

The Eurocoustic approach to sustainable construction





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Eurocoustic, a prime mover in sustainable construction



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During the construction, operation and maintenance phases, all buildings consume raw materials and energy, while also generating carbon emissions and waste that have a significant impact on our environment.

That is why the construction sector is moving towards buildings that address the environmental, social and economic challenges of sustainable development.

These sustainable buildings are designed to limit the consumption of natural resources and reduce their environmental impact while ensuring the comfort and well-being of their users.

Demand for such sustainable buildings is growing, among other things through the development of environmental certifications such as NF HQE™, LEED® and BREEAM®, as well as through standards and regulations increasingly focusing on an approach that factors in the building's entire life cycle, from extraction of raw materials to its end of life.

At Eurocoustic we are committed to the deployment of sustainable construction. We make a point of offering our clients products that ensure the comfort, safety and health of their buildings' users while at the same time helping reduce their environmental footprint.

Our approach is primarily underpinned by a life cycle analysis of our products to assess their environmental impact at each stage of their life cycle. In this respect, we communicate the results of this rigorous analysis to our clients in a transparent manner.

This brochure describes the measures we take to reduce the environmental impact of our products throughout their life cycle with a view to partnering you in your approach to sustainable construction.

The qualities of Eurocoustic products

Comfort



Acoustic comfort

Acoustical correction is essential to improve the quality of listening and the intelligibility of exchanges in a room: it contributes to optimal sound comfort for the occupants.

Thanks to the flexible and porous structure of rock wool, Eurocoustic manufactures and distributes highly efficient ceilings that combine sound absorption and lateral attenuation (soundproofing between two adjacent rooms). Most of our ceilings are class A, with a maximum level of absorption.



Viewing quality

Light largely conditions the quality of life of users and their efficiency in the workplace.

Eurocoustic ceilings are thus designed and created in such a way as to ensure optimal reflection of natural light, which improves the well-being and health of the occupants of buildings.



Sanitary comfort

Indoor air quality is an absolute necessity to ensure the sanitary comfort of the occupants.

To preserve healthy and unpolluted air indoors, Eurocoustic designs products that emit low levels of VOCs and inhibit the development of microorganisms. All Eurocoustic products meet the sanitary rating stipulated by the ministerial order of 19 April 2011 (amended by the ministerial order of 20 February 2012) on the labeling construction products and their VOC emission levels. Eurocoustic stone wool limits are rated class A or A+.

They are also rated class E1, the best possible rating, for release of formaldehyde according to standard NF EN 717 - 1 & 2.



Thermal comfort

Good heat insulation is fundamental to guarantee the comfort of the building's users and preserve resources and the environment.

Thanks to its entangled structure, stone wool is an excellent heat insulating material. It maintains a steady temperature inside buildings, irrespective of the outside temperature. Eurocoustic products insulating contribute to the thermal comfort of occupants and reduce global warming emissions.



Durability



Healthy

Creating healthier environments is at the heart of Eurocoustic's concerns.

With this in mind, our products are made with fibers exempt from the carcinogenic classification (European Regulation 1272/2008 as amended by European Regulation 790/2009). This exemption is certified by the European Certification Board (EUCEB - www.euceb.org).



Safe

Mindful of the safety of the occupants of buildings, Eurocoustic offers a wide choice of products having the best fire reaction performance rating (class A1), an essential criterion to guarantee life safety in the event of fire.

Our stone wool products boast one of the highest passive fire protection levels: they do not fuel the fire or spread the flames, and they release very little smoke.



Available and recyclable

Eurocoustic's products are made using basalt, a raw material found in abundance in the natural environment.

Engaged in a process of preservation of natural resources, Eurocoustic recycles the great majority of its production scrap by reintroducing it into the manufacturing process. As a result, 45% of the content of our wools is recycled.

Life cycle analysis (LCA)

An exhaustive and objective methodology for assessing environmental impacts

To offer our clients highly efficient products that are environmentally-friendly throughout their life cycle, Eurocoustic has carried out a comprehensive analysis of their life cycle.

Life Cycle Analysis (LCA) uses standardized assumptions and calculations based on recognized international standards (ISO). As a result, **the information provided by this analysis is exhaustive and objective** and can be used to **compare the impacts of different products**.

