

Finishing elements facings

Technical Data Sheet – Rev. 01/2021

DESCRIPTION

The Pietre d'Arredo finishing elements are an accurate reproduction of natural stones, handmade fired bricks and wooden walls. They are made using special binding materials, natural lightweight aggregates, colour pigments highly resistant to UV rays and additives conferring excellent resistance to atmospheric agents. The Pietre d'Arredo elements are lightweight, resistant, breathable, frost-proof and extremely water-repellent.

FIELDS OF APPLICATION

The Pietre d'Arredo finishing elements, aesthetically similar to natural stones, can be used for new projects as well as in the requalification and refurbishment of old buildings. As a result of their versatility, they can be used to clad both internal and external walls, retaining walls, columns, fireplaces, wainscoting, etc. Furthermore, with the PIETRACOMFORT system, they can be used to finish thermal insulation systems of all types and replace the classic coloured finishes.

SUBSTRATE PREPARATION

The surfaces must be flat, seasoned, mechanically resistant, sufficiently dry, free from inconsistent areas and dust or greasy substances. Extremely porous and highly absorbent stable surfaces can be treated with consolidating primer RASOTECH PRIMER CONSOLIDANTE in order to lower the level of absorption and improve the workability of the adhesive.

Cement plaster surfaces: must be sufficiently dry and seasoned, with a mechanical resistance on the surface that is capable of supporting a traction force equal to $\geq 0.5 \text{ N/mm}^2$. Moreover, they will need to be perfectly integral and free from any superficial decorative treatment, such as skimming finishes and wall painting.

Concrete surfaces: must have been dried for at least 28 days taking the hydrometric shrinkage of the concrete into consideration during the curing phase.

Chalk surfaces: must be perfectly dry, compact and free from dust. They will need to be pre-emptively treated with insulating resin primer PRIMER A 16 when laying with cement adhesive; alternatively, they require ARREDOFIX, a ready-to-use adhesive paste, which is permanently flexible and cement-free.

Plasterboard surfaces: must be as stable as possible and, in any case, capable of supporting a weight of approximately 50 kg/m^2 . For the laying of this type of surface, the use of ready-to-use and permanently flexible ARREDOFIX adhesive paste is recommended.

Painted surfaces: Remove the decorative layer to the greatest extent possible (chiseling, sanding with large-grit sandpaper, sandblasting). Carefully clean all residues and eventually treat with primer RASOTECH PRIMER CONSOLIDANTE in order to consolidate and improve the adhesion.

Metal surfaces: those that are already being used must be mechanically cleansed of any oxidation or previous treatments; should they be newly made, they must be degreased with a cloth soaked in solvent. The laying of reconstructed stones directly on metal surfaces is not recommended for external applications or for large size surfaces, because the surface may be subject to heavy expansion.

It is however advisable, should you have any doubts, to contact our Technical Assistance Service.

Surface	Adhesive
Cement plaster	ARREDOCOLLA natural hydraulic lime-based levelling adhesive
Concrete surfaces	ARREDOCOLLA natural hydraulic lime-based levelling adhesive
Thermal insulating systems	ARREDOCOLLA (PIETRACOMFORT SYSTEM)
Chalk plaster	ARREDOFIX ready-to-use adhesive paste ARREDOCOLLA prior application of PRIMER A 16
Plasterboard surfaces	ARREDOFIX ready-to-use adhesive paste
Wood, chipboard	POXYCOL (A+B) polyurethane bi-component adhesive

Metal surfaces	POXYCOL (A+B) polyurethane bi-component adhesive
Painted walls	ARREDOFIX prior removal of decorative coatings ARREDOCOLLO previa prior removal of decorative coatings

PREPARATION OF THE ADHESIVE

For the binding of various elements onto cement surfaces, specifically use the natural hydraulic lime-based levelling adhesive ARREDOCOLLA. It is characterized by its excellent workability, zero vertical slippage, guaranteed mechanical hold, resistance to atmospheric agents (even in harsh climates), optimal breathability and ability to repel water. ARREDOCOLLA efficiently counteracts the possible formation of efflorescence on the surface of the stones, caused by the migration of mixing water from the cement adhesives that are widely available on the market. To prepare ARREDOCOLLA, mix one 25 kg bag of product with approx. 7 litres of clean water and blend until a uniform and lump-free paste is obtained. Allow the paste to rest for a few minutes, mixing once again briefly before use.

