BUILDING SYSTEM

ISOTEX®

Wood-cement Blocks and Floor Slabs

EUROPEAN LEADER
FOR OVER 30 YEARS

Happy to **live in**
Happy to **invest in**

TOP CLASS thermal and acoustic insulation,
fire resistance, seismic safety and green building

ABOUT US

Cement-bonded wood fibre formwork blocks have been used successfully in Northern Europe for over 70 years, especially in Germany, where we acquired the **ISOTEX®** technology and where over 400,000 homes have been built.

ISOTEX Srl has been offering its building system in Italy since 1985. **To date, about 80,000 homes have been built.** ISOTEX® cement-bonded wood fibre formwork blocks and floor slabs ensure a complete and uniform construction technology.

Advantages

ISOTEX® is an anti-seismic structure, **resistant to fire, with reduced energy consumption both in summer and in winter, excellent acoustic insulation (Class 1), excellent transpiration and part of green building. All of which ensure maximum structural safety and the very best living comfort, in full compliance with current regulations.**

Living comfort **ENERGY SAVINGS**

Living comfort **THERMAL INERTIA**

Living comfort **ACOUSTIC INSULATION**

Green building **CERTIFIED ECOLOGICAL**

Safety **ANTI-SEISMIC TESTED**

Safety **FIRE RESISTANCE**

Living comfort **VAPOUR PERMEABILITY**

Buying an ISOTEX® house means you will certainly recoup your investment thanks to an **economic value set to increase over time,** as the various features mentioned above ensure you will have the **top performance.**

Blocks

Floor slabs

ENERGY SAVINGS:
perfect insulation without waste

It is important to specify that **the outer envelope accounts for 80% of a building's energy savings , therefore Isotex has developed its own building system that completely eliminates thermal and acoustic bridges.**

One aspect not to be overlooked is that Italy is made up of very different climate zones, with varying temperature and humidity conditions, so it is important to choose the block most suitable for each location.

Our technicians will be at your complete disposal for any kind of advice.

In terms of thermal requirements, house are classified according to energy consumption from A4 down to G.

THERMAL INERTIA:
the right balance that lets you save

ISOTEX® walls and floors make it possible to create extremely well thermally insulated buildings, without thermal bridges and, thanks to the contribution of the concrete mass, excellent thermal inertia is obtained and therefore a perfect balance in the building's indoor temperature: **cool in summer and warm in winter.**
Moreover, thanks to ISOTEX® floor slabs which also allow you to eliminate thermal bridges and are more insulating than regulations stipulate, a considerable reduction in energy consumption is achieved.

Try it yourself:

Winter: in the evening try turning off the boiler and check the temperature, it will be the same in the morning, with consequent savings on your heating bills.

Summer: by letting in fresh air early in the morning and keeping the windows closed during the hottest part of the day, you will be able to maintain a cool temperature throughout the day, thereby reducing the need to use the air conditioning system to a minimum.

