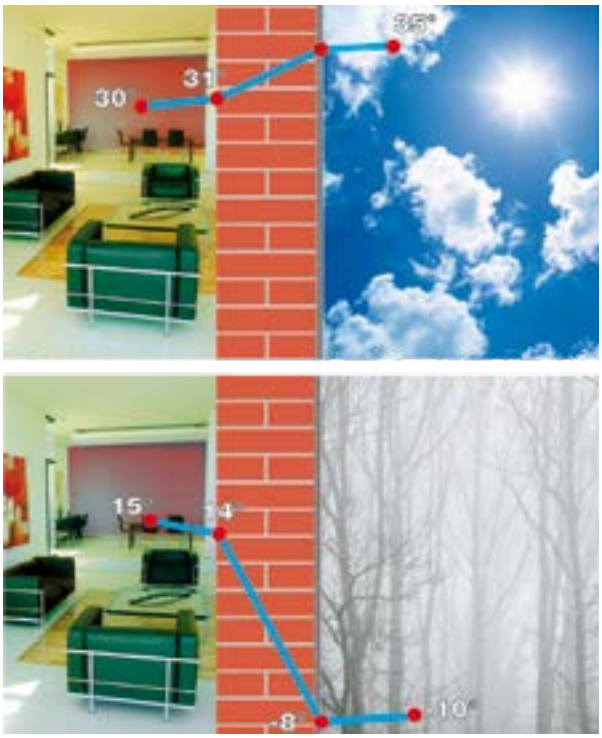
Energy saving is not just a question of using low cost energy but optimizing efficiency.

Nearly all our domestic hot water requirement is for heating & a considerable part of electric energy consumption is for air-conditioning in the summer. These expenditure items are second in line to those of food, clothing & petrol.

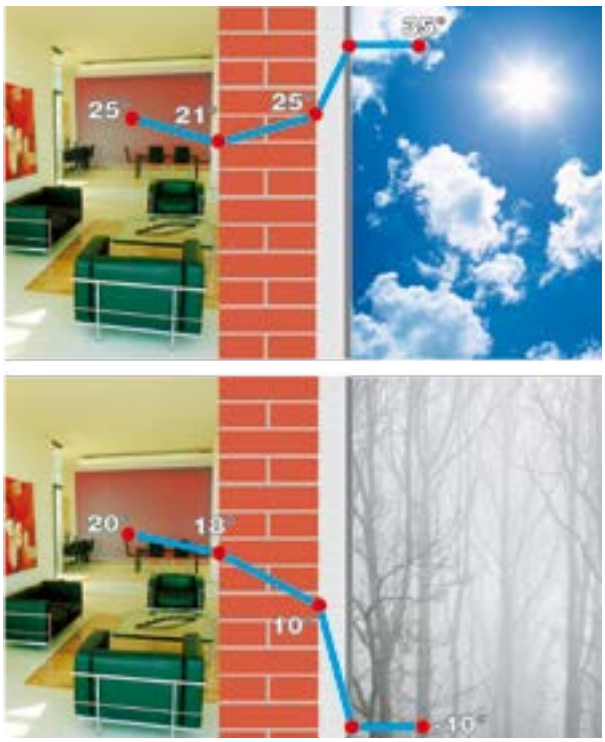


The proportion between energy consumption for heating & air conditioning clearly varies according to the climatic zone and differs greatly between northern and southern Italy. Air-conditioning has increased tremendously over the years and this confirms that insulation standards are equally important both for the high summer temperatures and the harsh winter climate.

WITHOUT ARDCOAT SYSTEM

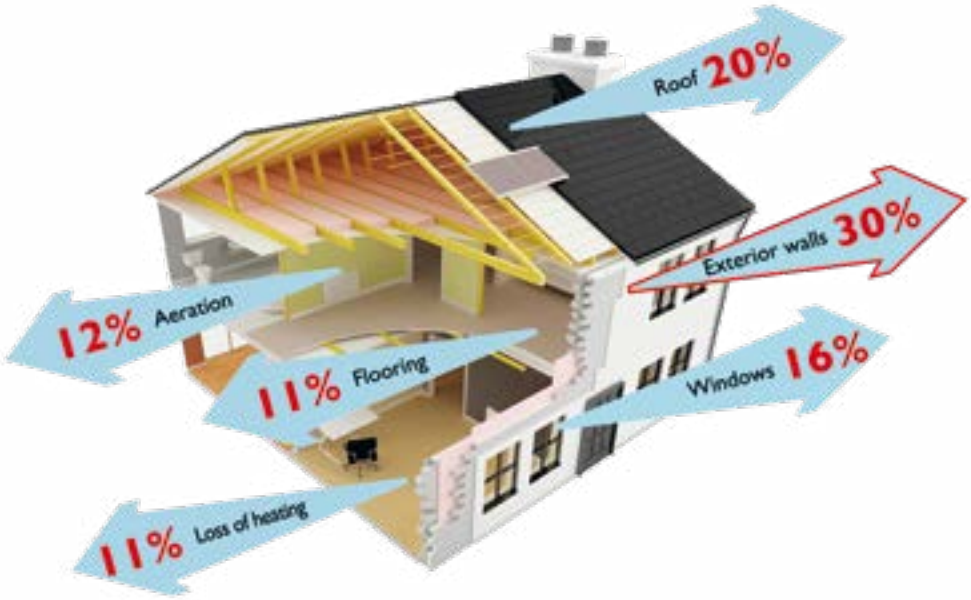


WITH ARDCOAT SYSTEM



EXTERIORS (HOW TO INTERVENE...)

The level of energetic efficiency depends greatly on the exterior; the vertical matte surfaces (perimeter walls) are extremely important.



The dispersion through walls in old constructions may even exceed 60%.
The thermographic analysis clearly highlights this phenomenon; yellow & red indicate the areas with greater heat dispersion.

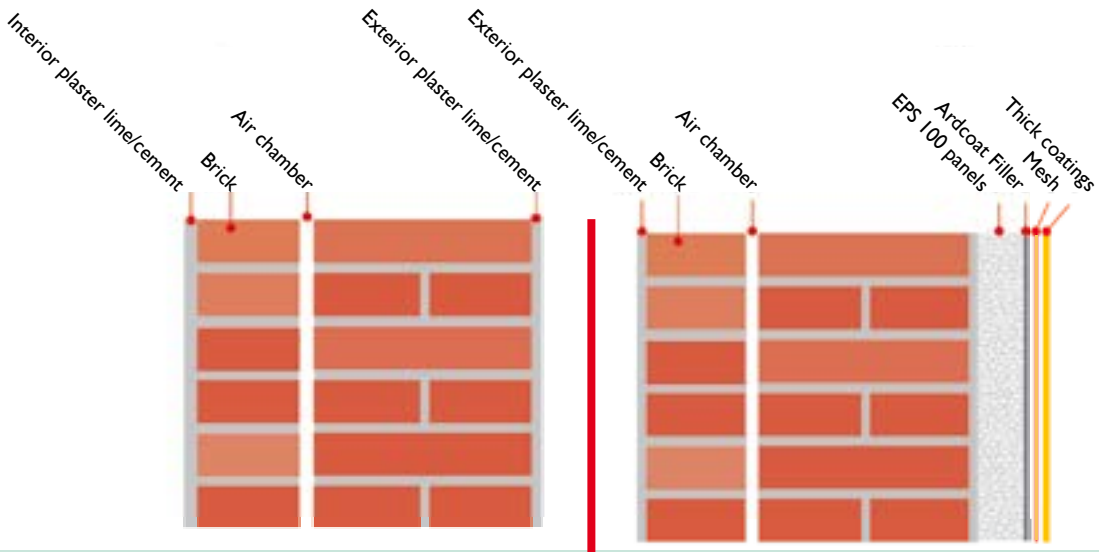
Poorly insulated walls & thermal bridges not only create huge heat dispersion but also cause cracks and mould.
This confirms that an adequate insulation is both an optimal investment and improves living comfort.
It is wiser & easier to choose the constructive system durng planning, even if restorations represent the ideal context for ETICS.
It is a modular (pliable to any architectural context), multi component system (composed with different layers/components).
The versatility and energy efficiency explains its rapid & interminable diffusion.
Listed buildings or buildings with humidity due to rising damp must be assessed attentively.

ARDCOAT SYSTEM - INSULATING SOLUTION

The correct dimensions of the insulating material can be obtained from the thermal transmittance of the pre-existant walls and by determining, with specific calculations, the level of insulation required. This approach is fundamental & of utmost importance as an undersized layer thickness would reduce the economical benefits.

A well-designed ETICS saves on the cost of heating and air-conditioning. Installation costs are recovered almost immediately and can be verified by calculating the reduction in heat transmittance through the walls insulated with the ARDCOAT system.
The following comparison was carried out on a fairly good quality wall, even if realistically speaking the walls, in particular of old buildings, can be a lot worse.

The example refers to ideal conditions (with no thermal bridges) and a perfectly dry structure. In view of these considerations the estimated saving on the cost of energy should easily be above 50%.



	A) WITHOUT ARDCOAT System			B) WITH ARDCOAT System		
	thickness [m]	λ	R=s / λ	thickness [m]	λ	R=s / λ
Interior plaster lime/cement	0,02	0,9	0,0222	0,02	0,9	0,0222
Solid brick	0,12	0,47	0,2553	0,12	0,47	0,2553
Air chamber	0,02		0,1500	0,02		0,1500
Solid brick	0,25	0,47	0,5319	0,25	0,47	0,5319
Exterior plaster lime/cement	0,02	0,9	0,0222	0,02	0,9	0,0222
EPS 100 panels				0,08	0,037	2,1622
Filler with mesh				0,004	1,2	0,0033
Thick coatings				0,001	1,21	0,0008
Wall resistance			**0,9816**			**3,1479**
Thermal surface resistance			**0,1930**			**0,1930**
Total resistance			**1,1746**			**3,3409**
Transmittance U (W/m²K)			**0,8513**			**0,2993**
Energy consumption						**-65%**

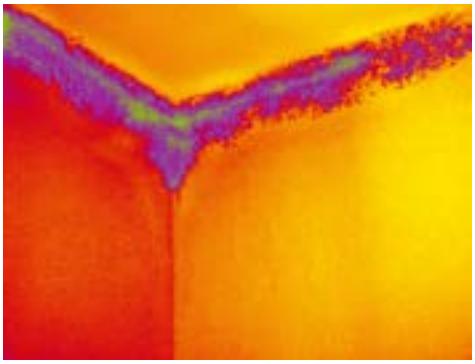
FUNCTIONAL ADVANTAGES

Issues related to thermal bridges

We have seen how a considerable amount of heat is dispersed through an undesirable heat exchange with outdoors.
This usually occurs when structural elements, with a remarkable thermal conductivity such as attics and pillars, are subject to exterior exposure.
There are numerous negative effects which result in higher heating costs, poor living comfort and likely onset of mould due to superficial condensation.
It is well known that mould causes allergic reactions in particularly sensitive individuals, children and the elderly.
An excessive humidity not only results in a poor living comfort but also causes condensation on the inside of the wall. This condition may generate the following problems due to the presence of liquid water:

- **diminution of thermal insulation**
- **interior infiltrations**
- **dissolution of the structural binders**
- **crystallization of the salts originating from the surface plaster**
- **patches on walls**

The evaluation of the hygrometric conditions is mandatory and is usually carried out by using the Glaser Diagram which evaluates the probability, in steady-state conditions, of water condensation inside walls.
Interiors: thermal-imaging highlights how the presence of mould coincides with low temperature areas.



INTERIORS: thermal-imaging highlights how the presence of mould coincides with low temperature areas.