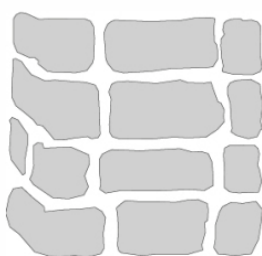
Should you choose to use ARREDOFIX, the product is ready to use and therefore mixing is not required.

For POXYCOL (A+B) binding, a polyurethane-based adhesive, mix component A and component B together until they are fully combined, then apply as a normal adhesive.

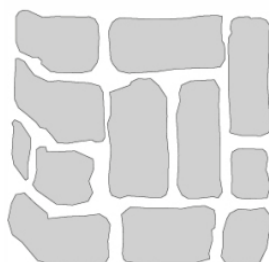
| NOTE: CONSULT THE TECHNICAL DATA SHEETS RELATIVE TO THE INDIVIDUAL PRODUCTS BEFORE APPLICATION |

ASSEMBLY INSTRUCTIONS

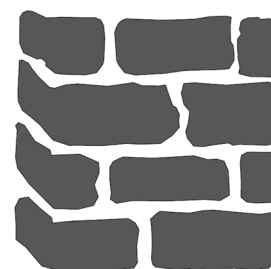
Pre-emptively determine the quantity of material necessary (in sq. m) during the planning phase. Measure the linear meters of the structures' external corners, any eventual columns or pillars and openings that you wish to clad in order to determine the measurements (in meters) of the necessary angular elements. During the laying phase, it is crucial that you have a greater quantity of material available to be used for cuts or to compensate for any eventual off-cuts. Laying always takes place starting from the corners, alternating the long and short sides of the angular elements, in order to create an appearance that is altogether similar to that of traditional bricklaying. It is always advisable to lay the different elements flat (horizontally), even on masonry work executed on sloping terrain (access ramps, retaining walls, ground-contact structures etc.). NEVER lay the stone parallel to sloping ground. The individual elements must never be laid vertically; therefore, the long side must always be horizontal and the upper element must rest on another two elements below. Being a material that is coloured by hand, a slight tonal difference between one tub and the next may be perceived. In order to avoid evident differences or colour spots on the wall, it is advisable to open a number of tubs and mix the contents during the laying phase.



| INCORRECT LAYING |



| INCORRECT LAYING |



| CORRECT LAYING |

APPLICATION OF PIETRE D'ARREDO ELEMENTS

Apply the adhesive using a spatula or trowel, spreading it onto the surface to be clad and onto the back of the element to be laid; position the element that you wish to bind, apply a significant amount of pressure, making subtle movements in order to ensure full contact with the adhesive. Leave a gap of at least 1.5 cm between the various elements should the model require this. Do not lay on icy or wet surfaces or on those that are directly exposed to the sun. Pay particular attention to avoid soiling the various elements with the adhesive; should this occur, clean immediately with water or a damp sponge, so as to avoid irreparable staining.

STONE POINTING

Point the stone and the bricks using the designated ARREDOSTUCCO low-water absorption mortar, which is available in several shades to be coordinated on an ad hoc basis with the type of product chosen, so as to create an aesthetically pleasing effect. ARREDOSTUCCO can be used as it is (fine finish) or mixed with the lightweight aggregate ARREDOLIGHT 0-3 mm (for a medium finish) or with ARREDOLIGHT 3-6 mm (for a rough finish). After having mixed ARREDOSTUCCO, and eventually also ARREDOLIGHT, with water, apply the paste, using the designated plastic bag (piping bag), directly into the spaces between one stone and the next until they are filled in their entirety. When the mortar loses its plasticity and appears to be sufficiently hardened, apply pressure and remove the excess product with an appropriate utensil or trowel; subsequently, finish with a brush made from vegetable fibres and a fine brush. Never finish the mortar when it is still wet in order to avoid soiling the surface of the stone; if necessary, clean immediately with a wet sponge to avoid residue rings. Protect the cladding from the rain, washouts or hot sun until the adhesive and pointing are fully hardened. The use of ARREDOLIGHT is recommended when laying on thermal insulation cladding.

