

THERMAL
INSULATION

bauSATEi®

**bauSATEi®**

Impact Resistant Thermal Insulation Exterior or Interior

BauSATEi® is designed to create the thermal envelope of non-insulated buildings and to thermally rehabilitate facades of existing buildings that do not comply with current energy efficiency regulations.

BauSATEi® is made up of a folded expanded polystyrene panel, with a steel mesh attached to it by means of Connectors. It is completed on site by applying a layer of mortar with a compressive strength greater than 15 MPa and a Weight of 20 mm, which gives it its characteristic strength.

Highly resistant to impacts (+ 300 Joules), BauSATEi® helps maintain comfortable temperatures inside buildings throughout the year. It leads to energy savings that can reach 50 kW-h/m² year, depending on the Weight of the selected expanded polystyrene core and allows access to Class A of the standardized scale of energy efficiency for buildings.

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The Baupanel® System Thermal Envelope



High resistance to impacts

100 times more resistant (300 joules) than traditional SATE systems (3 joules).



High resistance to bending

25 times more resistant to bending than traditional SATE systems.



Envelope tightness

Improves the necessary tightness, according to the CTE DB-HE regulations.



More secure placement

It can be fixed with steel bars, given the greater Weight of the resistant layer.



Reduce execution times

BauSATEi® panels are supplied in plates of up to 4.4 m² that simultaneously incorporate the insulating element and the resistant reinforcement, providing greater speed in placement.



Simplifies commissioning

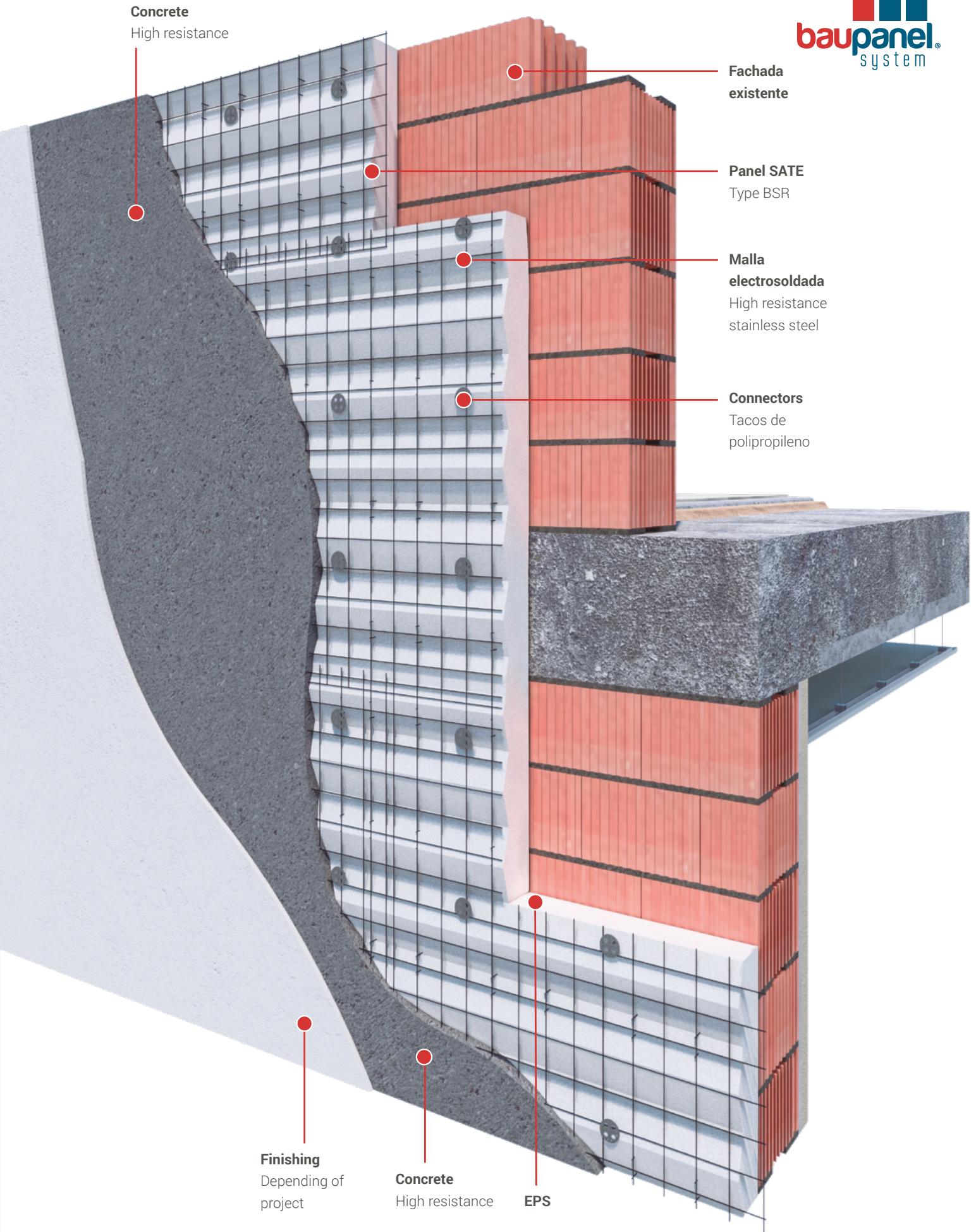
BauSATEi® consists of only two operations: fixing the plate and subsequent application of the resistant layer, while the traditional SATEs take at least six operations.