Ardcoat system – the solution to problems deriving from thermal bridges

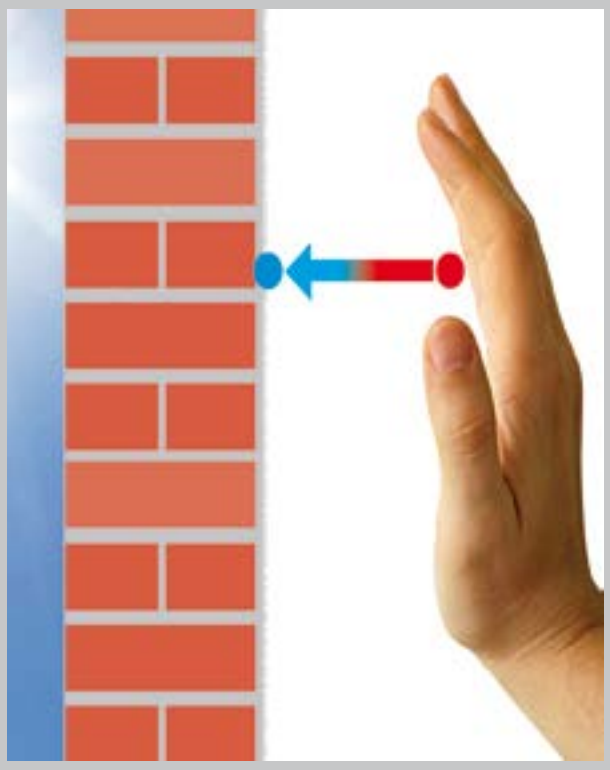
External thermal insulation systems are indeed a decisive and practical solution. This system produces a significant increase in surface temperature which keeps the walls dry and, therefore, eliminates the conditions which favour the spread of fungi and mould.
The external insulation impedes condensation and the correct water vapour permeability of the finishing products provides an ideal hygrometric balance with the external environment.
A wall is constructed with materials featuring different heat flow coefficients (tiles, plaster, concrete casting, reinforcement rods etc.). Daily thermal excursions produce differential deformations which generate fissures and cracks.
Thanks to its thermal inertia, a wall insulated from the outside is thermally more stable & subject to more moderate temperature excursions.
Apart from the aesthetics a well done insulation system **also guarantees a lasting performance.**
As far as new buildings are concerned, this technique reduces the structural thickness resulting in a significant increase in the habitable surfaces.

Ardcoat and living comfort

A pleasant and immediate sensation is the perception of comfort that we perceive when our body temperature doesn't have to adapt to the ambient temperature. A considerable part of the heat transfer occurs through radiation which, in domestic environments, depends on the interior surfaces.
Thermographic measurements illustrate how the interiors of buildings insulated with ETICS are ideally 5/6 degrees warmer during the winter. Furthermore, comfort is improved during the summer months thanks to cooler exterior walls.

Environment- friendliness

Saving energy does not only mean a reduction in fuel consumption but also a lower production of the gasses responsible for the greenhouse effect & environmental pollution.
According to a report issued by the Ministry of Economic Development, a third of Italy's energy is for civil use.
As heating and air-conditioning represent the primary energy consumption, it is important to reduce dispersion.
This is possible with insulation systems (ETICS) which reduce fuel consumption by more than 65% (refer to page 4).
Even a simple personal choice like an insulating system will tackle energy demand and contribute to a better future.

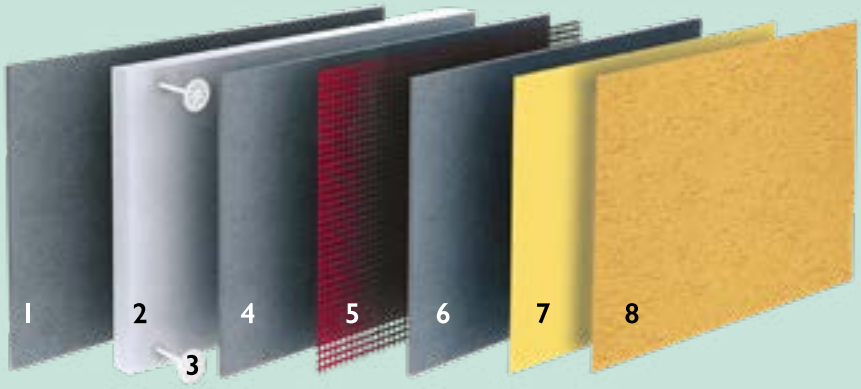


High temperatures between two surfaces result in an increase in heat dispersion and a poorer personal comfort.

COMPONENTS OF THE SYSTEM

Making the right choice

In Europe, insulation systems are known as ETICS (Exterior Thermal Insulation Composite Systems).
This system is technically defined as a "composite system" because it is composed of many different elements.



1. Ardcoat adhesive filler for thermal insulation systems.
2. Insulating panel (closed cell sintered expanded polystyrene) with CE Marking according to EN 13163 – reaction to fire performance Eurocass E. Alternatively, panels in graphited EPS, rock wool, expanded polyurethane and cork can be employed.
3 Dowels which comply with the ETAG 014 guidelines.
4. Ardcoat adhesive filler for thermal insulation systems.
5. Alkali resistant fiberglass starched warp & woof mesh weighing 150 gr/m² - 4 x 4,5 mm ± 5% centre spacing, with ETAG 004 certification and 10 cm overlaps.
6. Ardcoat adhesive filler for thermal insulation systems.
7. Pigmented primer (the hue must match the finish).
8. Ard finishing coat with CE Marking according to EN 15824 in various particle sizes.

The performance depends on the type of insulation and thickness. Another important factor, which is often overlooked is "durability". This depends on each single layer and the mechanical/thermo-hygrometric compatibility.
A deep knowledge and systematic evaluation of the dynamics is fundamental in order to select the best performing components.
Our technical staff in collaboration with the University of Padua, has been studying this matter for several years. It now boasts a high profile of expertise which makes us the optimal partner for the most demanding customers.
A detailed assessment of the specific conditions is necessary before selecting the single components and insulating cycle. Professional advice may be required during the planning phase.
Our Technical Assistance Team is always on hand.

Problems deriving from inexpert installations

Another factor which affects "effectiveness and durability" is the applicators expertise. Our instructions must be followed accurately in order to guarantee the correct laying.
A list of all the most significant issues which stem from an incorrect laying process are provided on page 28.
A series of accessories (profiles, end trims, staff angles, dowels etc.) have been optimally devised to resolve architectural issues. Hence, feed materials must be selected carefully to guarantee a lasting performance whereas the particular geometry facilitates the laying process.
Various illustrations are provided in the chapter entitled "Examples". The planning phase (choice of insulator, structure & operational details) is the responsibility of qualified technicians.

ETICS WITH CE MARKING

The EU Construction Products Regulation N° 305/2011 which entered into force in April 2011, is a regulation that guarantees compliance with the performance requirements and consistent quality standards of construction materials.
The specific requirements for such materials are published in a number of harmonised standards.
The ETAG 004 (European Technical Approval Guideline) is the reference standard for ETICS.
Following a complex process of laboratory measurements the EOTA (European Organization for Technical Approval) issues the Authorization to companies which have applied voluntarily.
ETA 17/0640 identifies the ARDCOAT SYSTEM.
This document, recognized by all member states, is integrated with a periodic AVCP certificate (Assessment & Verification of Performance Constancy) issued by external inspection bodies after monitoring the production process.
Both of the aforementioned certifications must be obtained to affix the CE marking.

Factory inspections have been mandatory since April 2011; indeed, most of the approvals granted before this date do not meet the requirements necessary for the CE marking.

CE

ARD F.lli Raccanello s.p.a.
1a Strada, 13 Z.I. Nord 35129 PADOVA
17

ETAG 004 ed. 2013

Sistema Composito di Isolamento Tecnico Esterno di facciata con intonaco su EPS destinato all'isolamento termico esterno delle murature degli edifici

Denominazione dell'ETICS: ARDCOAT SYSTEM cod. 9.968.0000

Organismo Notificato: ITC Istituto per le Tecnologie della Costruzione - Consiglio Nazionale delel Ricerche
via Lombardia 49 - 2009*8 San Giuliano Milanese ITALY

n° identificazione Organismo Notificato: 0970

European Technical Approval: ETA 17/0640 del 13/09/2017

Sistema di VVCP: 2+

Norma armonizzata: ETAG 004 edizione 2013

Dichiarazione di Prestazione n° 28/2017

THE CHROMATIC RANGE

The **Centri Storici** & **Extra Colours** exterior fan-decks are the reference for our tinting systems ("suitability for use" specifications are provided on the back of each strip).
Only finishing hues classified as "suitable" should be employed to avoid decay due to solar radiation overheating.
Our distributors can contact our laboratory to evaluate the possibility of producing a lasting dark colour sample coating.

ARDCOAT SYSTEM: adhesives & fillers

ardcoat S8

siliceous adhesive filler for ETICS

Family 13 · class A
TDS N° 407
MSDS° 967

PRODUCT INFORMATION

ARDCOAT S8 is a ready-mix based on premier quality Portland cement, fluvial silica sands and additives suitable for the bonding & filling (interiors & exteriors) of thermal insulation panels such as EPS, stiferite, mineral wool (glass & rock) or cork intended for the realization of thermal insulation systems.The remarkable mechanical properties guarantee a solid adhesion to insulating panels (which are notoriously subject to creeping) as well as the most common mural substrates such as bricks, plastered walls, concrete etc. Furthermore, the particular granulometry and optimum workability result in a filling mortar which offers an excellent uniforming power, easy application & a finishing similar to two-coat plaster work. It is also suitable for reinforced fillings on coplanar surfaces with old paintwork or bonded coatings.

KEY INFORMATION

mix 25 kg of product with 6,7 L of water

Glue: approx. 3-5 kg/m²
Filler: approx. 4 kg/m²
per 3 mm of thickness

recoatable after 5-6 days

Complies with UNI EN 998/1:2010

ardcoat C8/C8W

carbonatic adhesive filler for ETICS

Family 13 · class A
TDS N° 408
MSDS° 967

PRODUCT INFORMATION

ARDCOAT C8 è un premiscelato cementizio monocomponente ideale per l'incollaggio e la rasatura in interni ed esterni di pannelli termoisolanti fra cui quelli in polistirene espanso (EPS), Stiferite, lane minerali (vetro e roccia) o sughero, destinati alla realizzazione di sistemi coibenti a cappotto. Le elevate caratteristiche meccaniche garantiscono una stabile e tenace adesione ai pannelli coibenti, notoriamente sottoposti a deformazioni, ed ai supporti murali più diffusi come ad esempio laterizi, superfici murali intonacate, calcestruzzo ecc. Inoltre la particolare granulometria e l'ottima lavorabilità fanno di ARDCOAT C8 una malta a rasare dotata di elevata facilità applicativa, di ottimo potere uniformante con finitura tipo intonaco civile fine. E' idoneo anche per la realizzazione di rasature armate di superfici complanari con vecchie pitture o rivestimenti ben aderenti.ARDCOAT C8 è conforme ai requisiti della guida tecnica europea ETAG 004, è di colore grigio ma è disponibile anche nella versione bianca ARDCOAT C8W. 1.967.0510

KEY INFORMATION

mix 25 kg of product with 6,7 L of water

Glue: approx. 3-5 kg/m²
Filler: approx. 4 kg/m²
per 3 mm of thickness

recoatable after 5-6 days

Complies with UNI EN 998/1:2010

ardcoat PU

adhesive foam for bonding insulation panels

PRODUCT INFORMATION

ARDCOAT PU is a monocomponent polyurethane adhesive foam, not readily flammable, ideal for the "quick & easy" bonding of insulation panels intended for interior & exterior thermal insulation. It is particularly suitable for the chemical bonding of panels in expanded (EPS) and extruded (XPS) polystyrene - Stiferite, mineral fibre (glass & rock) or cork - intended for ETICS. The remarkable mechanical properties guarantee a solid adhesion to insulation panels of the most common mural substrates such as bricks, plastered mural surfaces, concrete etc. (assuming the surfaces are relatively regular). ARDCOAT PU contains CFC & HCFC free expanded gases therefore, it is environmentally safe according to the EU regulations in force.ARDCOAT PU enables the realization of ETICS which satisfy the ETAG 004 requirements.

