



Technical data sheet



AFON TERMO® IL NANOCAPPOTTO®

**Extra-thin anti-condensation Thermo-reflective
insulating coating**



INDOOR - OUTDOOR

Rev. 31_10_25 EN1



General description

AFONTERMO® IL NANOCAPPOTTO® is the first finish for masonry that functions as an extra-thin anti-condensation reflective insulating coat, result of scientific research aimed towards quality of insulation and therefore having as objective not only to maximise energy saving but also to improve the salubrity of buildings.

Thanks to its heat reflecting and high insulating properties it prevents the dispersion of heat through the masonry during the winter and, if applied outdoors, will reflect and reject the heat of the summer sunshine. This means that in winter the heat produced by the household stays inside, while in summer the external heat is rejected, preventing the heat from entering inside. **AFONTERMO®**, if applied on the building surfaces (such as walls, ceilings, steel and/or reinforced concrete pillars), substitutes completely the traditional insulating coat and eliminates thermal bridges preventing condensation and Mold, meanwhile the great breathability of the product permits the natural flow of vapor throughout the walls. In this way **AFONTERMO®** preserves its thermo-hygroscopicity and makes living environments healthy.

AFONTERMO® is a white doughy mass, ready for use. Available in various finishing grain sizes, it is applied in two or more coats for an average finished thickness of 4 to 12 mm for outdoor applications and 4/5 mm for indoor applications.

Once all layers of **AFONTERMO®** are applied and the wall is completely dry it can be painted only and exclusively using **THERMOPITTURA AFON CASA**, which can be tinted exclusively in light colours using mineral oxides.

Guarantee

In addition to the legal guarantee, the product is covered by a product liability policy with a leading Italian insurance company.

Fields of use

AFONTERMO® IL NANOCAPPOTTO® Is used as insulation for walls or surfaces of existing or new constructions and flat roofs. Thanks to its elasticity and adherence to any surface (masonry, steel, reinforced concrete, wood, glass, PVC pipes, steel pipes, etc.) it achieves long lasting and high resistance to all atmospheric agents.



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SUBSTRATE PREPARATION ON WALLS AND CEILINGS

Before applying **AFONTERMO®**, particular attention must be paid to the paint previously applied to the surfaces. If previously painted with quartz, washable, non-breathable or siloxane (non-absorbent) paint, or in the case the painted covering crumbles, the paint must be removed using appropriate stripping or scraping methods, the surfaces must be cleaned with a high-pressure cleaner and covered with a layer of **AFON CASA FIXATIVE**. Then, once the surface is completely dry you can proceed with the application of **AFONTERMO®**.

AFON CASA FIXATIVE should be applied in any case on internal or external Walls and on gypsum plaster or false wall plasterboards. In the case of new constructions with a finishing veil applied on the masonry, it's important to wait for all surfaces to dry and only after applying **AFON CASA FIXATIVE** proceed with the application of **AFONTERMO® IL NANOCAPPOTTO**.

In any case, before the application of **AFONTERMO®**, treated substrates must be dry - compact - clean and not affected by primary and secondary capillary rising damp. If this is the case, our dehumidifying product **NOVOMUR** can be used to recondition the humid wall.

AFONTERMO FOR FLAT ROOFS SUITABLE FOR WALKING ON

For the insulation of flat roofs, it is strictly necessary to ensure that an effective waterproofing system (e.g., membrane) is present above the screed. If absent, this system must be newly created beforehand to guarantee the deck's water tightness. The waterproofing system must be equipped with specific perimeter tapes for water tightness along the intersections between vertical and horizontal surfaces, appropriate fragmentation joints in the screed, and specific tapes for sealing the joints themselves. In the case of existing or newly created waterproofing systems above the screed, water tightness tests of said systems must be carried out prior to the application of **AFONTERMO®**. If bituminous sheaths are present, they must be removed, and a new membrane waterproofing system created. On the dry - compact - clean and waterproofed substrate, proceed with the preparation of the perimeter with the **Mapeband Sa** product, an elastic self-adhesive butyl waterproofing tape with non-woven fabric, and subsequently with the application of the coats of **AFONTERMO®**. Once the last coat of **AFONTERMO®** has dried, proceed with laying the **AFON CASA NON-WOVEN FABRIC** (60 g/sqm), ensuring it overlaps onto vertical surfaces by at least 10-15 cm and is glued with **AFONGUAINA REFLEX**. Subsequently, apply 2 coats of **AFONGUAINA REFLEX**, allowing 24 hours between coats. Note that **AFONGUAINA REFLEX** does not replace the above-screed waterproofing system, which must always be present and guarantee the deck's water tightness. It is advisable to provide overhead cover to allow work to be carried out protected from atmospheric agents.

Application procedures:

INDOOR USE

- After adding one pack of **AFON CASA HARDENER** for each pail of **AFONTERMO®** mix the product directly in it's pail using an electric whisk. The product must be mixed until it becomes homogeneous creamy and soft. If the product is excessively compact or dry add a cup of water before mixing.
- Apply **AFON CASA FIXATIVE**.
- FOR INTERIORS Apply **AFONTERMO®** evenly using a **smooth-edged steel trowel**. For a correct application follow these procedures: Apply **AFONTERMO® type A**. Once completely dry, after at least 48 hours, proceed by applying **AFONTERMO® type B** available in the following finishes:
 - **AFONTERMO® type B 0,25-0,5 – Civil finish**. The particle size is similar to fine sand. If necessary proceed with painting only after complete drying (at least 48 hours).
 - **AFONTERMO® type B 0,5-1 mm. – Civil finish**. The particle size is similar to the traditional plaster. If necessary proceed with painting only after complete drying (at least 48 hours).**N.B.** To achieve a **smooth finish**, apply two coats of **THERMOPITTURA AFON CASA** (diluted 4% with water) over **AFONTERMO® type B 0,25-0,5**.