- 01○ **A rigorous scientific approach**
- 02○ **The most comprehensive environmental assessment methodology**
- 03○ **An essential tool for eco-innovation**
- 04○ **The only tool for avoiding transmission of impact**
- 05○ **A standardized international methodology**

Raw materials

- A basalt career in the vicinity of our plant
- Recycled content



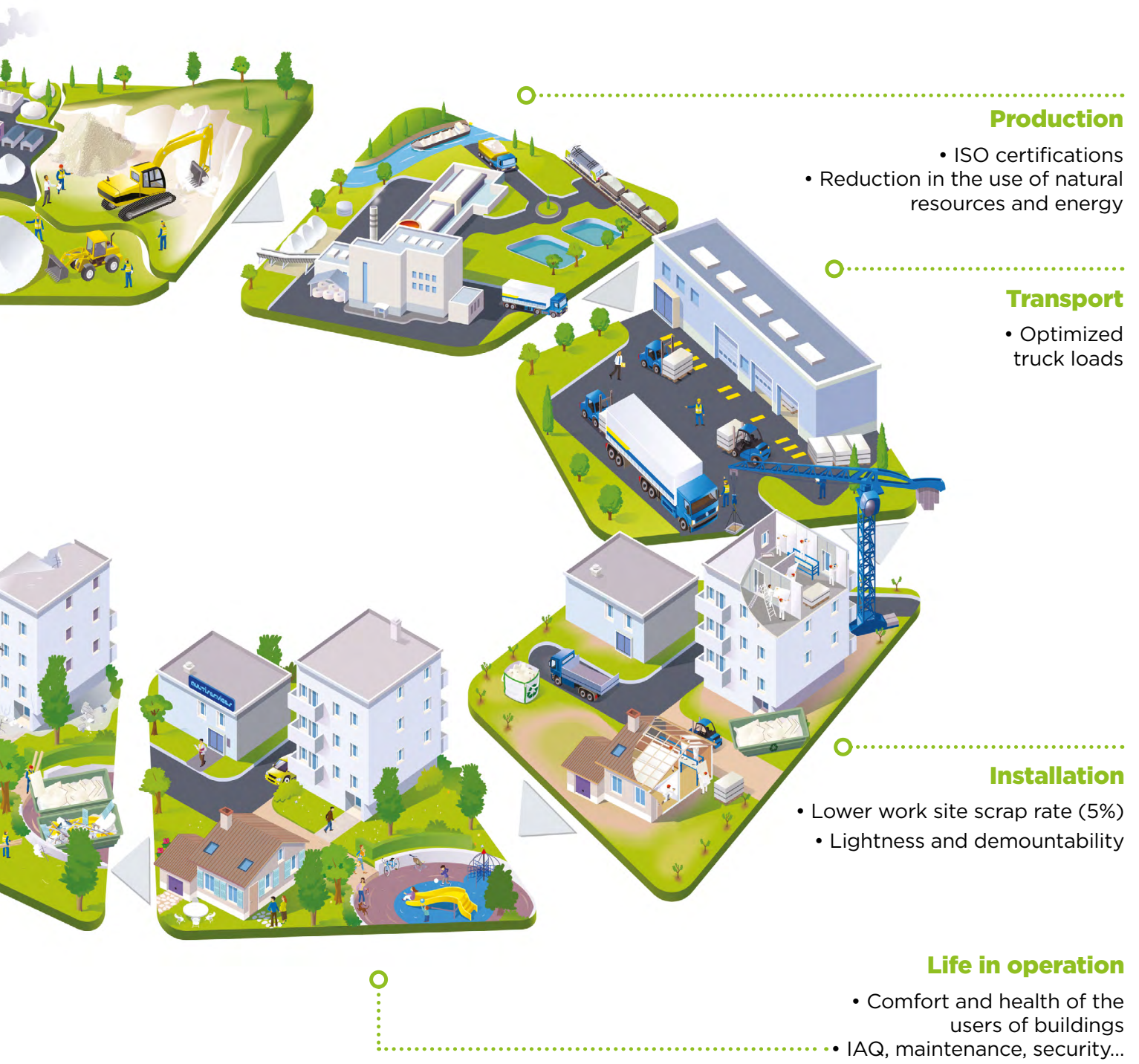
Recycling

- Recycling production scrap



End of life

- Collection and separation of metallic waste



Life cycle analysis (LCA)



Raw materials

The stone wool produced by Eurocoustic is composed of basalt, briquettes, slag and coke.