KEY INFORMATION

- approx. 12,5 m2/l
- 10 m²/pcs per can of product

Family 13 · class A
TDS N° 410
MSDS N° 987

ardcoat L10 glass

lightweight adhesive filler for ETICS

PRODUCT INFORMATION

ARDCOAT L10 Glass is a ready-mix based on premier quality Portland cement, selected sands light mineral inert and additives suitable for the bonding & filling (interiors & exteriors) of thermal insulation panels such as EPS, stiferite, mineral wool (glass & rock) or cork intended for the realization of thermal insulation systems. The remarkable mechanical properties guarantee a solid adhesion to insulating panels (which are notoriously subject to creeping) as well as the most common mural substrates such as bricks, plastered walls, etc. Furthermore, the particular granulometry & optimum workability result in a broad spectrum filling mortar which offers an excellent spreading capacity & thickness. ARDCOAT L10 Glass is perfect for fillings (with or without reinforcements) on coplanar surfaces with old paintwork or bonded coatings.

KEY INFORMATION

mix 20 kg of product with 5,6 L of water

Glue: approx. 4-6 kg/m^2
Filler: approx. 5,2 kg/m^2
per 5 mm of thickness

recoatable after
5-6 giorni

Complies with
UNI EN 998/1:2010

Family 13 · class A
TDS N° 409
MSDS N° 967

Pigmented primers

primer riempitivo coprente

pigmented sealer with optimum hiding power

PRODUCT INFORMATION

PRIMER RIEMPITIVO COPRENTE is a pigmented sealer suitable for the preparation of interior/exterior mural surfaces to be finished with traditional emulsion or textured paints. It offers a remarkable filling power, optimum hiding power & anchorage. In fact, its fixative and hiding power is often such that one of the finishing coats can be saved. PRIMER RIEMPITIVO COPRENTE is ideal for application on lime cement mortar plaster, chalky primers and plasterboard panels. The application on plasterboard is particularly effective as it produces a rough surface favouring the adhesion of the subsequent layers. PRIMER RIEMPITIVO COPRENTE is also suitable for smooting stucco work & the recoating of surfaces painted with strong colours.

KEY INFORMATION

15-20%
in water
volume

10-15%
in water
volume

approx. 6 m^2/l
per 1 layer

Family 3 · Class B
TDS N° 260
MSDS N° 075

recoatable after 4 h

rasante a pennello

rough acryl-siloxanic pigmented primer

PRODUCT INFORMATION

RASANTE A PENNELLO is a rough pigmented primer suitable for smoothing interior & exterior surfaces to be finished with traditional emulsion paints, decorative effects & thick coatings. It offers a remarkable filling/hiding power, alkali inertia, anchorage & adhesion on any clean/dry mural surface. RASANTE A PENNELLO is ideal for interior application on plasterboard & smooth chalky/lime surfaces. It also improves the final aesthetics of surfaces with repair areas & imperfections. At the same time, it can also be applied externally to roughen smooth surfaces such as cement slabs & concrete parts. RASANTE A PENNELLO is ideal for smoothing & filling substrates characterized by static micro-cracks & as a primer to reproduce antique like hazes.

KEY INFORMATION

12-15%
in water
volume

5-10%
in water
volume

approx. 3,7 m^2/l
per 1 layer

Family 3 · Class B
TDS N° 263
MSDS N° 064

recoatable after
4 h

rasard

uniforming smoother

PRODUCT INFORMATION

RASARD is a rough pigmented primer suitable for smoothing exterior walls to be finished with traditional emulsion paints or thick coatings. RASARD features an excellent filling power which uniforms irregular surfaces such as those found during restoration work. It also offers an optimum hiding power, resistance to alkali, adhesion & anchorage which lends a rough aspect similar to two coat plaster work. Thanks to these features it can be used to roughen smooth surfaces such as cement slabs & concrete parts. RASARD is ideal for filling substrates with static micro-cracks & as a primer to reproduce antique-effect rustic hazes.

KEY INFORMATION

5-10% in water volume

5-10% in water volume

approx. 2 m^2/l per 1 layer

Family 3 · Class B
TDS N° 261
MSDS N° 083

recoatable after 4 h

silrest intermedio

bonding primer

PRODUCT INFORMATION

SILREST INTERMEDIO is a specific primer based on potassium silicate and inerts with a selected granulometry. It is ideal for smoothing external surfaces to be finished with the Silrest line of mineral products. The exceptional filling power uniforms the irregularities found during restoration works. The remarkable vapour permeability makes it the perfect product when treating dehumidifying plasters which can be recoated with different finishes such as the SILIARD line of products. SILREST INTERMEDIO is also suitable for uniforming & filling substrates with crazes &/or patches of different granulometry. The optimum adhesion is perfect for treating old organic paintwork ("cost saving" as the removal of old synthetic paintwork is not necessary). SILREST INTERMEDIO creates a bonding bridge between the substrate and the silicate paint preserving an open capillary network which is essential for the passage of water vapour.

KEY INFORMATION

10-15% in volume of ISOREST 0.076.

approx. 3,3 m^2/l per 1 layer

Family 7 · Class B
TDS N° 271
MSDS N° 095

recoatable after 24 h

Ard's finishing products

The finishes are specific products which guarantee the aesthetic appeal and even more important, functional protection which determines the lifespan.

The finishing coat must comply with the following criteria:
- **REMARKABLE WEATHER RESISTANCE**
- **WATER VAPOUR PERMEABILITY**
- **REMARKABLE CHROMATIC LUMINOSITY**
- **LIQUID WATER IMPERMEABILITY**
- **MOULD/ALGAE RESISTANCE** (according to the UNI 15457:2008 & UNI 15458:2008).

Ard's renowned INTONACLIMA & SPACHTEL RUSTICO (algae resistant version) which also feature an excellent "application" & "filling", meet the aforementioned requirements.
State-of-the-art technology is found in our ARDELAST line. This line of products offers excellent general features, prevents & resolves the problems regarding the formation of microcrazing.

spachtel rustico 1 · 1,2 · 1,5

acrylic plaster

PRODUCT INFORMATION

SPACHTEL RUSTICO is a fibre-reinforced plastic rustic like coating for interiors & exteriors. The product lends an optimum resistance to alkali & atmospheric agents, remarkable elasticity & adherence, low dirt pick-up, excellent application & workability. The use of lightfast pigments (UV rays) & alkali guarantee the solidity of the colours even on walls exposed to strong sunlight & weather extremes.
SPACHTEL RUSTICO is suitable for the protection of urban buildings in two coat plaster work, cement mortar renders, gypsum plaster for interiors & smooth compact prefabricated concrete structures.

KEY INFORMATION

ready to use (with steel or plastic float)

m²/kg
1 mm: 0,55 m²/kg
1,2 mm: 0,45 m²/kg
1,5 mm: 0,36 m²/kg

Family 6 · class E
TDS n° 76, 82, 77
MSDS: n° 632, 637, 639

CE Marking
UNI EN 15824

intonaclima 1 · 1,2 · 1,5

algae resistant acryl-siloxane rustic coating

PRODUCT INFORMATION

INTONACLIMA is an acryl-siloxane coating for exteriors. The product lends a remarkable resistance to atmospheric agents & alkali, optimum adherence, applicability, working & low dirt pick-up. The light-fast pigments guarantee a good colour retention even on walls exposed to radiation & weather extremes. It also contains specific additives which inhibit algae & mould growth.
INTONACLIMA is ideal for the for the protection of urban buildings in two coat plaster work, cement mortar renders (whether or not finished), gypsum plaster for interiors & smooth compact prefabricated concrete structures. INTONACLIMA (with a granulometry above 1 mm) is particularly suitable for the finishing of ETICS.

KEY INFORMATION

ready to use (with steel or plastic float))

m²/kg
1 mm : 0,55 m²/kg
1,2 mm : 0,45 m²/kg
1,5 mm : 0,36 m²/kg

Family 6 · class E
TDS n° 79, 78, 89
MSDS n°638, 635, 630

CE Marking
UNI EN 15824

ardelast intonachino
1 · 1,2 mm

algae resistant acrylic-siloxane elastomeric filler coating

PRODUCT INFORMATION

ARDELAST INTONACHINO, thanks to a remarkable elasticity - even in low temperatures - is specific for the restoration of cracked walls. It features optimum filling/covering power, alkaline inertia, adhesion (on clean & dry surfaces) & low dirt pick-up due to a self-reticulating substance which reacts under sunlight increasing surface hardness without reducing the coating's elasticity. The presence of specific broad spectrum biocides lends an effective protection against the proliferation of algae, funguses & moulds. These particular properties make ARDELAST INTONACHINO perfect for the finishing of ETICS.

KEY INFORMATION

ready to use (with steel or plastic float)

m²/kg
1 mm: 0,65 m²/kg
1,2 mm: 0,55 m²/kg

Family 9 · class C
TDS n°102, 108
MSDS n° 556, 645

CE Marking
UNI EN 15824

silrest intonachino
1 · 1,2 mm

silicate mineral plaster

PRODUCT INFORMATION

SILREST INTONACHINO is a coating based on potassium silicate in aqueous solution, formulated in compliance with the Regulation VOB/C DIN 18363 2.4.6.. After application the soluble silicates react with the carbon dioxide in the air originating colloidal silex hydrate which offers remarkable fixative powers. The silex, reacts with the plaster's calcium salts producing silicate calcium. The film free mineral nature offers optimum breathability and an excellent bond on lime plaster, cement mortar renders & civil plastering without flaking or detachment. SILREST INTONACHINO is not thermoplastic so a low-dirt pick up is guaranteed together with a mould and bacterial resistance thanks to its inorganic nature. SILREST INTONACHINO is a fibre reinforced coating which features an outstanding mechanical resistance in comparison to traditional silicate coatings.

KEY INFORMATION

ready to use (with steel or plastic float)

m²/kg
1 mm: 0,5 m²/kg
1,2 mm: 0,4 m²/kg

Family 7 · class C
TDS n° 152, 451
MSDS n° 627, 629

CE Marking
UNI EN 15824

siliard intonachino
1,2 mm

siloxanic algae resistant plaster

PRODUCT INFORMATION

SILIARD INTONACHINO is formulated using advanced technologies based on nanoparticles & siliceous binders in aqueous dispersion.
SILIARD INTONACHINO lends a remarkable water vapour permeability, water-repellence & low water absorption. SILIARD INTONACHINO produces a porous/transpiring matt coat which adheres perfectly to both mineral substrates & old mineral/synthetic paintwork. SILIARD INTONACHINO offers an outstanding resistance to weather extremes, low dirt pick-up & inhibits the formation of micro-organisms such as mould & algae. SILIARD INTONACHINO is perfect for the protection & decoration of listed buildings, external plaster, transpiring restoration plaster & porous materials in general. SILIARD INTONACHINO is particularly suitable for the finishing of ETICS.