ACOUSTIC INSULATION

no more worrying about bothering others or being bothered yourself

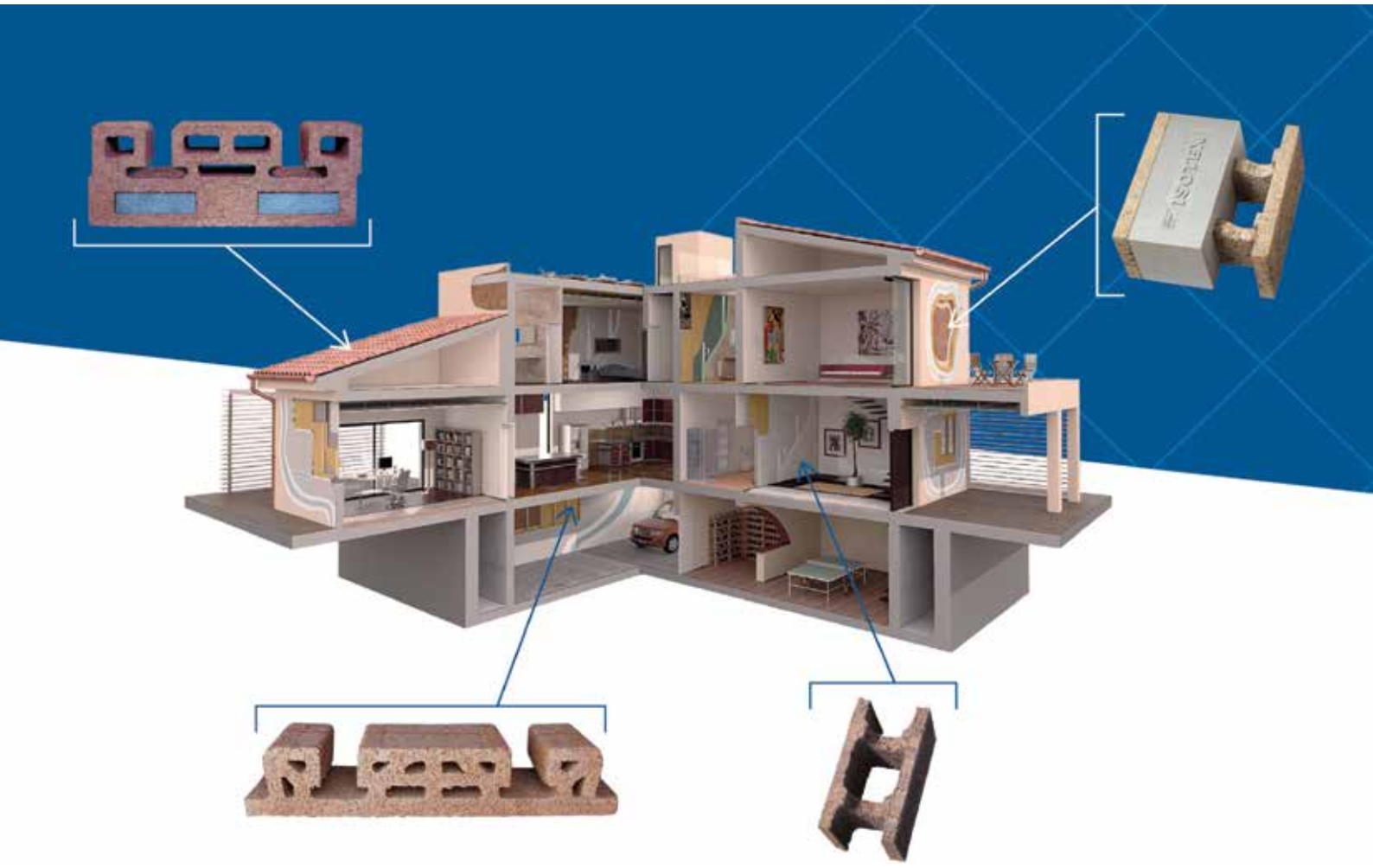
A house

built with the ISOTEX® System lets you block out those bothersome noises coming both from outside and neighbouring houses, allowing you to enjoy peace and quiet.

Thanks to the combination of wood-cement and concrete, **we can make walls and floors capable of "breaking" the acoustic wave**, therefore with ISOTEX® there is no more worrying about bothering others or being bothered yourself.

Furthermore, ISOTEX® floors are able to considerably attenuate the annoying noises produced by people walking in heels, from objects falling on the floor, etc.

The ISOTEX® system ensures acoustic insulation 2-3 times higher with the same thickness compared to traditional walls and floors.

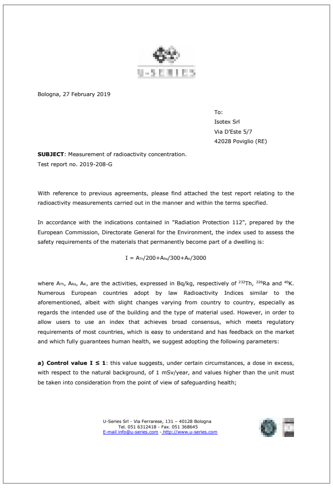


GREEN BUILDING
and eco-sustainability

Isotex

pays a great deal of attention to protecting the environment and choosing natural and high-quality raw materials: pure Portland cement, untreated spruce wood, iron oxide and a natural mineral for the wood mineralisation process.

All the materials are harmless to human health.



U-SERIES

Bologna, 27 February 2019

To:
Isotex Srl
Via D'Este 5/7
42028 Poviglio (RE)

SUBJECT: Measurement of radioactivity concentration.
Test report no. 2019-208-G

With reference to previous agreements, please find attached the test report relating to the radioactivity measurements carried out in the manner and within the terms specified.