Does not spread fire

The BauSATEi® expanded polystyrene insulating plate is Class E, hardly flammable, so it does not spread the flame in case of fire.

Designed for the rehabilitation of the thermal envelope of buildings.



Advantages and Applications

- ✓ Huge savings on heating and cooling costs conditioned by the reduction of the U value of Thermal Transmittance of the building.
- ✓ Mechanically protects the building envelope.
- ✓ Improves the energy efficiency of the building allowing it to achieve sustainability criteria.
- ✓ Eliminates thermal bridges, avoiding the risk of interstitial condensation and heat loss.
- ✓ Reduces the thermal solicitation of the structure.
- ✓ Transfers the potential dew point away from the building structure.
- ✓ Excludes the need to remove the original coating.
- ✓ Optimizes the use of thermal inertia, limiting fluctuations in the interior temperature of the building.
- ✓ Contributes to the acoustic insulation of the facade.
- ✓ It has low maintenance cost.
- ✓ Contributes to the elimination of internal health problems, such as humidity and condensation.
- ✓ It does not reduce the usable surface (in rehabilitation of the exterior façade).
- ✓ Renew the appearance of the facade and increase the value of the property.
- ✓ Corrects cracks and fissures in the support, avoiding possible leaks and improving impermeability.
- ✓ Increases the useful life of the building.
- ✓ It can be installed in houses already inhabited.
- ✓ It is respectful with the environment as it does not disperse harmful polluting substances, as it can be recycled and as it reduces losses by avoiding a greater emission of CO₂ into the atmosphere.

100 times more resistant than traditional thermal solutions

BauSATEi® is the result of research by the Baupanel® System R+D+i department to improve everything that exists to date in terms of external thermal insulation systems, commonly known in Spain as SATE systems.

Traditional SATE solutions have very low impact resistance (3 joules), making them very vulnerable to natural wear and tear and accidental or intentional damage.

BauSATEi® is 100 times more resistant (300 joules) since it has been developed from an expanded polystyrene plate reinforced with a galvanized high-resistance steel mesh; The zig zag profile of the plate allows it to house a robust layer of High Resistance mortar.



¿How do you install the panels?

BauSATEi® is anchored to the façade either by means of polypropylene plugs with nylon nails or with 6 mm diameter corrugated steel bars.

The number of fixings required is given according to a mechanical calculation applying the criteria of the CTE-DB-SE-AE, particularly section 3.3 where the wind forces are collected according to the geographical location, degree of roughness of the environment, height above sea level, and the shape and orientation of the façade. Usually 5 fixings per m² are required.

Once the panels have been placed and anchored to the façade, the High-resistance mortar layer is applied, which will be given with 15 mm masters placed on the steel mesh. Taking into account the depth of the fold (11 mm) and the diameter of the elements of the steel mesh (2.5 mm), this layer acquires the Weight of 20 mm. It is applied with a spray machine and finished with a mastered and floated finish.