KEY INFORMATION

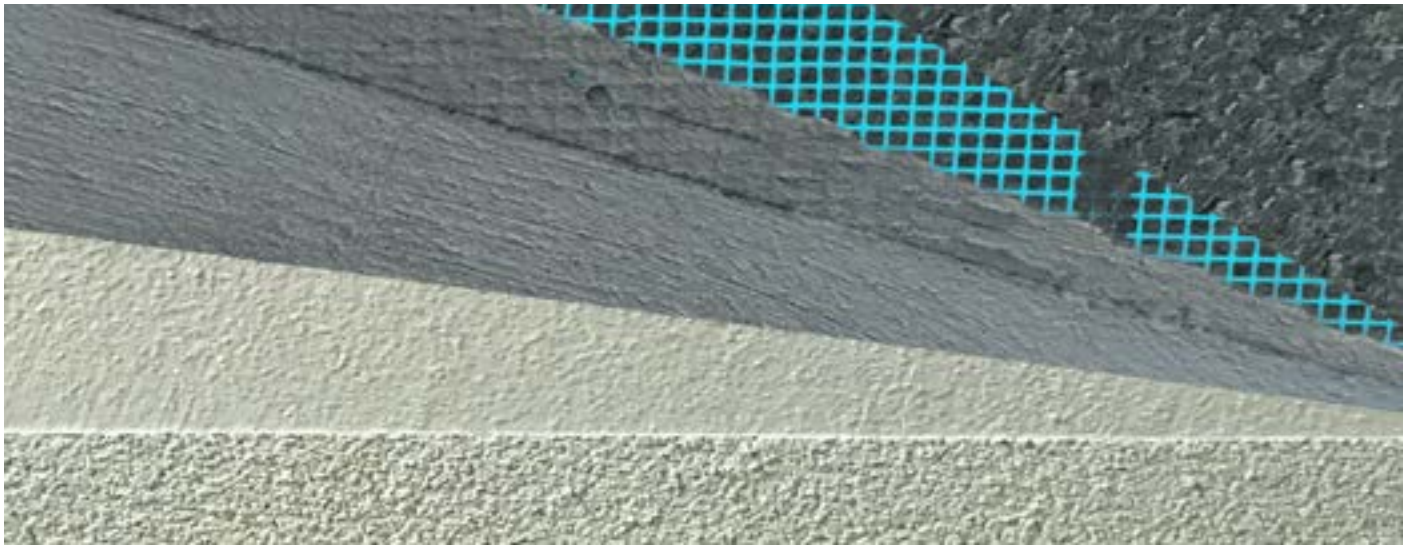
ready to use (with steel or plastic float)

m²/kg
1,2 mm: approx. 0,45 m²/kg

Family 9 · class C
TDS n°216
MSDS: n° 625

CE Marking
UNI EN 15824

PROPOSED CYCLES
eps & eps with graphite

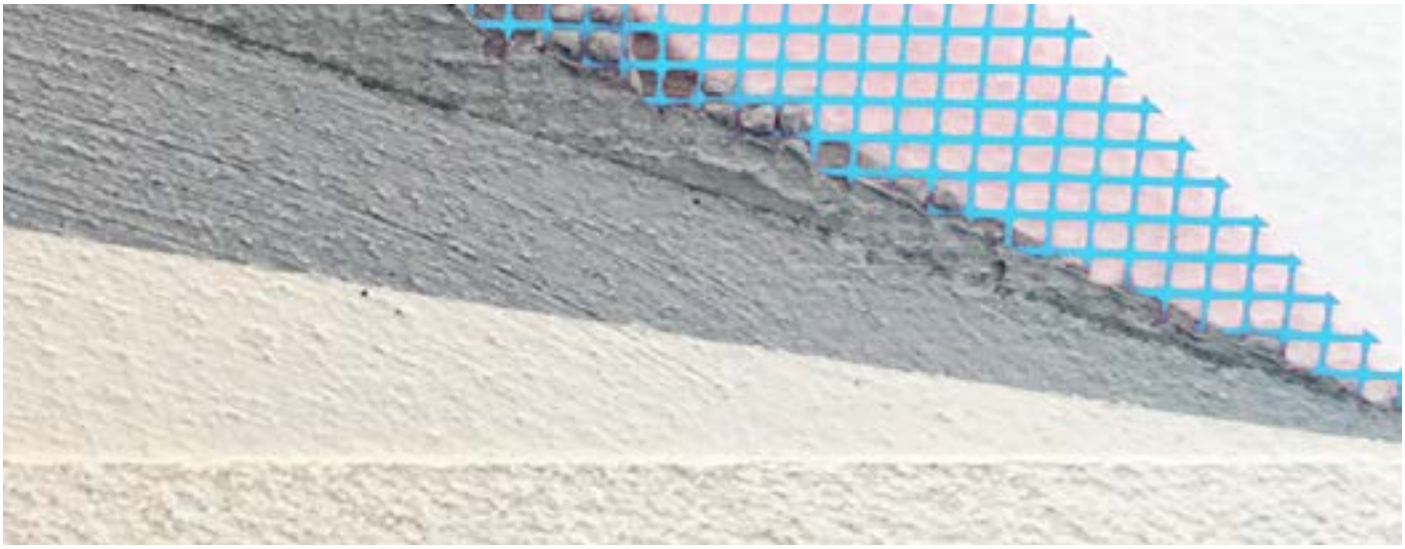


EPS: Thermal insulation composite system with synthetic closed cell EPS panels – CE Marking in compliance with the EN 13163 Regulation (EU classification for the Reaction to Fire - Euroclass E -).

EPS WITH GRAPHITE: Thermal insulation composite system with synthetic closed cell EPS panels with graphite additive - CE Marking in compliance with the EN 13163 (EU classification for the Reaction to Fire - Euroclass E -).

	ADHESIVE & FIXING MECHANICAL	REINFORCED FILLER	PRIMER	FINISHES
BASIC CYCLE	ARDCOAT C8 Mono-component carbonate based cementitious powder ready mix for bonding insulation panels in compliance with the ETAG 004 (Guideline for European Technical Approval of ETICS). Min. consumption: 4-5 kg/m² Mechanical fixing of insulation panels with dowels in compliance with the ETAG 014 (European Technical Guideline).	ARDCOAT C8 Mono-component carbonate based cementitious powder ready mix for reinforced filling in compliance with the ETAG 004 (Guideline for European Technical Approval of ETICS). Minimum thickness: 3 mm Minimum consumption: 4-5kg/m² Alkali resistant fiberglass starched warp & woof mesh weighing 155 gr/m² - 4 x 4,5 mm ± 5% centre spacing, with ETAG 004 certification and 10cm overlaps.	PRIMER RIEMPITIVO COPRENTE Pigmented undercoat with high covering power (tintable with a hue similar to the finish). Consumption: 0,16 l/m²	INTONACLIMA Algae resistant acryl-siloxane rustic coating - CE Marking in compliance with the EN 15824 Regulation. Thickness: 1,2 mm: Consumption: 2,2 kg/m² Thickness: 1,5 mm: Consumption: 2,8 kg/m²
ALTERNATIVE	ARDCOAT S8 Mono-component siliceous based cementitious powder ready mix for bonding insulation panels in compliance with the ETAG 004 (Guideline for European Technical Approval of ETICS). Min. consumption: 4-5 kg/m² ARDCOAT L10 GLASS Mono-component lightweight cementitious powder ready mix for bonding insulation panels. Min. consumption: 4-5 kg/m² ARDCOAT PU Mono-component polyurethane adhesive foam (not readily flammable) for the bonding of insulation panels in compliance with the ETAG 004 (Guideline for European Technical Approval of ETICS). Min. consumption: 80 ml/m²	ARDCOAT C8 W (white) Mono-component carbonate based cementitious powder ready mix for reinforced filling in compliance with the ETAG 004 (Guideline for European Technical Approval of ETICS). Minimum thickness: 3 mm Minimum consumption: 4-5kg/m² ARDCOAT S8 Mono-component siliceous based cementitious powder ready mix for bonding insulation panels in compliance with the ETAG 004 (Guideline for European Technical Approval of ETICS). Minimum thickness: 3mm Minimum consumption: 4-5kg/m² ARDCOAT L10 GLASS Mono-component lightweight cementitious powder ready mix for reinforced filling. Thickness: 5 mm Consumption: 5-6 kg/m²	RASANTE A PENNELLO Rough pigmented acryl siloxane primer (tintable with a hue similar to the finish). Consumption: 0,27 l/m² RASARD Rough pigmented uniforming primer (tintable with a hue similar to the finish). Consumption: 0,5 l/m	SPACHTEL RUSTICO Acrylic plaster - in the algae resistant additive version - CE Marking in compliance with the EN 15824 Regulation. Thickness: 1,2 mm: Consumption: 2,2 kg/m² Thickness: 1,5 mm: Consumption: 2,8 kg/m²

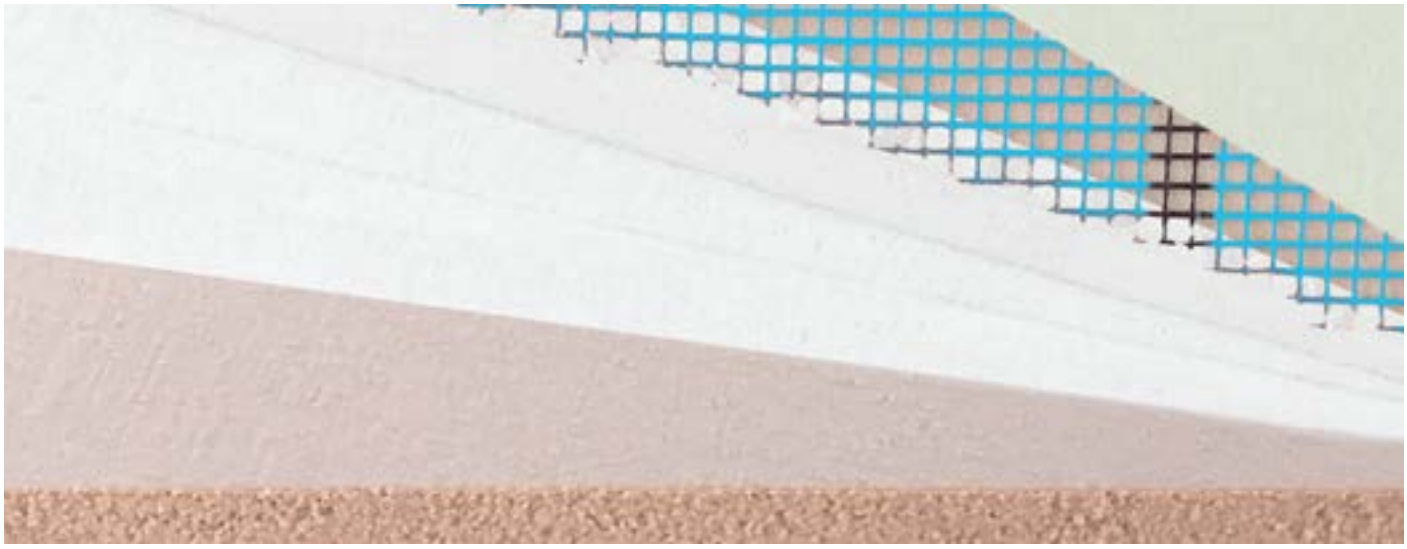
double-density eps



DOUBLE-DENSITY EPS: Thermal insulation composite system with synthetic closed cell EPS panels coupled with panels with graphite additives - CE Marking in compliance with the EN 13163 Regulation (EU classification for the Reaction to Fire - Euroclass E -).

