

ECAP®

pre-finished system for **external thermal insulation** of walls and ceilings



THERMAL INSULATION. REFURBISHMENT AND DEHUMIDIFICATION

ECAP® SYSTEM

SIGNIFICANTLY REDUCES THE POSSIBILITY OF APPLICATION MISTAKES

- The board is pre-finished with smoothing mortar layer, mesh with overlaps, pre-drilled holes for fixing dowels and predispositions for grouting between boards.
- Once the Ecap® board is applied, it is enough to lay only one layer of suitable coloured finishing in paste, to obtain a perfect final result.
- · The application can occur also with unfavorable weather conditions.
- The pre-applied smoothing mortar protects the boards during the working on-site from weather and solar radiation.
- Thermal insulation performances in accordance with energetic certifications and the current standards.
- · It makes fast and safe the application on site.
- · It improves the productivity during the realization phase.
- Ecap® is indicated for the internal and external wall insulation of new buildings, pre-fabricated buildings, for façades restoration and rebuilding. It also eliminates the thermal bridges and protects from rain.



- 1) Holes for fixing dowel into the smoothing mortar.
- 2) Holes for fixing dowel into the smoothing mortar with mesh.
- 3) Fiberglass mesh embedded in the smoothing mortar.
- 4) Pre-applied cementitious smoothing mortar.

ECAP® L

Pre-finished thermal insulating EPS board for thermal insulation of (external and/or internal) walls and ceilings.

The Ecap® board is supplied pre-smoothed with fiberglass mesh, overlaps and pre-drilled holes for the insertion of fixing dowels.

ECAP® GT

Pre-finished thermal insulating EPS board, treated with graphite, for thermal insulation of (external and/or internal) walls and ceilings. The Ecap® board is supplied pre-smoothed with fiberglass mesh, overlaps and pre-drilled holes for the insertion of fixing dowels.

ECAP® STIF

Pre-finished thermal insulating board in Stiferite Class SK. Stiferite Class SK is a sandwich board made of a polyiso foam insulating component, expanded without the use of CFC or HCFC, covered on both sides with saturated fiberglass.

ECAP® WOOL

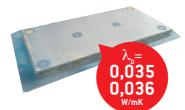
Pre-finished thermal insulating board in rock wool for thermal insulation of (external and/or internal) walls and ceilings.

The Ecap® board is supplied pre-smoothed with fiberglass mesh, overlaps and pre-drilled holes for the insertion of fixing dowels.





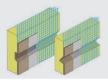




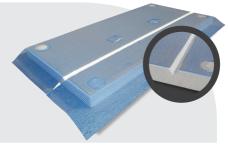
ECAP® L and **ECAP®** GT

are also available in the version with **GROOVE** to satisfy **architectural and aesthetic needs**.

Groove's accessories: shaped meshes and smoothing trowels.









SPECIAL DRY
THERMAL INSULATION

Ready to use system:

- · Nothing to mix
- · No dust production
- · Any equipment required

COMPARISON BETWEEN **ECAP**® AND **TRADITIONAL SYSTEMS**

FAST APPLICATION: ONLY ONE OF THE BENEFITS

DAY	TRADITIONAL SYSTEM	ECAP®
1	Positioning of the starting profile. Gluing of the boards.	Positioning of the starting profile. Gluing of the boards. Fixing of the dowels. Grouting or finishing.
2	Waiting time for glue drying.	Waiting time for finishing drying.
3	Fixing of the dowels. Application of the first coat of smoothing mortar and mesh fixing.	Application of the primer for the coloured finishing mortar.
4	Waiting time for the first coat drying.	Coloured finishing mortar application (END)
5	Application of the second coat of smoothing mortar.	
6 - 7	Waiting time for the second coat drying of smoothing mortar.	

TRADITIONAL SYSTEM	ECAP®
PRODUCTIVITY:	PRODUCTIVITY:
8,08 m ² / day / person	14,32 m ² / day / person

COMPARISON WITH TRADITIONAL SYSTEM:

- + 77% m² / day /person
- **55%** days to finish the job





Realization of external wall insulation on the façade of a two-storey building (70 m²), and a three workers team

· LARGER SURFACES

mortar.

• REGULAR SURFACE OR WALLS WITHOUT WINDOWS *

Primer for coloured finishing

<u>Coloured finishing mortar</u>

· ON CEILINGS **

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FURTHER INCREASE OF SPEED COMPARED TO TRADITIONAL SYSTEMS

* POSSIBILITY TO USE MOBILE SCAFFOLDING OR ELEVATORS. ** AVOIDING THE APPLICATION OF SMOOTHING MESH UPWARD, ECAP® MAKES THE APPLICATION EASIER AND ENSURES THE GOOD "ENGINEERING PRACTICE".

ECAP® IS GUARANTEED,

with an insurance policy of ten years!