In accordance with the indications contained in "Radiation Protection 112", prepared by the European Commission, Directorate General for the Environment, the index used to assess the safety requirements of the materials that permanently become part of a dwelling is:

$$I = A_{Th}/200+A_{Ra}/300+A_{K}/3000$$

where A_{Th}, A_{Ra}, A_{K}, are the activities, expressed in Bq/kg, respectively of ^{232}Th, ^{226}Ra and ^{40}K. Numerous European countries adopt by law Radioactivity Indices similar to the aforementioned, albeit with slight changes varying from country to country, especially as regards the intended use of the building and the type of material used. However, in order to allow users to use an index that achieves broad consensus, which meets regulatory requirements of most countries, which is easy to understand and has feedback on the market and which fully guarantees human health, we suggest adopting the following parameters:

a) Control value $I \leq 1$: this value suggests, under certain circumstances, a dose in excess, with respect to the natural background, of 1 mSv/year, and values higher than the unit must be taken into consideration from the point of view of safeguarding health;

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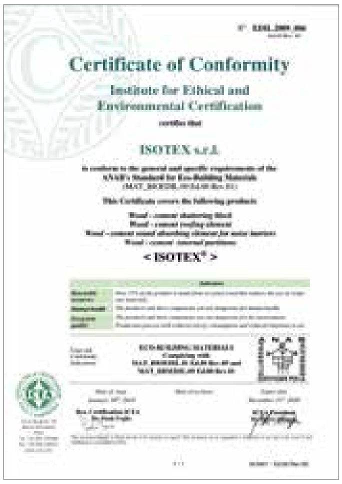


Certificate of Conformity

Institute for Ethical and Environmental Certification

certifies that

ISOTEX s.r.l.

This Certificate covers the following products

< ISOTEX® >

Tests of complete absence of substances harmful to human health, the environment and radioactivity were successfully passed in order to achieve the certifications shown to the side.

Ecovillage In Montale (Mo) - 180 homes

THE BUILDING SYSTEM
stronger than an earthquake

The structure

ISOTEX® load-bearing structure is made up of slabs and formwork blocks in wood-cement which are filled with concrete, to which a horizontal and vertical reinforcement is always inserted that connects the foundation to the edges of the floors up to the roof so as to obtain a solid reinforced structure.

The building created is the best possible in terms of strength and compactness, in actual fact, 4 pillars are made every metre compared to 1 pillar every 4 metres with traditional structures. The Ministry of Public Works has issued specific guidelines for the use of the building system in a highly seismic zone.

Of the approximately 80,000 homes built in Italy since 1985, many are located in areas that have been hit by strong seismic events: from earthquakes in Umbria (1997), in Friuli (1998), to the most recent ones in Abruzzo (2009), Emilia (2012) and Central Italy (2016). **No ISOTEX building has suffered any damage, not even a crack.**

Photo taken after the 2012 earthquake in Emilia

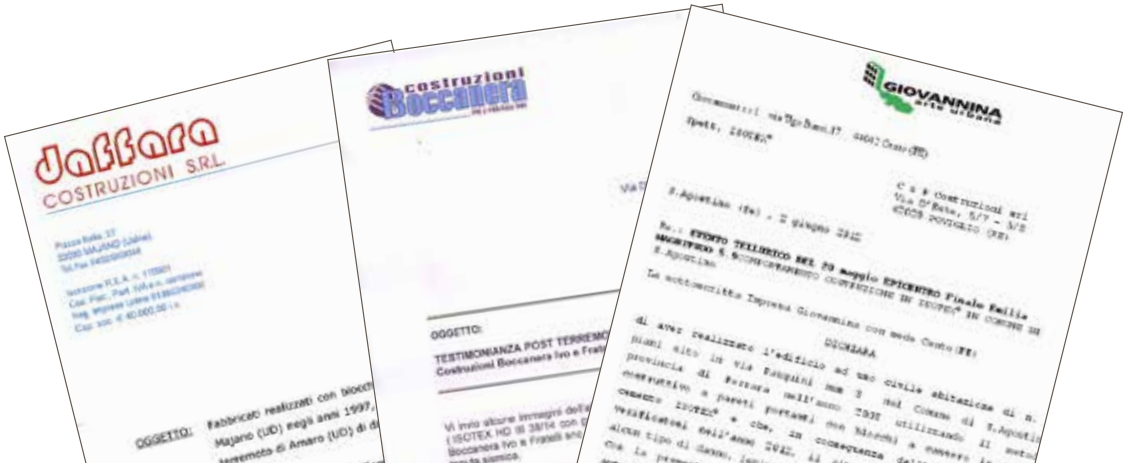
Brick-built building

Building constructed with the Isotex® building system

TESTIMONIALS
POST EARTHQUAKE

Read all the testimonials on:

