



SECIL ARGAMASSAS

SeciVit CORK MD SYSTEM

APPLICATION MANUAL

SecilVit CORK MD

APPLICATION MANUAL FOR THERMAL INSULATION WITH NATURAL CORK FINISH

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1. DESCRIPTION

SecilVit CORK MD system is an exterior composite thermal insulation system - and is designed to thermally and acoustically insulate opaque areas of external walls, giving them a visible natural cork finish.

SecilVit CORK MD system consists of SecilVit CORK MD black agglomerated cork insulation panels, which are fitted directly to the substrates (masonry, bricks, blocks, OSB or wooden). The boards are fixed with **ADHERE Vit ecoCORK MD** adhesive mortar. Around the edge of the panels, use **STICOL MD** mastic for increased waterproofing of system joins.

The composition of **ADHERE Vit ecoCORK MD**, based in Natural Hydraulic Lime and cork aggregates, offers a distinctive series of features to the system, notably high permeability.

2. AREA OF USE

SecilVit CORK MD system is intended for thermal and acoustic insulation of building façades, contributing to their energy saving, thermal comfort, acoustic and hygrothermal performance.

The system may be applied on concrete substrates (structures or concrete parts) and masonry (e.g. bricks, concrete blocks or cellular concrete blocks), previously coated with levelling plasters of suitable mechanical characteristics, for example **MAXDUR**. The system may be applied directly onto wooden, OSB or VIROC substrates.

SecilVit CORK MD system is also suitable for use in the acoustic and thermal renovation/refurbishment of buildings, and may therefore be applied over existing substrates, such as old masonry, etc. In these cases, we recommend you consult our technical services beforehand.

3. APPLICATION METHOD

3.1 Preparation of substrate

As with most other types of coatings, **SecilVit CORK MD** system should not be applied until the substrate has set properly. You should leave at least one month between finishing the wall and applying the system. Substrate surfaces should be sufficiently smooth and even. Flatness should not deviate by more than 5 mm when checked with a two metre ruler. If this cannot be guaranteed, the surface should be levelled by applying a plaster of an appropriate composition and resistance for the system substrate, for example MAXDUR. This should be left to set for one month before bonding the thermal insulation panels.

The substrates must be dry, cohesive, adhesive and free of dust or dismantling fluids. They should be dry at the time the system is applied.

Concrete substrates in poor condition should be repaired, including the reinforcements if necessary. Substrates with high levels of cracking must be repaired, whenever the cracks are more than 2mm wide.

Wooden panels, OSB or VIROC substrates should be flat, properly stabilized and structurally stable. They should also be suitable for exterior use, resistant to moisture and make the wall watertight. The substrates must be dry, cohesive, and free of dust or other substances that may interfere with bonding. They should be dry at the time the system is applied.

For renovation work, substrates should be checked for consistency, degradation, cracking and water content. Areas that are not stable should be removed, and damaged areas repaired. The application of this kind of system is not advised when there is persistent presence of high water content in non-rainy periods. The source of humidity must be checked and addressed in advance, and only then can the system be implemented.

3.2.1 Fitting cork panels

SecilVit Painel MD expanded agglomerated cork panels must be applied from the bottom up, to ensure they are leveled horizontally and that each row of panels is supported by the one below it.

SecilVit Painel MD panels should be fixed to the substrate with **ADHERE Vit ecoCORK MD** adhesion mortar, using the double bonding method. The adhesive should be spread onto the substrate and the back of the panels using a notched trowel (10 mm) to ensure a continuous bond between the panel and the substrate.

SecilVit Painel MD panels should be arranged vertically in horizontal rows of greatest width. The rows are placed from the bottom up, with the vertical joint of each row not matching previous ones. In the same way, on the corners, the tops of the rows of panels must be alternated in order to facilitate locking down of the system.

SecilVit Painel MD panels must be placed in their final positions, and pressure exerted on the substrates to squash the adhesion mortar.



1. Application of **Adhere Vit ecoCORK MD** to the substrate



2. Application of **Adhere Vit ecoCORK MD** to the back of the SecilVit Painel MD panel

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At the same time, the edges and flatness must be adjusted to the neighbouring panels, in order to prevent joints becoming loose and surface misalignment of wall panels.

When fixing the following panel, a line of polyurethane mastic, for example **Sitcol MC**, should be applied around the edge of the already applied panel, in order to prevent water penetration through the joint between boards which are not coated externally (which may lead to “run-off effect over time). The line of mastic should be applied on the area of the thickness of the board so as not to be visible outside the joint. The joints between panels should be adjusted by squeezing the line of mastic.