Thermal Division ... what is it?

The primary aim of Edilteco is to produce building materials that promote and enable a healthy living comfort. Edilteco has, for a long time, recognised the importance of **thermal insulation** in buildings and the need to create an effective thermal barrier between internal and external environments. Edilteco has always seen in this topic an important and innovative solution of energy and cost saving.





ECAP®

Innovative thermal insulating pre-finished board for the application on walls and ceilings.



THE PRE-FINISHED SYSTEM IN AEROGEL FOR EXTERNAL WALL INSULATION (EWI)



ECAP® nano is a thermal insulating board for ceiling and external/internal wall insulation systems. It is composed of nanotechnological Aerogel and polypropylene membrane reinforced with fiberglass mesh.

ECAP® nano board provides high thermal performances: it is perfect to reach, also in small spaces, good energy levels according to the current standards.

TECHNICAL CHARACTERISTICS

TECHNICAL CHARACTERISTICS INSULATING BOARD	VALUES	TEST METHODS
Board dimensions	1400 x 720 mm	n.d.
Thickness	10/20/30/40/50/60 mm	n.d.
Thermal conductivity $(\lambda_{_{\rm D}})$ declared to 10 $^{\circ}{\rm C}$	0,015 W/mK	EN 12667
Permeability to water vapour μ	5	EN 12086
Limit temperatures of use	-200 °C +200 °C	n.d.
Compressive strength (deform. 10%)	80 KPa	EN 826
Specific heat	1000 J/kgK	ASTM E 1269
Density	$230 \pm 20\% \text{kg/m}^3$	n.d.
Fire reactivity class	CS_1D_0	EN 13501-1
Water absorption by partial immersion and for a long period	$Wp \le 0.01 \ kg/m^2$	EN 1609
Colour	gray - white	n.d.

THERMAL RESISTANCE

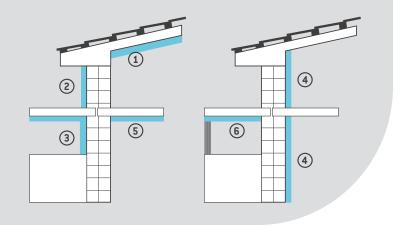
THICKNESS mm	10	20	30	40	50	60
R (m²K/W)	0,67	1,34	2,01	2,68	3,33	4,00

- Minimum thermal conductivity, flexibility and compressive strength
- Thermal conductivity equal to 0,015 W/mK
- Fast application
- Less application costs
- Less use of scaffolding

MAIN ECAP® USES

Internal and external.

- Ceiling thermal insulation.
 External wall thermal insulation.
- 3) Elimination of thermal bridges.
- 4) Internal wall thermal insulation.
- **5)** Floor: internal thermal insulation.
- 6) Floor: external thermal insulation (ex: portico).



TECHNICAL CHARACTERISTICS	STANDARD	ECAP® L	ECAP® GT
Thermal conductivity $\left(\lambda_{_{D}}\right)$ declared to 10 $^{\circ}\text{C}$	EN 12667	0,035 W/mK 0,036 W/mK	0,031 W/mK (th. 30 / 40 / 50 mm) 0,030 W/mK (th. from 60 to 200 mm)
Compressive strength at 10% deform. CS (10\Y)	EN 826	≥ 100 kPa	70 (*) kPa 100 (**) kPa
Flexural strength BS	EN 12089	≥ 150 kPa	> = 50 (*) kPa > = 150 (**) kPa
Water absorption by total immersion and for a long period $WL(T)$	EN 12087	≤ 2%	≤ 2% (*)
Water absorption by partial immersion \mathbf{W}_{lp}	EN 12087	\leq 0,5% kg/m ²	$\leq 0,5\% \text{ kg/m}^2$ (*)
Resistance factor to the diffusion of water vapour $\boldsymbol{\mu}$	EN 12086	30 - 70	20 - 40 (*) 30 - 70 (**)
Permeability to water vapour of EPS board	EN 12086	-	0,018 - 0,036 (*) mg/(Pa·h·m) 0,010 - 0,024 (**) mg/(Pa·h·m)
Limit temperature of use	-	75℃	80°C (*)
Fire reactivity	UNI EN 13501-1	B-s1,d0 (*)	B-s1,d0 (***)
Dimensional stability (in normal conditions of laboratory) DS(N)	EN 1603	± 0,2%	± 0,2% (*)
		(*) complete cycle.	(*) thick. 60 - 70 - 80 - 90 - 100 - 120 - 150 - 180 - 200 mm. (**) thick. 30 - 40 - 50 mm. (***) complete cycle.

ECAP® L Pre-finished thermal insulating EPS board

with expanded synterized polystyrene.

ECAP® GT Pre-finished thermal insulating EPS board with expanded synterized polystyrene treated with graphite.