- Basalt is a raw material found in abundance in nature. **It is mined in a quarry a few kilometers from the plant.**
- To preserve natural resources, we recycle all the plant's waste and strive to increase the quantity of recycled material in our products. For instance the slag, scrap from the steel-making process, and the briquettes, scrap from our production process, are reintroduced into the manufacturing process. **Our stone wool products contain 45% of recycled materials in weight.**
- **The raw materials mine is continuously restored** by using fusion scrap: residue of our fusion process that when cooled is recovered to backfill the cavities in the quarry.

Production

To optimize our production lines and reduce production risks, our plant at Genouillac (Creuse) is certified:

- ISO 9001 "Quality Management System"
- ISO 14001 "Environmental Management Systems"
- ISO 50001 "Energy Management Systems"

Furthermore,

- We undertake **to reduce our energy consumption at the plant** by reusing the cooling water in our process to heat our production shops.
- All the water generated by the process is recovered and re-used to make the binder used in our products. This both **economizes on upstream resources by re-using them** and reduces the volume of polluted spoilage.
- **We reduce the quantity of coke used to make our products** by recovering some of the heat in the fumes and re-injecting it into the raw material fusion process.

Transport

With a view to optimizing our logistics and reducing our CO₂ emissions, **the loads on our trucks leaving the plant are optimized**, and our raw materials are mined in a quarry near the plant.





Installation

- Installing Eurocoustic products requires **little energy and no water**.
- Eurocoustic ceiling tiles **are easy to cut to size without generating any noise or dust**.
- When used on site, **mineral wool generates less than 5% of waste**. The assembly systems are designed to be **practical** and **easy to disassemble**, thereby simplifying recovery at the time of deconstruction.



Life in operation

During the lifetime of the building, Eurocoustic products contribute to their occupants' comfort and health:

- **Comfort:**
 - Sound comfort
 - Visual comfort
 - Thermal comfort
 - Sanitary comfort
- **Passive fire protection**
- **Maintenance:**
 - Eurocoustic ceilings require **very little maintenance** and **are easy to dismantle**.
 - The assembly systems for our products are designed to be practical and easy to disassemble, thereby simplifying access to fluids flowing in the plenum for maintenance purposes. Even the bulkiest systems can be replaced without damaging the structural work.



End of life

- The waste from our stone wool products is sent to a non-hazardous waste storage facility.
- The steels we use to make **our frameworks and accessories are recovered on site and sent to the recycling center**.



Recycling

- To preserve natural resources, we recycle all the plant's waste. **Our wools contain 45% of recycled materials in weight**.
- The steels we use for our frameworks and accessories are **100% recyclable, indefinitely and without any deterioration in their quality**.



EPD: the reference tool for communicating the results of the life cycle analysis

The LCA results for each of our products are published in Environmental Product Declarations (EPDs), which are verified by a third party to ensure the quality and reliability of their results, and are available at www.environdec.com.
For French versions (FDES), please visit www.inies.fr.



The environmental impacts of this product have been assessed over its whole life cycle. Its Environmental Product Declaration has been verified by an independent third party.





01

A transparent approach

Eurocoustic has decided to have these results verified by a third party in a fully transparent manner. A pictogram denotes products covered by an LCA. The Environmental Product Declaration (EPD) is the official document presenting the results of the environmental assessment.

02

Publicly available information

EPDs can be downloaded from the INIES database at www.inies.fr

03

Clear data

Our EPDs provide our clients with environmental data, which helps them make well-informed decisions based on real facts.

04

The only way to assess the building's environmental footprint

Architects use the data in the EPDs of the building's main materials to assess the environmental impact of the building as a whole and try to minimize it.

05

A contribution to the certifications of buildings

EPDs are now required by all building certification bodies such as LEED®, BREEAM®, NF HQE™, DGNB ...



Contribution of Eurocoustic products to environmental certifications

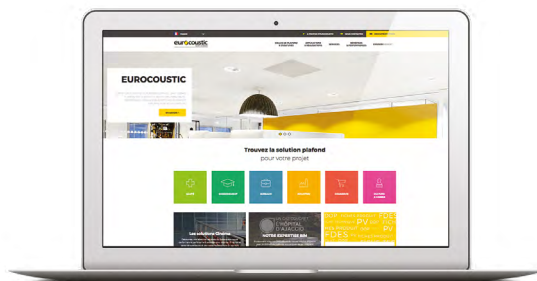
Greater awareness of environmental issues has led to a new form of construction: sustainable construction. To guarantee the quality of new builds, certifications are developed with versions different according to the type of building (residential or business) and construction (new or refurbishment), country, climate, culture and regulations.