	ADHESIVE & FIXING MECHANICAL	REINFORCED FILLER	PRIMER	FINISHES
BASIC CYCLE	ARDCOAT S8 Mono-component siliceous based cementitious powder ready mix for bonding insulation panels in compliance with the ETAG 004 (Guideline for European Technical Approval of ETICS). Min. consumption: 4-5 kg/m². Mechanical fixing of insulation panels with dowels in compliance with the ETAG 014 (European Technical Guideline).	ARDCOAT S8 Mono-component siliceous based cementitious powder ready mix for bonding insulation panels in compliance with the ETAG 004 (Guideline for European Technical Approval of ETICS). Min. consumption: 3 mm Minimum consumption: 4-5kg/m² Alkali resistant fiberglass starched warp & woof mesh weighing 155 gr/m² - 4 x 4,5 mm ± 5% centre spacing, with ETAG 004 certification and 10cm overlaps.	PRIMER RIEMPITIVO COPRENTE Pigmented undercoat with high covering power (tintable with a hue similar to the finish). Consumption: 0,16 l/m²	INTONACLIMA Algae resistant acryl-siloxane rustic coating - CE Marking in compliance with the EN 15824 Regulation. Thickness: 1,2 mm: Consumption: 2,2 kg/m² Thickness: 1,5 mm: Consumption: 2,8 kg/m²
ALTERNATIVE	ARDCOAT C8 Mono-component carbonate based cementitious powder ready mix for bonding insulation panels in compliance with the ETAG 004 (Guideline for European Technical Approval of ETICS). Min. consumption: 4-5 kg/m² ARDCOAT L10 GLASS Mono-component lightweight cementitious powder ready mix for bonding insulation panels. Min. consumption: 4-5 kg/m² ARDCOAT PU Mono-component polyurethane adhesive foam (not readily flammable) for the bonding of insulation panels in compliance with the ETAG 004 (Guideline for European Technical Approval of ETICS). Min. consumption: 80 ml/m²	ARDCOAT C8 W (white) Mono-component carbonate based cementitious powder ready mix for reinforced filling in compliance with the ETAG 004 (Guideline for European Technical Approval of ETICS). Minimum thickness: 3mm Minimum consumption: 4-5kg/m² ARDCOAT S8 Mono-component siliceous based cementitious powder ready mix for bonding insulation panels in compliance with the ETAG 004 (Guideline for European Technical Approval of ETICS). Minimum thickness: 3 mm Minimum consumption: 4-5kg/m² ARDCOAT L10 GLASS Mono-component lightweight cementitious powder ready mix for reinforced filling. Thickness: 5 mm Consumption: 5-6 kg/m	RASANTE A PENNELLO Rough pigmented acryl siloxane primer (tintable with a hue similar to the finish). Consumption: 0,27 l/m² RASARD Rough pigmented uniforming primer (tintable with a hue similar to the finish). Consumption: 0,5 l/m	SPACHTEL RUSTICO Acrylic plaster - in the algae resistant additive version - CE Marking in compliance with the EN 15824 Regulation. Thickness: 1,2 mm: Consumption: 2,2 kg/m² Thickness: 1,5 mm: Consumption: 2,8 kg/m²

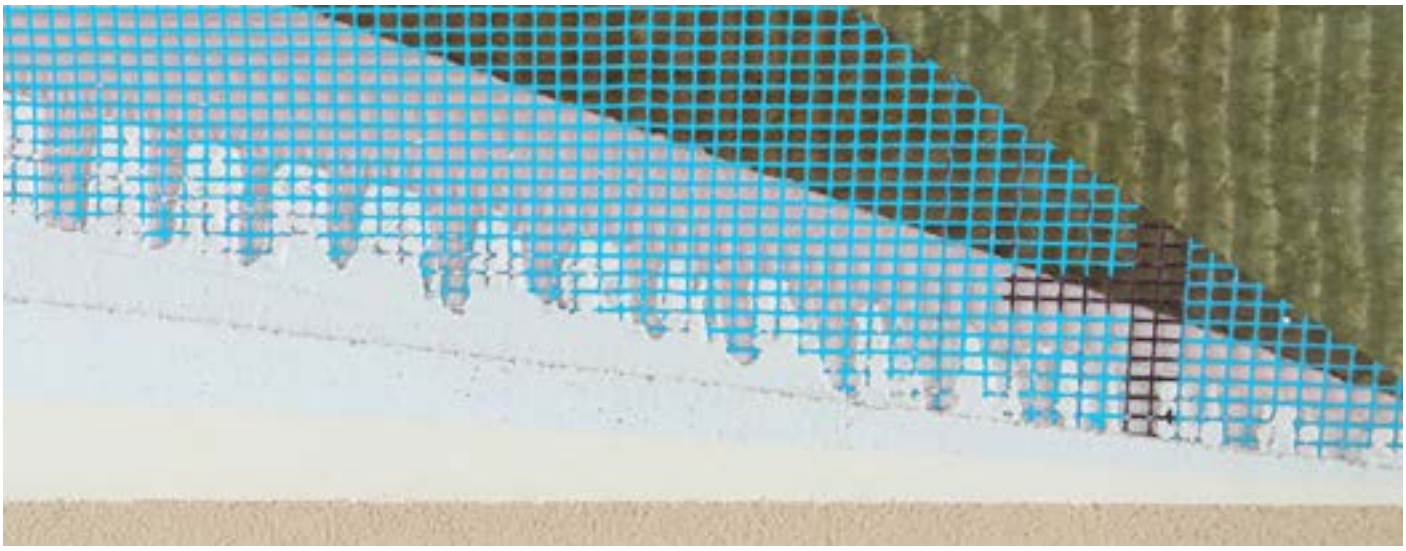
expanded polyurethane



PIR: Thermal insulation composite system with expanded polyurethane panels PIR covered with a saturated glass mesh - CE Marking in compliance with the EN 13165 Regulation (EU classification for the Reaction to Fire - Euroclass E -).

	ADHESIVE & FIXING MECHANICAL	REINFORCED FILLER	PRIMER	FINISHES
BASIC CYCLE	ARDCOAT C8 Mono-component carbonate based cementitious powder ready mix for bonding insulation panels in compliance with the ETAG 004 (Guideline for European Technical Approval of ETICS). Min. consumption: 4-5 kg/m² Mechanical fixing of insulation panels with dowels in compliance with the ETAG 014 (European Technical Guideline).	ARDCOAT C8 W (white) Mono-component carbonate based cementitious powder ready mix for bonding insulation panels in compliance with the ETAG 004 (Guideline for European Technical Approval of ETICS). Minimum thickness: 3mm Minimum consumption: 4-5kg/m² Alkali resistant fiberglass starched warp & woof mesh weighing 155 gr/m² - 4 x 4,5 mm ± 5% centre spacing, with ETAG 004 certification and 10cm overlaps.	PRIMER RIEMPITIVO COPRENTE Pigmented undercoat with high covering power (tintable with a hue similar to the finish). Consumption: 0,16 l/m²	ARDELAST INTONACHINO Algae resistant acrylic-siloxane elastomeric filler coating – CE Marking in compliance with the EN 15824 Regulation Thickness: 1 mm: Consumption: 1,6 kg/m² Thickness: 1,2 mm: Consumption: 2 kg/m² With this cycle it is possible to obtain Class A3 crack resistance in compliance with the UNI EN 1062-7 Standards.
ALTERNATIVE	ARDCOAT S8 Mono-component siliceous based cementitious powder ready mix for bonding insulation panels in compliance with the ETAG 004 (Guideline for European Technical Approval of ETICS). Min. consumption: 4-5 kg/m² ARDCOAT PU Mono-component polyurethane adhesive foam (not readily flammable) for the bonding of insulation panels in compliance with the ETAG 004 (Guideline for European Technical Approval of ETICS). Min. consumption: 80 ml/m²	ARDCOAT C8 Mono-component carbonate based cementitious powder ready mix for bonding insulation panels in compliance with the ETAG 004 (Guideline for European Technical Approval of ETICS). Minimum thickness: 3mm Minimum consumption: 4-5kg/m² ARDCOAT S8 Mono-component siliceous based cementitious powder ready mix for bonding insulation panels in compliance with the ETAG 004 (Guideline for European Technical Approval of ETICS). Minimum thickness: 3mm Minimum consumption: 4-5kg/m²	RASANTE A PENNELLO Rough pigmented acryl siloxane primer (tintable with a hue similar to the finish). Consumption: 0,27 l/m² RASARD Rough pigmented uniforming primer (tintable with a hue similar to the finish). Consumption: 0,5 l/m	INTONACLIMA Algae resistant acryl-siloxane rustic coating - CE Marking in compliance with the EN 15824 Regulation. Thickness: 1,2 mm: Consumption: 2,2 kg/m² Thickness: 1,5 mm: Consumption: 2,8 kg/m²

rock wool



MW: Rock mineral wool thermal insulation composite system - CE Marking in compliance with the EN 13162 Regulation (EU classification for the Reaction to Fire - Euroclass A1 -).

	ADHESIVE & FIXING MECHANICAL	REINFORCED FILLER	PRIMER	FINISHES
BASIC CYCLE	ARDCOAT S8 Mono-component siliceous based cementitious powder ready mix for bonding insulation panels in compliance with the ETAG 004 (Guideline for European Technical Approval of ETICS). Min. consumption: 4-5 kg/m² Mechanical fixing of insulation panels with dowels in compliance with the ETAG 014 (European Technical Guideline).	ARDCOAT L10 GLASS Mono-component lightweight cementitious powder ready mix for reinforced filling. Thickness: 5mm Consumption: 5-6 kg/m Alkali resistant fiberglass starched warp & woof mesh weighing 155 gr/m² - 4 x 4,5 mm ± 5% centre spacing, with ETAG 004 certification and 10cm overlaps.	SILREST INTERMEDIO Uniforming primer with hiding & filling power (tintable with a hue similar to the finish). Consumption: 0.3 l/m²	SILREST INTONACHINO Silicate mineral plaster - CE Marking in compliance with the EN 15824 Regulation Thickness: 1,2 mm: Consumption: 2,5 kg/m²
ALTERNATIVE	ARDCOAT C8 Mono-component carbonate based cementitious powder ready mix for bonding insulation panels in compliance with the ETAG 004 (Guideline for European Technical Approval of ETICS). Min. consumption: 4-5 kg/m² ARDCOAT L10 GLASS Mono-component lightweight cementitious powder ready mix for bonding insulation panels. Min. consumption: 4-5 kg/m²	ARDCOAT S8 Mono-component siliceous based cementitious powder ready mix for bonding insulation panels in compliance with the ETAG 004 (Guideline for European Technical Approval of ETICS). Minimum thickness: 5 mm Minimum consumption: 6-7 kg/m ARDCOAT C8W (white) Mono-component carbonate based cementitious powder ready mix for bonding insulation panels in compliance with the ETAG 004 (Guideline for European Technical Approval of ETICS). Minimum thickness: 5 mm. Minimum consumption: 6-7 kg/m²	RASANTE A PENNELLO Rough pigmented acryl siloxane primer (tintable with a hue similar to the finish). Consumption: 0,27 l/m²	SILIARD INTONACHINO Siloxanic algae resistant plaster - CE Marking in compliance with the EN 15824 Regulation Thickness: 1,2 mm: Consumption: 2,2 kg/m²

sughero

ICB: Thermal insulation composite system with self adhesive brown cork panels (ICB) - CE Marking in compliance with the EN 13170 Regulation (EU classification for the Reaction to Fire - Euroclass E -).