TECHNICAL CHARACTERISTICS	STANDARD	ECAP® STIF (a)	ECAP® WOOL (b)		
Thermal conductivity $\left(\lambda_{_{D}}\right)$ declared to 10 $^{\circ}\text{C}$	EN 12667	0,026 W/mK (*) 0,028 W/mK (**)	0,035 W/mK 0,036 W/mK		
Compressive strength at 10% deform. CS (10\Y)	EN 826	150 kPa	20 kPa		
Water absorption by total immersion and for a long period WL(T)	EN 12087	< 2% thick, 20 - 110 mm < 1% thick, 120 - 140 mm	≤ 3% kg/m²		
Water absorption by partial immersion \mathbf{W}_{lp}	EN 12087 ^[a] EN 1609 ^[b]	-	$\leq 1 \text{ kg/m}^2$		
Resistance factor to the diffusion of water vapour $\boldsymbol{\mu}$	EN 12086	56 <u>+</u> 2	1		
Perpendicular tensile strength	EN 1607	> 80	10		
Fire reactivity	UNI EN 13501-1	B-s1,d0 (***)	Euroclass A1		
Dimensional stability (in normal conditions of laboratory) DS(N)	EN 1603 ^(a) EN 1604 ^(b)	< 0,5%	≤ 1%		
		(*) thick. 80 · 90 · 100 · 120 · 140 mm. (**) thick 40 · 50 · 60 · 70 mm. (***) also for board only.			

ECAP® STIF Pre-finished thermal

insulating board in Stiferite Class SK.

ECAP[®] **WOOL** Pre-finished thermal

insulating board in rock wool.

PACKAGING AND STORAGE BOARDS AND PALLET ECAP®

BOARD:

Ecap® L/Ecap® GT/Ecap® Stif/Ecap® Wool: with straight edge 600 x 1200 mm [0,72 m²]. Ecap® Nano: with straight edge 720 x 1400 mm (1,008 m²).

PACKAGING:

Ecap® L / Ecap® GT / Ecap® Stif / Ecap® Wool: box on stackable pallets

[1200 x 1200 x h. 1200 mm] with heat-shrink wrapping.

Ecap® Nano: box on stackable pallets [1440 x 735 mm] with heat-shrink wrapping.

The packaging prevents damages during transport and make the storage on building site easier.



THICKNESSES mm*	30	40	50	60	70	80	90	100	120	150	180	200
N° BOARDS PER PALLET	74	56	44	38	32	28	26	22	18	14	12	10
TOTAL m ² PER PALLET	53,28	40,32	31,68	27,36	23,04	20,16	18,72	15,84	12,96	10,08	8,64	7,20

* only for Ecap® L / Ecap® GT / Ecap® Stif

COMPLETE SYSTEM FOR: EXTERNAL WALL THERMAL INSULATION



ECAP® RANGE OF PRODUCTS FOR: **GLUING, SMOOTHING MORTAR AND FINISHING**

ECAP® SOUDATHERM WALL 220 Single-component polyurethane adhesive.

ECAP® ADP Adhesive Powder Fibre-reinforced adhesive in powder, ready to use.

 $\textbf{ISOLTEC0} \textbf{@ RASATURA MONOCAP} \ \text{Premixed single-layer levelling smoothing mortar}.$

ECAP® F Fixative Ready to use universal fixative, also available in fibre-reinforced version.

ECAP® FS Silicate Fixative Fibre-reinforced potassium-based fixative.

ECAP® AC Acrylic Colour Acrylic finishing in paste.

ECAP® AP Acrylic Paint Ready to use resin wall paint.

ECAP® APR Smoothing mortar in paste, free of cement.

ECAP® STC Silicate Colour Mineral finishing in paste, composed of silicates of potassium.

ECAP® STP Silicate Paint Ready to use wall paint, composed of potassium silicates.

ECAP® SC Silicone Colour Silicon finishing in paste.

ECAP® SP Silicone Paint Silicon wall paint.

ECAP® EP Elastomeric Paint Ready to use elastomeric wall paint.

ECAP® SCLP Selfcleaning Paint Self-cleaning wall paint.

ECAP® PSCL Selfcleaning Primer Self-cleaning primer for wall paint.



On the Ecap® external wall insulation, it is also possible to realize STONE FINISHING.

Ask more information to our Technical Department technical@edilteco.com





WHO HAS CHOOSEN **ECAP**®

REFERENCES



LIBRARY AND MUSIC MUSEUM QUARTUCCIU - CAGLIARI - ITALY



B&B HOTELS BREST - FRANCE



MANFREDONIA HARBOR FOGGIA - ITALY



With Ecap®... everything is easier!

Innovative pre-finished thermal insulating board to be applied on walls and ceilings

EDILTECO,AN INTERNATIONAL SUCCESS

italy . france . benelux













360° Insulation

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