Some of the most common environmental certifications include BREEAM® (United Kingdom), LEED® (United States), NF HQE™ (France), VERDE® (Spain), CASBEE® (Japan) and DGNB (Germany). Their main purpose is to promote more responsible construction practices that protect the environment and improve the well-being and health of their occupants.

Using Eurocoustic products increases the number of points obtained in environmental certifications and thereby the certification of the building. Below is our contribution for LEED®, BREEAM® and NF HQE™ certifications.

For more information, consult our web site at www.eurocoustic.fr

“Environmental Certifications of buildings LEED®, BREEAM® et NF HQE™” brochure





Developed by the U.S. Green Building Council in the United States in 1998, Leadership in Energy and Environmental Design (LEED®) is an assessment system and an international standard focusing on the quality of construction strategy and environmental practices.

Our analysis is based on the latest version, LEED® V4 for Building Design and Construction.

LEED® category	LEED® credits influenced by EUROCOUSTIC products	Maximum number of points available
Credit: Integrated process	<ul style="list-style-type: none"> • Integrated process 	1
Materials and resources	<ul style="list-style-type: none"> • Reduction of the building's life cycle impact 	5
	<ul style="list-style-type: none"> • Information on construction products and optimization: environmental product declaration 	2
	<ul style="list-style-type: none"> • Information on construction products and optimization: procurement of raw materials 	2
	<ul style="list-style-type: none"> • Information on construction products and optimization: composition of the materials 	2
	<ul style="list-style-type: none"> • Management of building and demolition waste 	2
Quality of interior environments	<ul style="list-style-type: none"> • Low-emission materials 	3
	<ul style="list-style-type: none"> • Interior lighting 	2
	<ul style="list-style-type: none"> • Acoustic performance 	1
Innovation	<ul style="list-style-type: none"> • Innovation 	5
TOTAL		25

Contribution of Eurocoustic products to environmental certifications



Building Research Establishment's Environmental Assessment Method (BREEAM®) is a construction project durability assessment system developed by BRE (Building Research Establishment) in the United Kingdom in the early 1990s.

BREEAM® certification systems vary according to country and type of building.

This analysis is based on the *BREEAM® International New Construction* technical manual published in June 2013. Its main purpose is to attenuate the impacts of the life cycle of new buildings on the environment in an effective manner and at no additional cost.

BREEAM® theme	BREEAM® credits influence by EUROCOUSTIC products	Maximum number of points available
Health and well-being	• Hea 01 Visual comfort	3*
	• Hea 02 Quality of indoor air	4*
	• Hea 05 Acoustic performance	3*
Materials	• Mat 01 Impacts of the life cycle	6*
	• Mat 03 Responsible procurement of materials	4*
	• Mat 05 Design for robustness	1*
Waste	• Wst 01 Building waste management	4
Innovation	• Inn 01 Innovation	10
TOTAL		35*

* Depends on the type of building.



High Environmental Quality (HEQ) is an environmental management system developed in France in 1997 to offer healthy and comfortable buildings whose environmental impacts assess over their entire life cycle are as controlled as possible.

NF HQE™ is a multicriteria optimization approach to 4 themes (eco-construction, eco-management, comfort and health) breaking down into 14 targets.

NF HQE™ target	Secondary NF HQE™ targets influenced by EUROCOUSTIC products
2. Integrated choice of construction products, systems and processes	• Constructive choices for the durability and adaptability of the building
	• Constructive choices for easy access when carrying out upkeep and maintenance work on the building
	• Choice of building products that limit the environmental impacts of the building
	• Choice of building products that limit sanitary impacts
3. Low environmental impact work site	• Optimization of site waste management
	• Mitigation of environmental nuisance and pollution on the work site
	• Reduction of resources consumed on the work site
7. Maintenance and Sustainability of environmental performance	• Building design allowing simplified servicing and maintenance of the systems
9. Sound comfort	• Creation of quality acoustic environment adapted to different types of premises: offices, schools, retail outlets, hotels, logistics centers
10. Visual comfort	• Optimization of natural lighting
12. Sanitary quality of areas	• Creation of specific hygiene conditions
13. Sanitary quality of air	• Control of sources of indoor air pollution



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