https://en.blocchiisotex.com/earthquake-resistant-structure/



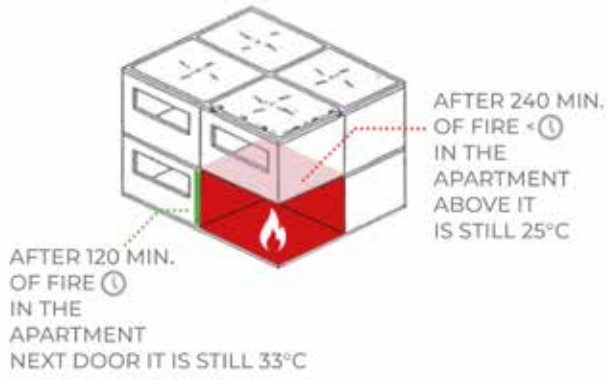
FIRE RESISTANCE:
the safety you are looking for

Fire

resistance is a very important aspect for buildings, as required by current legislation (NTC 2018), to be taken into serious consideration during the design phase and when buying a house. ISOTEX® offers maximum safety also in terms of fire resistance as **the wood undergoes a natural mineralisation process that makes it inert and therefore resistant to fire, mould and wood-destroying pests.**

The structure built with **ISOTEX® has obtained REI 120 certification for the Blocks** and REI 240 for the Slabs. Both tests were carried out without plaster. From the lab tests carried out, in the event of a fire, in addition to being a structure that does not collapse, it also **does not emit any toxic gases harmful to human health.**

The 9th of November 2020, **the EFECTIS laboratory carried out the Lepir 2 test (The fire behaviour of a building façade)** on a wall made with Isotex® wood-cement formwork blocks with a thickness of 23 cm of graphite EPS. The facade was subjected to a violent fire developed entirely within the Isotex building. **Our products passed the test with outstanding results as there was no fire spread on our Isotex woodcrete wall** (take a look to the picture below).



Fire safety of buildings façades (Lepir 2 test)

CONSTRUCTION SYSTEMS
compared

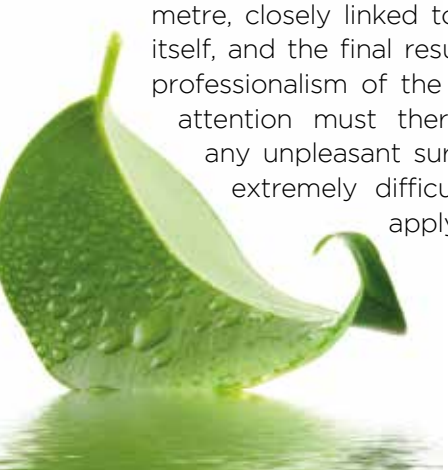
As explained above in the preceding pages, ISOTEX has applied all the principles of safety and living comfort to develop its building system, which is certified in all aspects according to applicable regulations in Italy and Europe. We invite technicians, builders and buyers to compare ISOTEX with other building systems, on which we make some brief remarks below:

Structural frames & non-load-bearing walls:

Pillars and beams have been widely used over the last few decades. The realization of the structural frame then requires the installation of non-load-bearing walls.
The Technical Construction Regulations 2018 (NTC) specify that non-load-bearing walls must be securely anchored to the structural frame in order to prevent them from collapsing, in case of an earthquake, and causing damage to persons and property. In order to insulate and eliminate thermal bridges, coating insulation must then be used (see side paragraph). Finally, to comply with the regulations on sound insulation, specific action must be with suitable materials.
Clearly, the sum of all these requirements significantly increases the time and costs of construction, exposing the site to the risk of IMPROPER INSTALLATION, which may compromise the final technical performance of the building.

External Wall Insulation (E.W.I):

Coating insulation can be found on the market with considerable differences in costs per square metre, closely linked to the quality of insulation itself, and the final result depends highly on the professionalism of the applicators. Considerable attention must therefore be paid to avoid any unpleasant surprises over time. Itis also extremely difficult (if not impossible) to apply finishes to the coating.



Insulated Concrete Formwork (I.C.F.):

For supporters of the ethics of green construction, polystyrene blocks would not seem the ideal solution. It must also be considered that, in case of fire, polystyrene fumes are harmful to human health and the environment. Similar considerations as for the coating insulation also apply.