	ADHESIVE & FIXING MECHANICAL	REINFORCED FILLER	PRIMER	FINISHES
BASIC CYCLE	ARDCOAT L10 GLASS Mono-component lightweight cementitious powder ready mix for reinforced filling. Min. consumption: 4-5 kg/m² Mechanical fixing of insulation panels with dowels in compliance with the ETAG 014 (European Technical Guideline).	ARDCOAT L10 GLASS Mono-component lightweight cementitious powder ready mix for reinforced filling. Minimum thickness: 5mm Minimum consumption: 5-6 kg/m² Alkali resistant fiberglass starched warp & woof mesh weighing 155 gr/m² - 4 x 4,5 mm ± 5% centre spacing, with ETAG 004 certification and 10cm overlaps.	RASANTE A PENNELLO Rough pigmented acryl siloxane primer (tintable with a hue similar to the finish). Consumption: 0,27 l/m²	SILIARD INTONACHINO Siloxanic algae resistant plaster - CE Marking in compliance with the EN 15824 Regulation Thickness: 1,2 mm: Consumption: 2,2 kg/m²
ALTERNATIVE	ARDCOAT C8 Mono-component carbonate based cementitious powder ready mix for bonding insulation panels in compliance with the ETAG 004 (Guideline for European Technical Approval of ETICS). Min. consumption: 4-5 kg/m² ARDCOAT S8 Mono-component siliceous based cementitious powder ready mix for bonding insulation panels in compliance with the ETAG 004 (Guideline for European Technical Approval of ETICS). Min. consumption: 4-5 kg/m².	ARDCOAT C8 W (white) Mono-component carbonate based cementitious powder ready mix for bonding insulation panels in compliance with the ETAG 004 (Guideline for European Technical Approval of ETICS). Minimum thickness: 5mm Minimum consumption: 6-7 kg/m²	SILREST INTERMEDIO Uniforming primer with hiding & filling power (tintable with a hue similar to the finish). Consumption: 0.3 l/m²	SILREST INTONACHINO Silicate mineral plaster - CE Marking in compliance with the EN 15824 Regulation Thickness: 1,2 mm: Consumption: 2,5 kg/m²

aerogel

AEROGEL: thermal insulation with aerogel panels in nanoporous silica with a mineral wool matrix support, reinforced with a fiberglass mesh on both sides - CE Marking in compliance with the EN 13162 Regulation (EU classification for the Reaction to Fire - Euroclass B/s 1/d0).

	ADHESIVE & FIXING MECHANICAL	REINFORCED FILLER	PRIMER	FINISHES
CICLO BASE	ARDCOAT L10 GLASS Mono-component lightweight cementitious powder ready mix for reinforced filling. Min. consumption: 4-5 kg/m² Mechanical fixing of insulation panels with dowels in compliance with the ETAG 014 (European Technical Guideline).	ARDCOAT L10 GLASS Mono-component lightweight cementitious powder ready mix for reinforced filling. Minimum thickness: 5mm Minimum consumption: 5-6 kg/m² Alkali resistant fiberglass starched warp & woof mesh weighing 155 gr/m² - 4 x 4,5 mm ± 5% centre spacing, with ETAG 004 certification and 10cm overlaps.	RASANTE A PENNELLO Rough pigmented acryl siloxane primer (tintable with a hue similar to the finish). Consumption: 0,27 l/m²	SILREST INTONACHINO Silicate mineral plaster - CE Marking in compliance with the EN 15824 Regulation Thickness: 1,2 mm: Consumption: 2,5 kg/m²
VARIANTI	ARDCOAT C8 Mono-component carbonate based cementitious powder ready mix for bonding insulation panels in compliance with the ETAG 004 (Guideline for European Technical Approval of ETICS). Min. consumption: 4-5 kg/m² ARDCOAT S8 Mono-component siliceous based cementitious powder ready mix for bonding insulation panels in compliance with the ETAG 004 (Guideline for European Technical Approval of ETICS). Min. consumption: 4-5 kg/m².	ARDCOAT C8 W (white) Mono-component carbonate based cementitious powder ready mix for bonding insulation panels in compliance with the ETAG 004 (Guideline for European Technical Approval of ETICS). Minimum thickness: 5mm Minimum consumption: 6-7 kg/m²	SILREST INTERMEDIO Uniforming primer with hiding & filling power (tintable with a hue similar to the finish). Consumption: 0.3 l/m²	SILIARD INTONACHINO Siloxanic algae resistant plaster - CE Marking in compliance with the EN 15824 Regulation Thickness: 1,2 mm: Consumption: 2,2 kg/m²

INSTALLATION

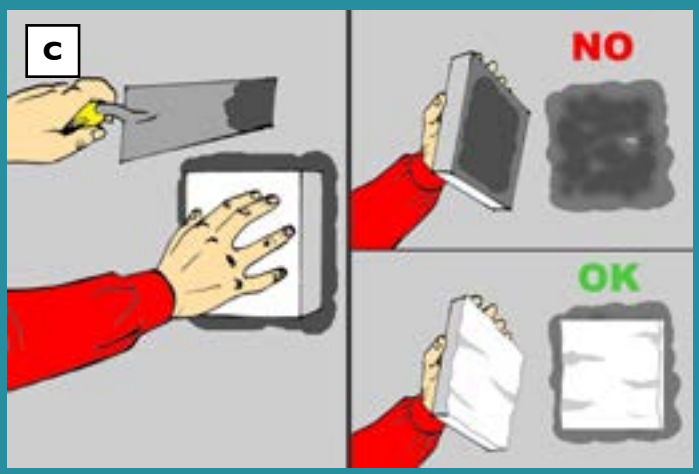
As ETICS can be applied to old and new buildings, the conditions of the numerous mural surfaces must be evaluated attentively.
Ard's ETICS can be applied on all sorts of walls, solid bricks, tiles, thermal/acoustic blocks, concrete cables/panels, wooden fibre panels and plaster.
The following is a description of the main steps:

Phase 1 - substrate preparation

1- Removal of any unsound parts, evaluation of the surface planarity, restoration of missing parts & regularizing of gradients above 1cm with **ardplan AS** (universal mortar for up to a 4 cm thickness). Allow complete hydration/drying of the plaster &/or restoration carried out with technical mortar.

2- Elimination of the causes of rising damp, water infiltrations and efflorescence.
Disinfestation/rinsing of any algae, mould, lichen colonizations with **ardsan risanante murale** (A-B).
Tear test part of an insulation panel to assess substrate adhesion (C).

Chalky substrates must be consolidated with a hand of **isolex** (consolidating solvent borne impregnating sealer) or **isolex w** (nanotechnological acrylic consolidating insulator).



Phase 2 – assembling the profiles and skirting

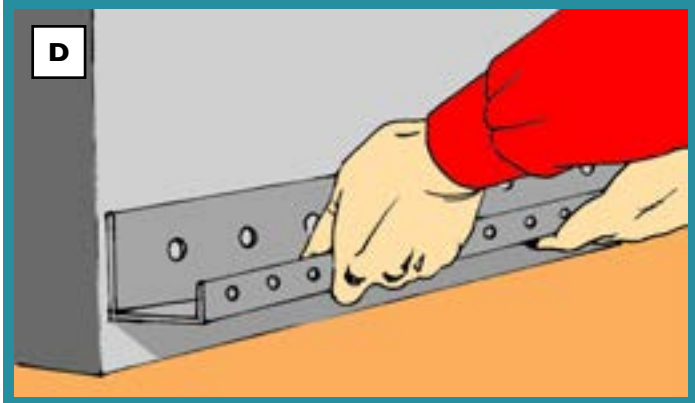
Position the profiles in perforated aluminium and drip caps (suitable for the thickness of the insulating panels). The profiles must be positioned at least 1-2 cm above the flooring, aligned correctly and fixed with suitable dowels at a 25-30 centre to centre distance (D).
If panels in rock wool, cork or expanded polyurethane are employed for thermal insulation or if the area underneath the flooring is insulated, + of XPS extruded polystyrene (CE Marking according to the EN 13164 specifications/reaction to fire performance Euroclass E with low water absorption) must be employed in the skirting and protected with the specific waterproof insulator.

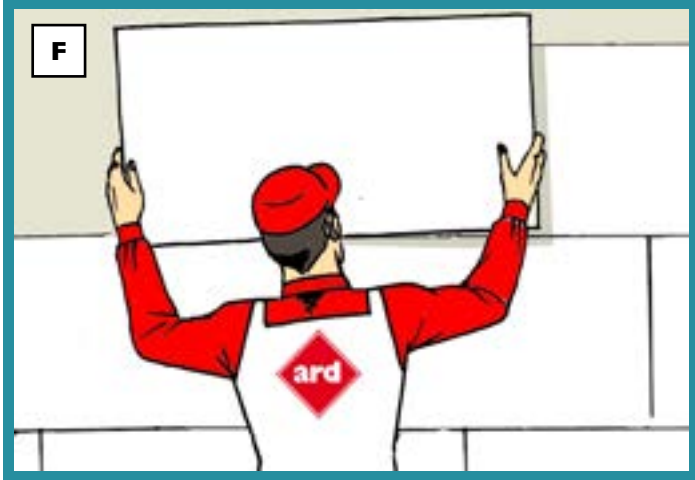
Phase 3 – insulation panels bonding

Installation of insulation panels with **ardcoat** (smoothing adhesive powder) suitably mixed with water. Follow the instructions provided in the TDS.

Distribute the glue along the perimeter and in the centre - at least 40% of the surface must be glued – (E/I).
Apply a thin layer of glue to fix the superficial fibres of rock wool panels before bonding.
Assemble the panels (longest side horizontally) from the bottom with staggered joints. The areas near the joints must not be aligned and any elements must be at least 30 cm (F). The joints must not be aligned with the corners of windows & doors to avoid cracking.

Position the insulation panels, use a trowel to press the panel and ensure the edges match to avoid break-outs. Any break-outs must be filled with an insulator or **ardocat PU** (polyurethane foam) to avoid undesirable thermal bridges.
Use a levelling ruler to check the planarity and eliminate any protrusions.
Alternatively, the insulating panels can be glued with **ardcoat PU** polyurethane adhesive foam (apply 2 cm from the edge and in the centre of the panel). Ensure that no air is trapped between the panel and the surface (E/2).





Phase 4 - accessories

Application of complimentary accessories (expansion joints, sealing tapes for joints) in critical areas such as balconies, cornices, doors & windows, pilotis and overhanging elements.
If railings, shutter holders, air-conditioning motors etc. are applied to the ETICS, suitable accessories must be employed to support the loads and reduce thermal bridging.

Phase 5 - mechanical bonding

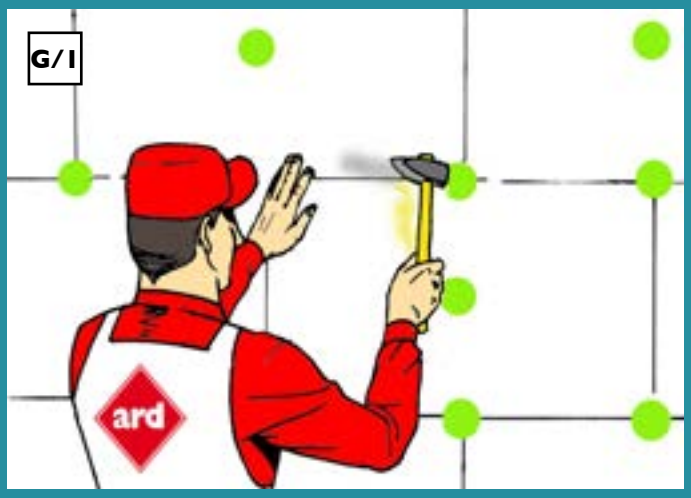
Allow at least 48 hours (from bonding) and use suitable percussion/screw in dowels (8/10 cm expansion Ø) to mechanically fix the insulating panels in order to improve wind load resitance (G/I).
The choice of dowel depends on the substrate and must comply with the ETAG 014 guidelines. The length must suit the insulation panel and the anchoring depth must be at least 35-45 mm. Six dowels are required per square metre (8 in the perimeter).