Each panel must be constantly checked with suitable tools to ensure it is vertical and flat in relation to the neighbouring panel.

In door and window recesses, panels should be fitted so that the edges do not align in the corners. This will prevent joints matching the alignment of the recess edges.

Insulation panels must be fitted carefully so that they are flush with neighbouring panels, in order to prevent this type of defect occurring on the wall.

Panels should be fitted out of direct sunlight, strong winds or high temperatures.

The facade must be protected on it's top with adequate solutions to protect the system from entrance of water.

3.3 Environmental conditions of application

SecilVit CORK MD system must not be applied when there are atmospheric conditions that may adversely affect the application and drying process. This occurs particularly in the following cases:

- ▶ air temperature above 30 °C or below 5 °C;
- ▶ substrates are frozen;
- ▶ substrates are too hot;
- ▶ in the event of rain, or where rain or heavy rain is forecast, during and up to 48 hours following completion of system application;
- ▶ when there is heavy, hot and dry wind;
- ▶ when intense solar radiation occurs.

3.4 Storage of products on site

The storage on site of **SecilVit CORK** system elements must be carried out using the original packaging and in a place that is dry and covered.

Insulation panels must be stored on a clean, firm, horizontal base that does not make contact with the ground.

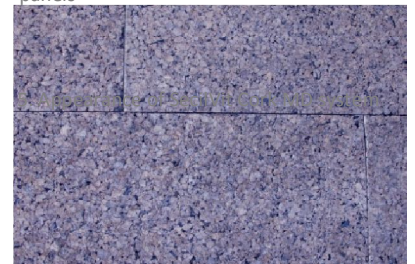
Products in powder or paste form must not be used after the packaging expiry date has passed. This date is counted from the date of manufacture, which can be located on the packaging.



3. Application of mastic around the edge of the panels



4. Aligning the edges of SecilVit Painel MD panels



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3.5 Health and safety recommendations

The application of **SecilVit CORK** system does not pose any particular flammability or toxicity risks, as long as air circulation is checked on the premises where the application takes place. During application, the possibility of products in paste form coming into contact with applicators' eyes should be prevented. The use of suitable personal protective equipment is recommended, in particular safety glasses. Once the application has been completed, wash face and hands with soap and water.

If the product comes into contact with eyes, wash with water immediately. If there are symptoms of irritation, seek medical advice.

Consult the various safety sheets for the products part of the system.

4. SYSTEM MAINTENANCE AND REPAIR

4.1 Cleaning and general maintenance operations

Regular cleaning of façades coated with **SecilVit CORK MD** can be carried out using tap water, or pressurised water (<100 bar).

Regular inspections of the system applied must be performed, particularly on joints and singular points, to ensure that infiltrations do not occur. If infiltrations exist, these must be repaired in order to increase system durability.

4.2 Small repairs

When inspections show that repairs are needed, repairs shall be carried out immediately by applicators with specialised training.

Damaged areas should be repaired using appropriate system components and the following steps:

- i) cut evenly through the insulation coating area using a sharp knife and remove a section about 50 mm larger than the damaged area on all sides;
- ii) clean any dirt and bonding product from the substrate;
- iii) Apply a line of mastic around the area to be repaired;
- iv) in the clean area carefully place a section of insulation that is the same as the one removed and of the appropriate size to fit perfectly into the area cut;
- v) flatten bumps and conceal the join;

If the damage was not accidental, its causes should be eliminated before repair.

5. PROJECT TECHNICAL DETAILS

5.1 Window railings

The design of window sills must be adequate in order to stop rain water from running directly onto the system coating. Therefore, there should be a well-sized, outwards-facing slope offering horizontal projection and drip of between 3 to 4 cm beyond the façade surface, as well as side edges (groove or vertical projection onto the board), preventing water from running laterally.

5.2 System in contact with the ground*

The system's coating solution close to the ground, particularly its final coating, should take into account that this will often be in contact with ground water or splashes from it, as a result of rainfall or irrigation systems.

Provision should be made for an efficient rainwater drainage system in order to prevent rainwater accumulating on the surface layers of the soil, which may affect the system's durability.

5.3 Renovation of façades

For renovation work with increased wall thickness, it is common for some adjustments to be required on the trim of the system, such as: increasing the length of the sill, replacing the upper panel protectors, amending the design of the eaves or cornices. If there are any of these, they should be examined on a case by case basis.