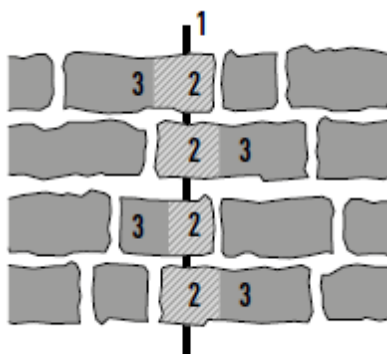


fig.16

- 1 expansion joint
- 2 without ARREDOCOLLA
- 3 with ARREDOCOLLA

WATER-REPELLENT TREATMENT

The Pietre d'Arredo finishing elements are manufactured to be resistant to freezing and absorb a low level of water. In particular climatic situations, the application, once the work had been completed, of a coat of ARREDOSIL colourless, breathable and water-repellent primer is recommended in order to obtain an even level of water resistance over both the laid material and the pointing.

RECOMMENDATIONS

- In order to avoid tonal differences on the wall, always use and mix the contents of several tubs.
- The product is delivered to the site packaged in boxes with a high level of residual humidity (resulting in darker colour). It is only possible to fully appreciate the definitive colour a few months after laying due to the thorough air-drying of the product.
- In all cases when surfaces do not provide an adequate guarantee with regard to consistency, pre-emptively perform reinforced skimming with ARMOFLEX 330 glass fibre mesh, anchored mechanically to the surface with mechanical fixings, positioned so as to form a lattice with a 40 cm side measurement.
- In the preliminary meter calculation phase, consider that the surface occupied by the corners is of approximately 0.25 m² for each linear meter (4 ml covers a surface of 1 m²).
- The building's structural joints must be left free and replicated in the cladding. In some cases, they may be able to be masked by the stone, by applying the adhesive on only one side of the expansion joint, leaving the other side free from solution.

TECHNICAL DATA

	Results	Rule
Compression resistance (MPa):	≥ 32.0	UNI EN 14617-15
Bending resistance (MPa):	≥ 2.0	UNI EN 14617-2
Water absorption per capillary action (%):	15.5	UNI EN 14617-1
Dry density (kg/dm³):	1.39	UNI EN 14617-1
Thermal resistance (m²K/W):	0.018	UNI EN 1745
Thermal conductivity (W/mK):	0.420	UNI EN 1745
Vapour permeability coefficient (μ):	132	UNI EN ISO 10572
Reaction to fire:	Classe A1	UNI EN 14617-15

| Tests performed at 23°C-R.H. 50% in the absence of air ventilation |

SPECIFICATIONS

Cladding laying in reconstructed stone, frost-proof, breathable, low-water absorption, *model* from the COLMEF Srl PIETRE D'ARREDO brand, for the cladding of internal and external walls. For laying, use a natural, anti-efflorescence hydraulic lime-based levelling adhesive with optimal performance and zero vertical slippage, classified as C2T in accordance with Standard EN 12004, such as **ARREDOCOLLA** from the COLMEF Srl PIETRE D'ARREDO brand. Point the stone using the appropriate breathable low-water absorption mortar, such as **ARREDOSTUCCO** from the COLMEF Srl PIETRE D'ARREDO brand, *in colour*

For the pointing of laid stone cladding on a thermal insulating system, always add a lightweight aggregate, such as **ARREDOLIGHT** from the COLMEF Srl PIETRE D'ARREDO brand, to the paste in order to increase breathability and reduce the weight on the wall.

FOR FURTHER DETAILS OR SPECIAL USES CONTACT THE **TECHNICAL DEPARTMENT**.

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The information in this bulletin is based on our best experience. We cannot be held liable for any product misuse. We therefore recommend anyone who intends to use this product to assess whether it is suitable for the intended application and to perform preliminary tests.