Caution: In autumn, winter or in any case of high humidity levels, the product may take up to 6 days to dry completely. Before applying new layers of **AFONTERMO®** it is always necessary to make sure the previous layers are completely dry. **AFONTERMO®** must overlap a few centimeters onto adjacent walls and ceilings.



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OUTDOOR USE - Application using a smooth-edged steel trowel.

- Apply **FISSATIVO AFON CASA**.
- After adding a flask of **CATALIZZATORE** or **INDURITORE AFON CASA** (catalyzer/hardener) for each pail of **AFONTERMO® Type A 1-2 CORAZZATO** (Armoured Afontermo for external use) mix the product until it becomes homogeneous creamy and soft.
- Proceed by applying evenly a first layer of the product to the surface using a smooth-edged steel trowel.
- Once the first layer is completely dry, after at least 48 hours, proceed by applying a second hand of the same type of **AFONTERMO®**.
- Once the second layer is completely dry, after at least 48 hours, proceed by applying a layer of **AFONTERMO® Type B CORAZZATO**.
- Painting must be done using exclusively our **THERMOPITTURA AFON CASA**.

For applications over 6 mm, refer to our specification items.

For the application of **AFONTERMO® type C**, refer to our specification items.

OUTDOOR USE - Application using a notched trowel.

For 8mm applications with mesh interposition, the notched trowel can be used as follows:

After adding a flask of **CATALIZZATORE** or **INDURITORE AFON CASA** (catalyzer/hardener) to each pail, apply a 1st layer of **AFONTERMO® CORAZZATO TYPE A "1-2"** with a 6 mm notched trowel; after at least 3 days apply a 2nd layer of **AFONTERMO® CORAZZATO Type A "1-2"** with a smooth edged trowel inserting **AFONRETE** Fiber glass mesh; after at least 2 days apply a 3rd coat of **AFONTERMO® CORAZZATO Type B "0.5-1"** with a smooth edged trowel.

For applications over 8 mm with mesh interposition, refer to our specification items.

Do not apply **AFONTERMO® CORAZZATO** during adverse weather conditions like rain or hail.



Watch the video on
YouTube

AFONTERMO® Finishes*

Type A sp. 1-2 mm



Type B sp. 0,5-1 mm



Type B sp. 0,25-0,5 mm



**The only purpose of the images is to illustrate approximately the looks of the finished product. Colors are not faithful to reality.*

Packaging and storage

AFONTERMO® Type A, B and C is supplied in 14 lt. pails. Store indoors and protected from the sun. If the pail is sealed well the product is maintained for 10 months.



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Warnings

- If the product is dense and excessively compact or dry add a cup of water before mixing.
- Apply only on well-cohesive, resistant, compact and stable surfaces; otherwise restore the underlying plaster and, only after drying, proceed with the application of **AFONTERMO®**;
- On irregular substrates, showing cracks, micro-cracks, cavities, or painted with non-removable paints, Before applying **AFONTERMO®**, apply **RASANTERMO** or **AFON CALCE** to interior walls and any **breathable skim coat** to exterior walls.
- If applying on new plaster at least 28 days must pass to ensure perfect drying of the substrate before applying **AFONTERMO®**;
- On substrates that have a tendency to chalk, crumble or that are particularly absorbent, first apply the **AFON CASA FIXATIVE** (non-filming Afon Casa water fixative), then, once completely dry, proceed by applying **AFONTERMO®**;
- Before Applying **AFONTERMO®** remove any traces of Mold.
- Avoid applying the product with temperature below 5° C;
- Never add binders or inert substances to the material to avoid compromising the characteristics of the material;
- Do not cover **AFONTERMO®** using ceramic tiles and / or coatings in general;
- In presence of new plaster, always apply our **FISSATIVO** (fixative) before the application of **AFONTERMO®**;
- **Attention:** in fall or winter and more generally in presence of high humidity, the product takes from 2 to 6 days to dry, so be sure the surfaces are completely dry before applying new layers of **AFONTERMO®**;
- Do not apply **AFONTERMO®** during adverse weather conditions like rain or hail.
- On out door applications the product could show small cracks. In these cases, the surface can be evened out by applying a finishing layer of **AFONTERMO®** or by painting with our **THERMOPITTURA AFON CASA**.

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THERMAL CONDUCTIVITY	Applied inside: $\lambda = 0,001$ W/mK Applied to the exterior: $\lambda = 0,003$ W/mK
REFLECTANCE	R=80%
VAPOUR RESISTANCE	$\mu = 9.1$
SPECIFIC HEAT	1493 J/KgK (40°) - 2089 J/KgK (90°)
APPROX YIELD TYPE A	2 lt/sqmt, 2/2,5 mm thick
APPROX YIELD TYPE B	1.5 lt/sqmt, 1 mm thick
APPROX YIELD TYPE B	4 lt/sqmt, 4 mm thick
SPECIFIC GRAVITY	490 Kg/mc
CAPILLARITY WATER ABSORPTION RATIO	0.11 Kg/mq min ^{0.5}
STRENGTH AND DEFLECTION CRITERIA	1.08 N/mm ²
RESISTANCE TO BUCKLING	0.38 N/mm ²
ADHERENCE BY DIRECT TRACTION	0.257 N/mm ²