5.4 Superior protection on façades

On the detail of the superior protection on façades, it is essential to prevent water from running directly over the textured surface finish, avoiding the dragging and subsequent depositing of debris on the surface. Therefore, it should be ensured that the slope of these coats goes towards the inside of the cover with a horizontal projection beyond the finishing plane of 3 to 4 cm, and a drip profile on its end.

6. COMPONENTS

6.1 General description of main components

COMPONENTS	DESCRIPTION	CONSUMPTION	THICKNESS (mm)
SecilVit Painel MD	Expanded agglomerated cork panel for exterior finish, 1000 mm x 500 mm and an approximate density of 150 kg/m ³ .	2 units/m ²	40 to 240
ADHERE Vit ecoCORK MD	Lightweight mortar, mixed binders, cork aggregates and natural hydraulic lime for bonding of insulation panels. With EC marking	5 kg/m ²	Levelling: 3.0 to 3.5 or 4.0 to 6.0 with reinforcement
Sticol MC	Polyurethane-based one-component elastic mastic which polymerizes under the effect of humidity	-	-

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6.2 Main system components

6.2.1 ADHERE Vit ecoCORK MD

DESCRIPTION

ADHERE Vit ecoCORK is a bonding mortar, formulated from mixed binders, cork aggregates and natural hydraulic lime.

CHARACTERISTICS

HARDENED PRODUCT	VALUE	STANDARD
Flexural strength	≥ 2.5 MPa	EN 1015-11
Resistance to compression	≥ 6.0 MPa	EN 1015-11
Adhesion to brick and block / Fracture mode	≥ 0.8 MPa / A and B	EN 1015-12
Adhesion to insulation panel (agglomerated black cork)	≥ 0.12 MPa substrate breaks	-
Density	1250 ± 50 kg/m ³	EN 1015-10
Capillarity	Class W2	EN 1015-18
Water vapour permeability	< 15 μ	EN 1015-19
Reaction to fire	Class A1	EN 998-1
Thermal conductivity ($\lambda_{10, dry}$)	0.24 W/m.K (P= 50%)	NP EN 1745

HEALTH AND SAFETY

- ▶ Irritating to eyes, respiratory system and skin;
- ▶ May cause sensitisation by skin contact;
- ▶ Do not inhale dust;
- ▶ In the event of contact with eyes, wash immediately with plenty of water and seek medical advice;
- ▶ Wear protective clothing and suitable gloves;
- ▶ Keep out of reach of children.



PACKAGING

20 kg paper bags in 60-bag laminated pallets.

VALIDITY

12 months

6.2.2 STICOL MC

DESCRIPTION

Polyurethane-based one-component elastic mastic which polymerizes under the effect of humidity

HEALTH AND SAFETY

- ▶ Handling of this product does not require special precautions.



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6.2.1 SecilVit Painel MD

DESCRIPTION

SecilVit Painel MD is a compact expanded agglomerated black cork panel for visible exterior coating, giving the appearance of natural cork. The panel provides acoustic and thermal insulation, is rot proof, dimensionally stable, unchanging over time, 100% environmentally friendly and recyclable, and comes from a renewable raw material source. Only cork granules are used in manufacturing, which, when subjected to a thermal process, release suberin, a resin which acts as a natural binder.

CHARACTERISTICS

CHARACTERISTICS	VALUE	STANDARD
Length	1000 mm	-
Width	500 mm	-
Thickness	40 to 240 mm	-
Water absorption	0.3 kg/m ²	NP EN 1609
Thermal conductivity λ_d	0.043 W/m.K	EN 12667
Compressive strength at 10%	180kPa	EN 826
Density	140 to 160 kg/m ³	

HEALTH AND SAFETY

- ▶ Handling of this product does not require special precautions. However, it can cause irritation to sensitive skin. In the event of this, rinse thoroughly with cold water and soap.

PACKAGING

- ▶ 4.0 m² - 40 mm thickness
- ▶ 3.0 m² - 50 mm thickness
- ▶ 2.5 m² - 60 mm thickness
- ▶ 1.5 m² - 100 mm thickness

With Wave finish

- ▶ 3.0 m² - 50 mm thickness
 - ▶ 1.5 m² - 100 mm thickness
- (other thicknesses on request– 40 to 240 mm)



As the application of our products is beyond our control, we are not responsible for their misuse. It is the customer's duty to check the suitability of the product for its intended purpose. In any event, our responsibility is limited to the value of the goods supplied by us. The information on this sheet may change without notice. If you have any queries and require further clarification, please contact our technical services.

Revised June 2015

TC.E.1142. 2 EN