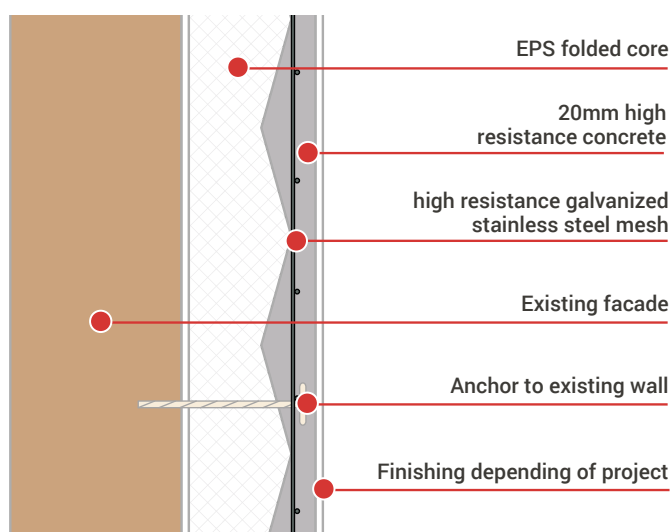
The finished surface may be completed as indicated in the project by means of paint, acrylic mortar, cladding or similar.

Technical Specifications

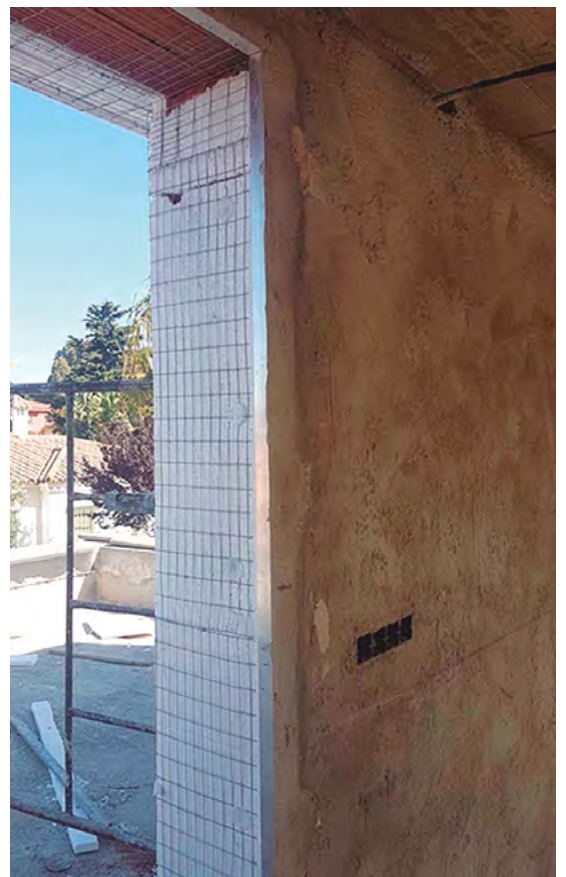
BPS Panels · BauSATEi®

Panels designed for cladding as a thermal insulation system both on the outside and inside, for use in buildings with enclosures executed with the traditional system. The transversal reinforcement is 1 Ø 2.5 every 75 mm.

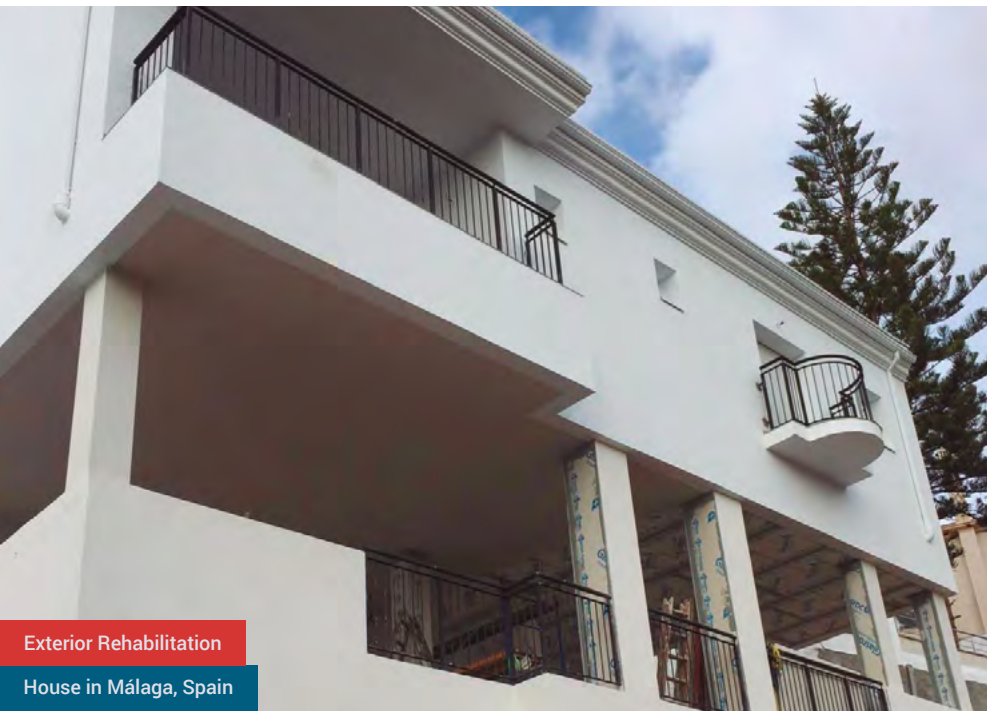
BauSATEi® panels are supplied in 2m long plates x 1.10m wide.