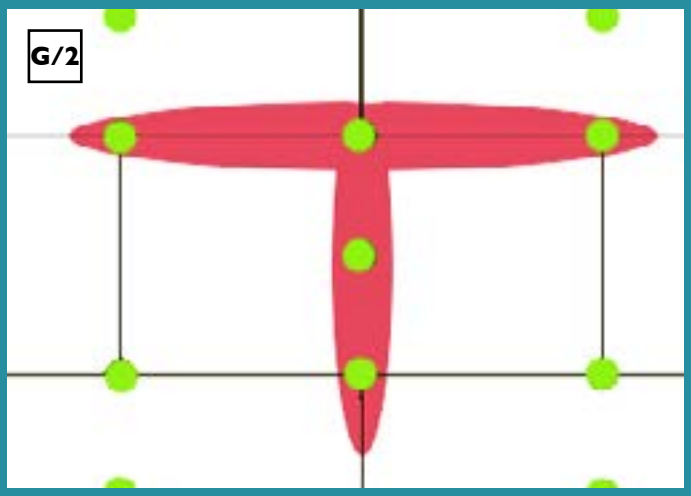
DOWELS FOR:
- **Concrete**
- **Solid bricks**
- **Perforated bricks**
- **Lightweight concrete**
- **Cellular concrete**

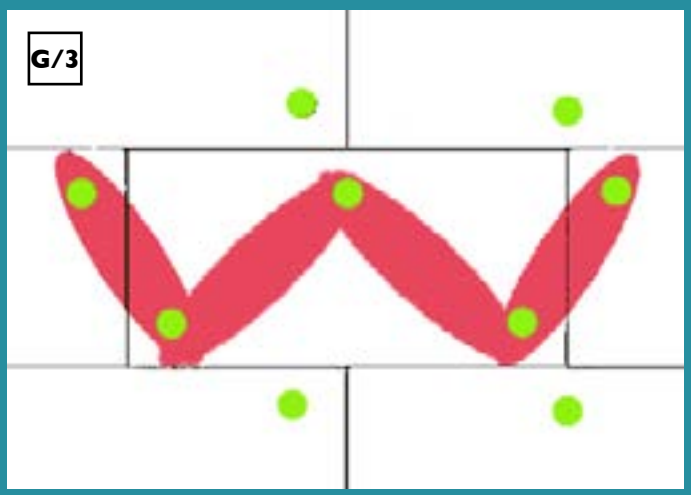
Scheme for heights up to 20 metres: T for EPS-ICB-PIR (G/2) & W for MW (G/3).
Scheme for heights from 20 to 40 metres: no less than 8 dowels per square metre.
Scheme for heights (& extreme wind) above 40 metres: the designer/architect must define the number/dimension of the dowels.

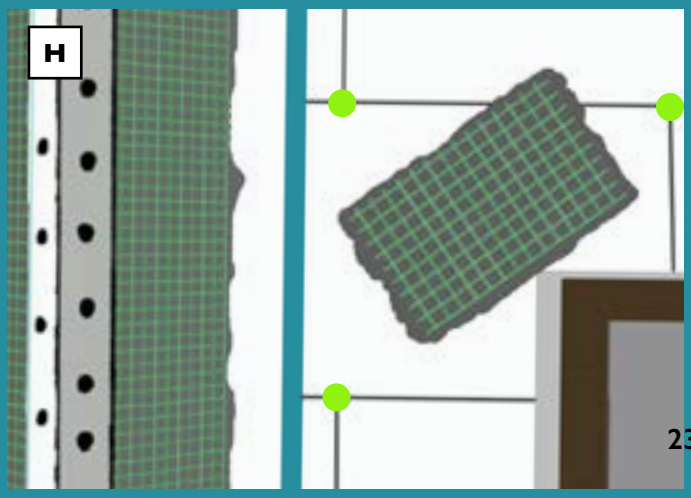
Phase 6 – assembling reinforcements & corner bumpers in critical points

In order to improve the stress resistance near doors and windows, obliquely lay a 25 x 50 cm specific diagonal reinforcement in alkali resistant fiberglass starched warp & woof mesh - weighing 150 gr/m² - 4 x 4,5 mm ± 5% centre spacing, with ETAG 004 certification on the corners (drowned between two layers of **ardcoat**) (H).
Lay the aluminium/PVC corner bumpers (drowned between two layers of **ardcoat**) with a mesh to reinforce the corners (H).









Phase 7 – reinforced filling

Allow at least 48 hours from the laying process and proceed with the filling using an **ardcoat** adhesive filler.
The coat must be even and at least 2 mm thick (I).
Drown (in a damp adhesive filler from top to bottom) an alkali resistant fiberglass starched warp & woof mesh weighing 150 gr/m² - 4 x 4,5 mm ± 5% centre spacing, with ETAG 004 certification and 10 cm overlaps. Allow to dry and proceed with another filling using an **ardcoat** adhesive filler. The coast must be even and at least 1,5 mm thick (L).
Skirting (subject to mechanical stresses): it is recommended to superimpose a 370 ± 5% gr/m² starched alkali mesh between two adhesive filling layers.

Phase 8 – primer

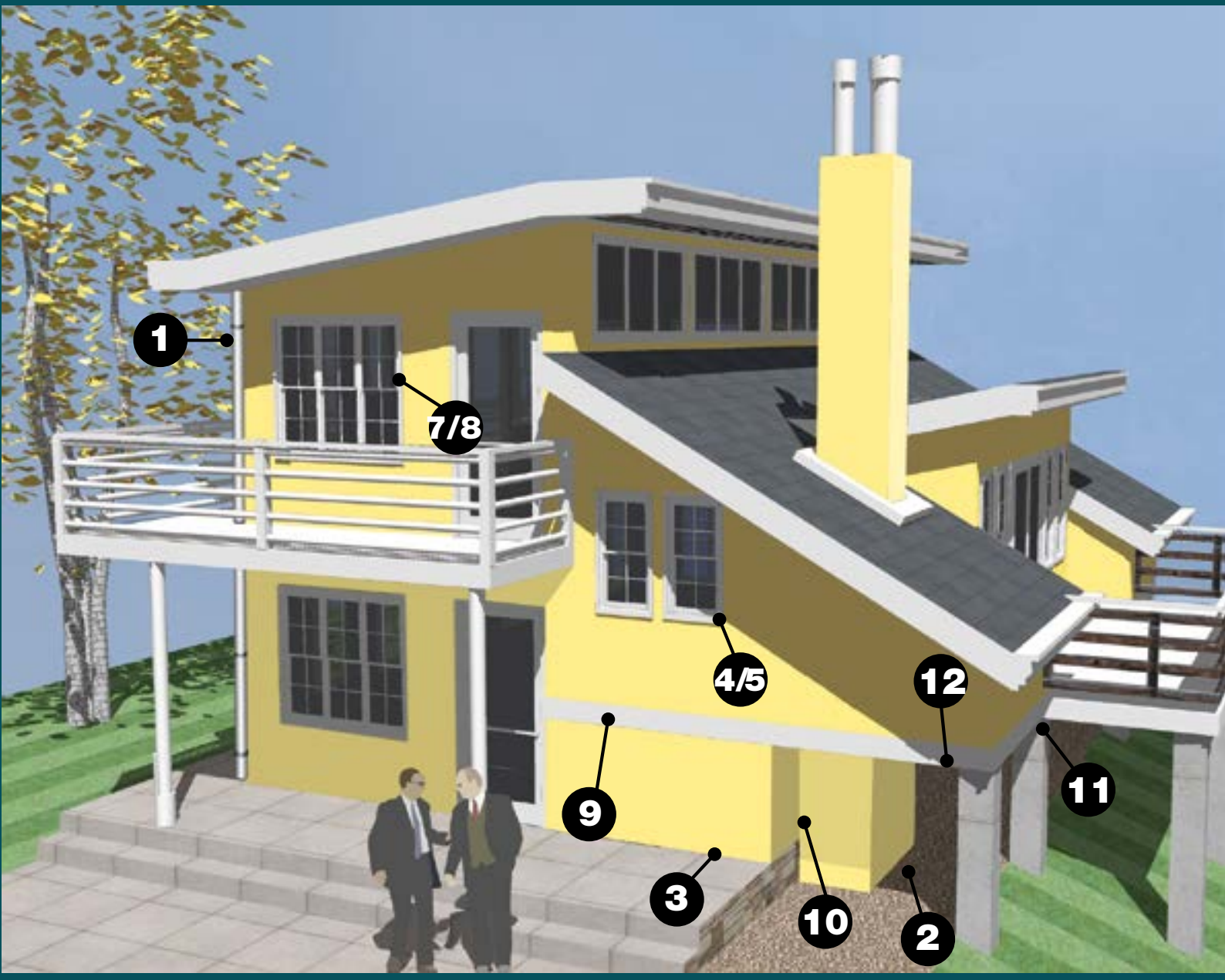
Ensure the substrate is perfectly dry/hydrated (allow at least 5/6 days from the filling process) and apply a uniform layer of a pigmented primer in a colour which matches the finish. The choice of primer depends on the filling homogeneity and type of finish (M).

Phase 9 – finishes

Allow at least 4 hours from the application of the primer and use a plastic float to apply/smooth a layer of an **ard** thick coating. All of our products offer an optimal resistance to alkali substrates, low dirt retention and an excellent applicability/workability. Furthermore, the presence of specific additives impedes the rooting of algae/mould and light-fast pigments guarantee lasting hues even when exposed to luminous radiations and adverse weather.

EXAMPLES
sealing & protection profiles

The key to a successful thermal insulation is the attentive evaluation of both the structural physics and particular situations (cornices, external lighting, solar shades etc.) which require specific measures &/or equipment as indicated below:



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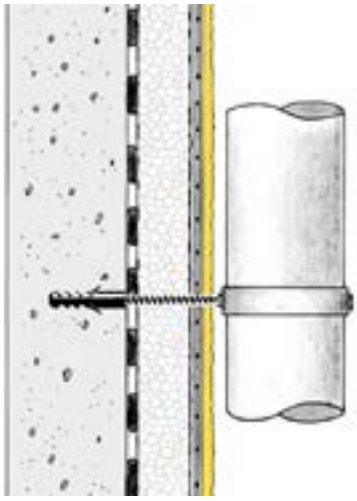
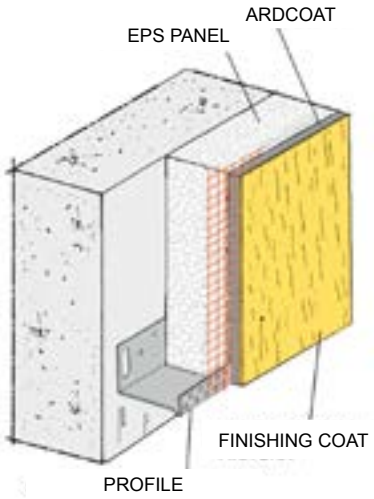