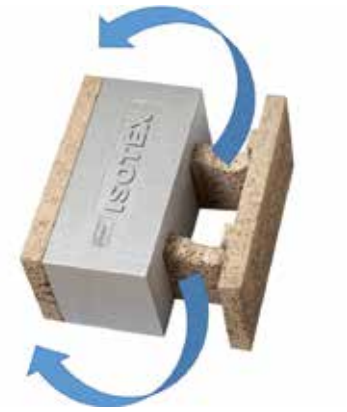
Timber frame:

Though advertised as a natural product, the adhesives used for the assembly of wooden boards, in order to make them structurally robust, and the paints used to protect them from the elements can be discussed at length.
Does it still seem natural to you?
Also regarding fire resistance, there are still considerable doubts and many buildings have had problems.
Furthermore, wooden houses are light weight structures, which raise many questions concerning thermal inertia and sound insulation. Finally, wood, when exposed to the elements, requires constant maintenance.

Aerated concrete blocks:

Their little mass raise significant questions about thermal inertia sound insulation. Also, the lack of reinforcement in the structure limits its seismic integrity.

USEFUL tips



Transpiration and plasters

The best solution for your health. The **ISOTEX® building system promotes excellent transpiration of the walls,** avoiding the formation of condensation and mould, even in rooms with high levels of steam/vapour such as bathrooms, kitchens and bedrooms.

Nowadays, doors and windows of homes are well-insulated and watertight, therefore, if there is no mechanical ventilation, it is suggested to properly air rooms and avoid furnishing the house until the plaster and paint has dried out.

Fixings & Fastenings

For wall-mounted furniture or units of a considerable weight, it is advisable to use **wall plugs at least 10 cm long**, so that these enter at least 4-5 cm into the concrete and guarantee a secure hold.

A **4 cm nail should be enough for lighter pieces of wall art.**

SOME TESTIMONIALS

of those who placed their trust in us

The Construction companies mentioned below are just some of the first "far-sighted" customers who have chosen, and are still using, the ISOTEX® building system.

In addition to the excellent technical characteristics and ease of installation of ISOTEX® products, these customers have been delighted to receive lots of positive feedback from home buyers regarding the excellent living comfort they enjoy **(energy savings, acoustic insulation, healthiness of the space, earthquake-proof structure).**

Word of mouth started from these first buyers, based on **the comfort and safety of the building system**, which has certainly benefited both our customers, who have continued to use our products, and Isotex Srl itself in over 35 years of business.

Edil Gornati from Milan has built **around 200 homes** since 1988

Alessandrini from Rome has built about **200 houses** since 1994

Baiocchi & Mantovani from Parma has built **about 650 homes** since 1985

Cooperative Edil Fidenza 2 from Fidenza (PR) has built **about 700 homes** since 1985

G&P from Vicenza has built **about 400 homes** since 1996

M.D.P. Sotgiù Srl from Alghero has built **about 200 homes** since 1986

MCA di Carne from Bergamo has built **around 250 homes** since 1988

AWARDS
and acknowledgements

In 2002 we were awarded the prestigious **PREMIO COSTRUIRE** building award, in which eight university professors chose our construction technology for walls and flooring.

SHE Venezia Project, Preganziol (TV)

SHE: Winner of the European campaign "Sustainable Energy for Europe 2005-2008"

The "LE QUERCE" project received the ENDESA Barcelona award for "most eco-sustainable real estate project" 2009, **Eco-building Paris 2009 Award, Klimahouse Trend Bolzano Award 2016 and Casa Clima Gold Award 2016.**

SAIE innovating, integrating, building award given to ISOTEX for best sustainable project with the presentation of the HDIII 44/18 Graphite Block.

Jury mention for the "Casanova" project as the first energy-efficient building in Reggio Emilia as part of the environmentally friendly innovation competition **"Premio all'INNOVAZIONE AMICA dell'AMBIENTE"** in 2007

Thanks from Mogol to ISOTEX for the creation of the Centro Europeo Tuscolano Terni (TR).

Maximum seismic safety and living comfort, always

BUILDING SYSTEM
ISOTEX®
Wood-cement Blocks and Floor Slabs

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ACCREDIA · L'ENTE DI ACCREDITAMENTO

QUALITY SYSTEM CERTIFICATION DNV·GL ISO 9001

CE
UNI EN 15037-1
UNI EN 15498
ETA 08/0023

ANAB PRODOTTO CERTIFICATO PER LA BIOEDILIZIA
CERTIFICATO ICEA

EPD®
THE INTERNATIONAL EPD® SYSTEM

03 - 2021