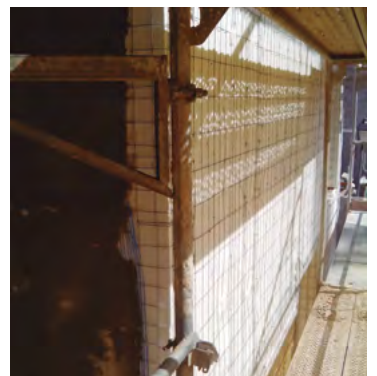
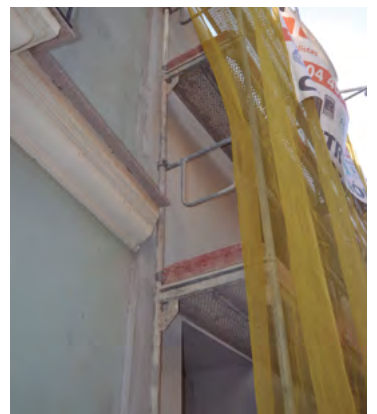
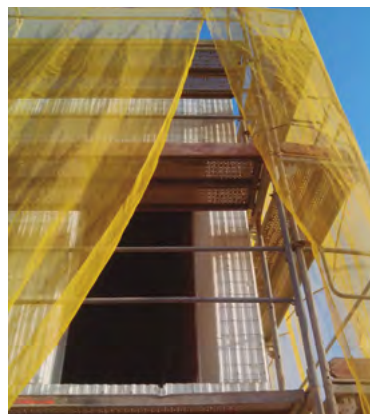


Ref.	Weight EPS mm	Ø Reinforcement Mesh	Ø Connectors mm	Concrete Weight mm	Weight panel mm	Total weight panel terminado Kg/m ²	Aislamiento mínimo a Ruido Aéreo dB(A)	Thermal Transmittance (W/m ² K)
BPS 30	30	15 Ø2,5	3,00	23	53	50,0	30,2	1,009
BPS 40	40	15 Ø2,5	3,00	23	63	50,2	30,2	0,797
BPS 50	50	15 Ø2,5	3,00	23	73	50,4	30,3	0,658
BPS 60	60	15 Ø2,5	3,00	23	83	50,6	30,3	0,561
BPS 70	70	15 Ø2,5	3,00	23	93	50,7	30,3	0,488
BPS 80	80	15 Ø2,5	3,00	23	103	50,9	30,3	0,432
BPS 90	90	15 Ø2,5	3,00	23	113	51,1	30,4	0,388
BPS 100	100	15 Ø2,5	3,00	23	123	51,3	30,4	0,352
BPS 110	110	15 Ø2,5	3,00	23	133	51,4	30,4	0,322
BPS 125	125	15 Ø2,5	3,00	23	148	51,6	30,4	0,286
BPS 140	140	15 Ø2,5	3,00	23	163	51,9	30,5	0,257
BPS 165	165	15 Ø2,5	3,00	23	188	52,3	30,5	0,219
BPS 200	200	15 Ø2,5	3,00	23	223	53,0	30,6	0,182



Private Homes Exterior Insulation





Residential Buildings



Exterior SATE

Building Complex in Málaga, Spain





Interior Rehabilitation

Casa Baños, Toledo, Spain

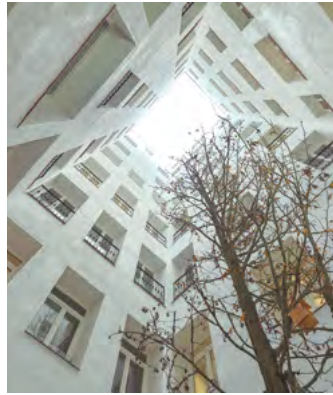


Exterior Rehabilitation

House in Badajoz, Spain



Homes & Buildings Rehabilitations





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