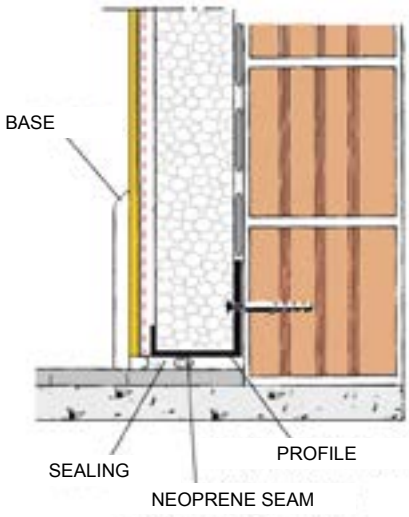
RAIN LEADER FIXING

2



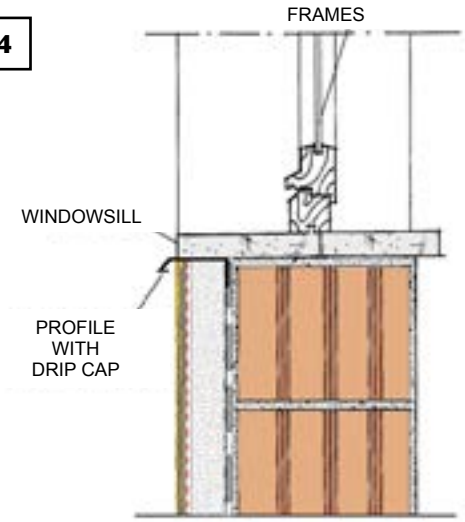
BASE

3



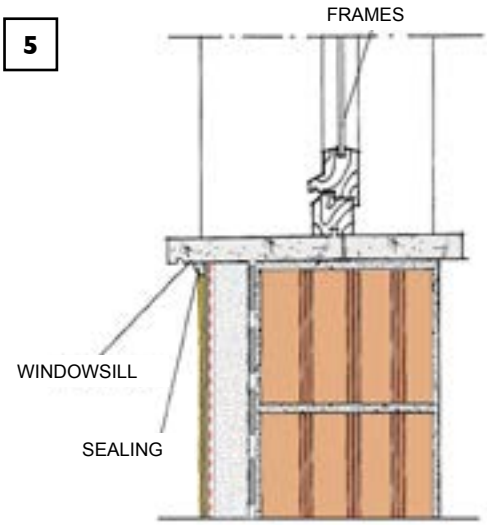
TERRACE – BASE

4



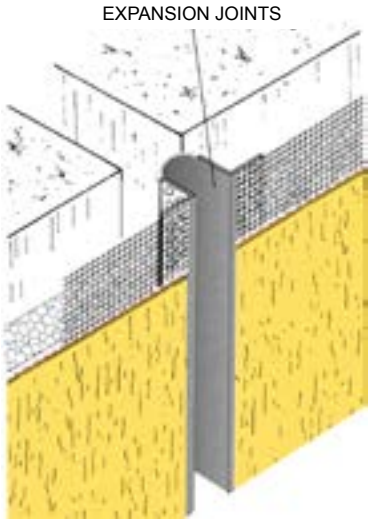
WINDOWSILL

5



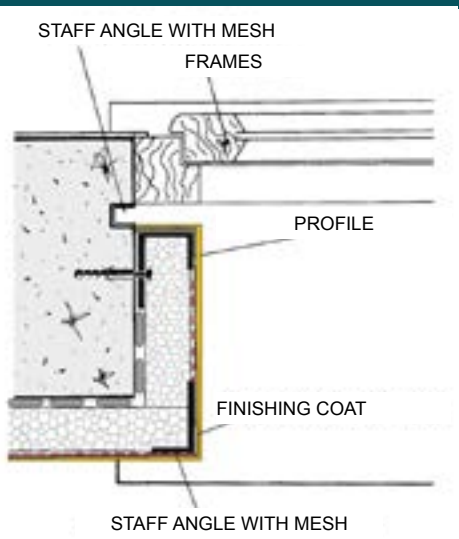
PROTRUDING WINDOWSILL

6



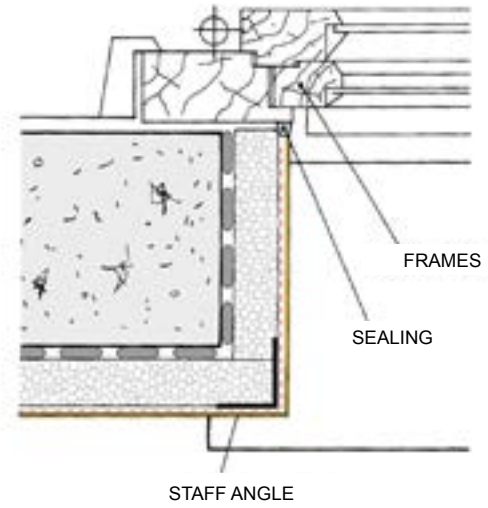
EXPANSION JOINTS

7



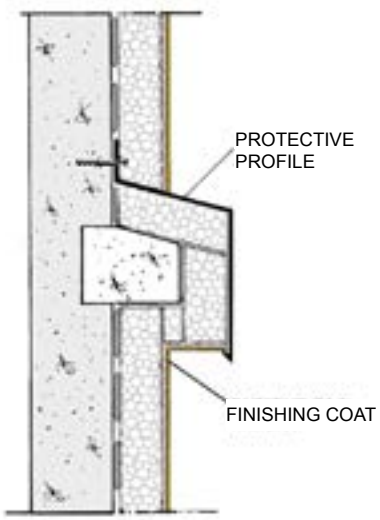
WINDOW BLIND

8



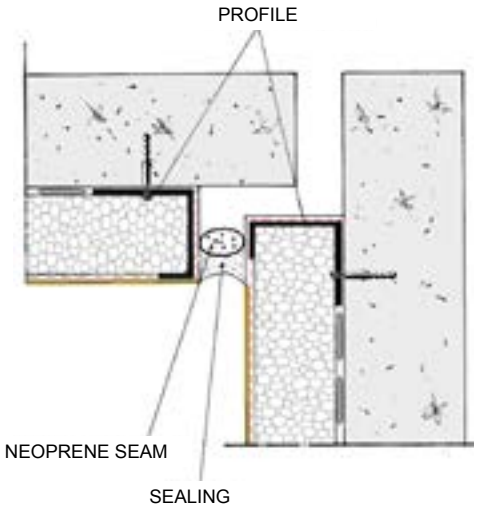
WINDOW SHOULDER

9



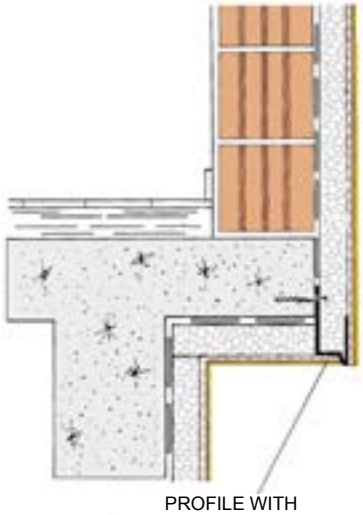
CORNICE

10



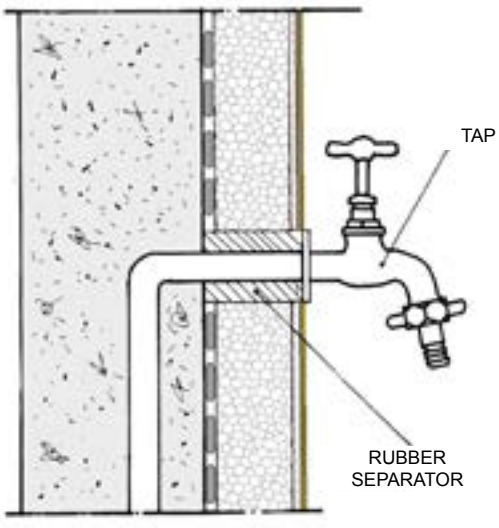
CORNER EXPANSION JOINTS

11



PROTRUSION

12



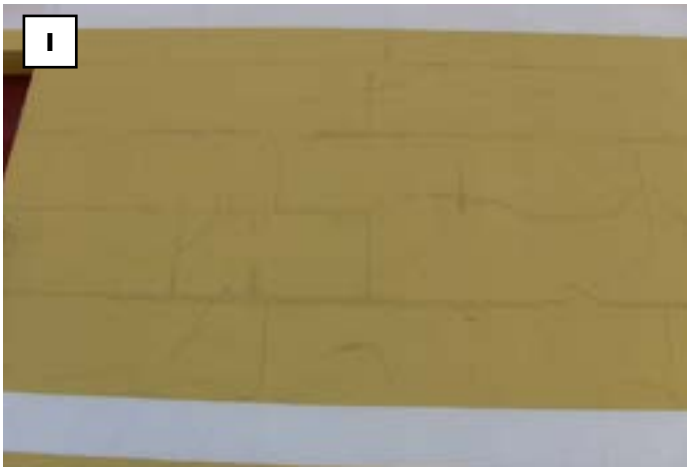
TAP

ETICS - problematics & damage

The ETICS technology is well known and has been employed for energy efficiency for quite some time.
As different forms of decay have appeared on the facades (where ETICS have been applied) in recent years, it is highly important to carry out the correct maintenance.

The pathologies (indicated below) are mainly due to flaws in the planning/application or unsuitable materials.

- **Formation of micro-crazing & fissures (photo 1-2)**
- **Formation/bursting of blisters-filler/finish detachment (photo 5)**
- **Swelling & fading (photo 3)**
- **Heterogeneity of finishes (photo 6)**
- **Biological colonization (algae, mould, lichen & moss photo 4)**



ETICS - maintenance

Ard has devised a series of ardelast renovating cycles (ardelast line of products), for the maintenance of ETICS.
Employ ardelast rasante to treat serious damage (crazing & superficial differences). This product has been developed to offer cost effective, rapid & lasting renovation works. On the contrary to the most common reinforced fillers, which require long maturing times, ardelast rasante offers an elastic reinforced filling which can be coated after only 24 hours. A primer is not required: ardelast rasante can be tinted and generates a surface which is "ready" for the finishing products. The reinforced "elastic" filler impedes the expansion of the cracks on the treated substrate.

ardelast rasante

elastomeric undercoat for reinforced fillings

PRODUCT INFORMATION

ARDELAST RASANTE is an elastomeric coating devised to conserve thermal insulation systems damaged by surface discontinuity. Fiberglass reinforcement meshes are employed in order to create a specific reinforcement layer when finishing with the ARDELAST line of products.
This is a professional product which offers a remarkable elasticity -even at low temperatures- and guarantees high performing cycles when treating cracks & crazes on thermal insulation systems.
ARDELAST RASANTE offers an excellent workability and a low volumetric decrease which makes it possible to uniform the susbtrate whilst "hiding" the embedded fiberglass mesh.
ARDELAST RASANTE is therefore perfect for preventing & treating cracks on the most common wall surfaces (bare & painted).

KEY INFORMATIONS

- ready to use (steel or plastic float)
- m²/kg — 0,25-0,35 m²/kg (per 1,7 mm dithickness)
- Family 9 · class D
  TDS n° 109
  MSDS n°561
- recoatable after 4 h
- CE Marking
  UNI EN 15824

Technical Assistance: an adequate technical assistance is required to guarantee successful renovation cycles.
Our highly professional Team of technicians are on hand to help all those engaged in this sector (applicators, professionals, customers etc.) to choose the most suitable products etc. They also visit (free of charge) the building yards in order to solve issues regarding application techniques. The T.A. Team propose the most suitable cycles according to the pathologies in question.
The maintenance cycle can also be insured against any faults & defects attributable to the products.

The above are an example of the different application phases ("heavy" renovating cycle for ETICS).
a) filling of all the surfaces with **ardelast rasante** (elastomeric undercoat for reinforced fillings)
b) embedding of a alkali resistant reinforced fiberglass warp and woof mesh weighing 60 gr/m² - 2,2 x 2,3 mm ± 5% with centre spacing (special care must be taken to ensure there is an overlapping of at least 5 cm on joints).
c) further filling with **ardelast rasante** (elastomeric undercoat for reinforced fillings) in a hue similar to the finish (special care must be taken to ensure the surfaces are uniform).
d) application and smoothing with a plastic float of **ardelast intonachino** 1 or 1,2 mm (algae resistant acrylic-siloxane elastomeric filler coating) or **ardelast grana fine** (algae resitant acryl-siloxane elastomeric finish) with a roller.

Thermal insulation system
ardcoatsystem

Centri Storici

I COLORI DELLA TRADIZIONE ITALIANA

Thermal insulation system
ardcoatsystem

eXtra colours

80 TINTE DI TENDENZA PER IL DESIGN URBANO

4265	4266	4267	4268	4269	4270	4271
4272	4273	4274	4275	4276	4277	4278
4279	4280	4281	4282	4289	4290	4291
4292	4293	4294	4295	5243	5240	5246
5249	8266	5251	5238	5239	5263	5241
7296	7301	5260	7302	5253	5222	7287
8265	5225	5216	5220	7303	5219	5218
4345	4201	3306	3310	5217	2261	5224
8262	5221	4346	8260			

Double exterior

eXtra colours + Centri Storici

These hues are for reference only and we are not responsible for the final result.

ard • f.lli raccanello s.p.a.
industria vernici e smalti

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