Sustainability report



GRESPANIA



Contents

Systems and labels

1. ISO 14001 ENVIRONMENTAL MANAGEMENT SYSTEM
2. ENVIRONMENTAL PRODUCT DECLARATION
3. DECLARATION OF RECYCLED CONTENT
4. PARIS AGREEMENT

4 4 5

5

6

7

Respect for natural resources

1. LOCAL RAW MATERIALS	
2. RESPONSIBLE WATER CONSUMPTION	



Environmentally-friendly energy consumption

1. REDUCED ENERGY USE	
TPM SYSTEM / LEAN MANUFACTURING	8
2. COGENERATION AND WASTE HEAT RECOVERY	9
3. GREEN HIDROGEN	9
4. INDUSTRY 4.0 MONCOFAR	10
5. ECO-DESIGN	11



1. ATMOSPHERIC

2. HAZARDOUS W **3. ZERO WASTE**



1. RAW MATERIA 2. NO VOLATILE C 3. RECYCLED CO 4. NO TOXIC EMIS **5. LOW PERCENT**

6

1. EFFICIENT, REC 2. ECOEMBES AN

1. VENTILATED FA 2. COVERLAM: M 3. H&C TILES FOR 4. H&C TILES FOR

1. LEED CERTIFIC 2. BREEAM CERTI



1. REDUCTION OF 2. CARBON DIOX

Environmental Impact

EMISSIONS	12
ASTE AND CONTAINERS	12
	13

(Natural) composition of ceramic tiles

LS	14
DRGANIC COMPOUNDS (VOCS)	14
NTENT	15
SSIONS DURING MANUFACTURING	16
AGE OF RESPIRABLE CRYSTALINE SILICA	16

Containers and packaging

YCLED AND RECYCLABLE CONTAINERS	17
ID SCRAPS	17

More sustainable products and systems

CADES WITH CERAMIC CLADDING	18
INIMAL THICKNESS	18
REXTERIORS	19
R INTERIORS	19

Contributing through energy assessment systems in construction

ATION	20
IFICATION	22

Beyond the product

NITROGEN OXIDES	24
IDE REMOVAL	25

Introduction

From its very beginning, Grespania's respect for the environment has been one of its fundamental values. Grespania has been a pioneer in the development of environmental sustainability policies, targeting its research and innovation at this field. True to this commitment, it has implemented various environmentally-friendly programmes, such as the installation of its wastewater treatment system, the cogeneration project or planning its tile manufacturing plant in line with the zero-waste concept.

Throughout its history, Grespania has been firmly committed to developing strategies aimed at minimizing the impact of its production processes on the environment. To that end, it has always used natural raw materials of the highest quality and has developed processes involving the most advanced technologies.

Grespania's current range of products includes floor tiles that minimize the generation of waste during construction projects, and wall tiles that purify the air in the atmosphere.

Keenly aware of the need to slow climate change and protect the environment, Grespania has incorporated into its business policy and its strategic plans measures that help bring about short-, medium- and long-term improvements in the environment and in society.



Systems and labels

1.1 ISO 14001 ENVIRONMENTAL MANAGEMENT SYSTEM

Respect for the environment has always been one of Grespania's key values. To this end, it has in place an environmental management system that is structured and certified in line with ISO 14001 requirements and subject to annual external audits. This system makes it possible to identify, evaluate and minimize the impact of production activity on the environment.

The ISO 14001 certificate can be downloaded from Grespania's website.



1.3 DECLARATION OF RECYCLED CONTENT

The compounds that Grespania uses to manufacture its products contain a high percentage of recycled material. For example, the spray-dried powder used to produce **porcelain** contains **16%** recycled material on average, and the powder used in **wall tiles** more than **70%**.

These percentages have been calculated following the guidelines of the ISO 14021 standard and the corresponding environmental label can be downloaded from Grespania's website.

1.4 PARIS AGREEMENT

1.2 ENVIRONMENTAL PRODUCT DECLARATION



In order to accredit and convey the environmental excellence of our products, Grespania has a Type III Environmental Product Declaration (EPD) verified by AENOR for each type of product it manufactures (wall tiles, porcelain flooring, and large format porcelain products), all certified under the standards of ISO 14025 and UNE-EN 15804:2012+A2:2020.

These environmental statements, or EPDs, provide a reliable, relevant, transparent, comparable and verifiable environmental profile, which can be used to show that a product is environmentally friendly on the basis of information from a life cycle assessment (LCA), in accordance with international standards and quantified environmental data.

This use of objective data, measured in accordance with defined standards, helps prevent green-washing by ensuring the environmental information is not biased or misleading.

The EPD can be downloaded from Grespania's website.





The emission of certain gases poses a risk to the environment, as their excessive concentration in the Earth's atmosphere can produce a greenhouse effect by trapping the heat from the sun and preventing it from dissipating.

Grespania adheres to the Paris Agreement (and previously the Kyoto Protocol), which regulates greenhouse gas emissions and is the most important international agreement on climate change.

In response, Grespania has introduced technological improvements designed to achieve maximum energy efficiency and, by extension, greater environmental sustainability. The new industrial systems are designed to reduce energy consumption and emissions as much as possible.

DECLARACIÓN DE CONTEN	NIDO RECICLADO
EUTOPOACHE TUNON	
UNE-EN-SO 14021-2002	-
RECLAMACIÓN AMBENDIL AUTODECIA AMBENDIL TIPO 10	ANDA USTRUETADO
GRESPANSA S.A. CH SI Cha Canadian an 3,380 - RO Ray 307 - 128	an Laundan
BELIAR LES IL PRINCIPAL	
INCOMING OF PARENTH POONT STORE	D.NOVADEDGO 1
Per offe methods had be impaired taxes from the minutes compare y defendance prime taxes. I minutes compare taxes 1	nene 194 ex 01 14015 (0
NORCHAR MANNE OF LOW/WARD ALCOUNT	the .

2 Respect for natural resources

2.1 LOCAL RAW MATERIALS

Before the manufacturing process begins, the raw materials are carefully selected and inspected.

When choosing the clays, preference is given to those of national origin, thus minimizing imports and reducing the CO, emissions caused by their transportation. In addition, part of Grespania's strategic plan is to further reduce the amount of imported clays in the coming years, by using more local raw materials.







On the other hand, Grespania has gradually reduced the thickness of its products as technological advances have made this possible without compromising performance.

This means less consumption of raw materials and a reduction in transport-related emissions.

2.2 RESPONSIBLE WATER CONSUMPTION



In Grespania's factories, all the water coming out of the industrial process is subjected to a physical-chemical treatment process, separating out and concentrating the polluting elements. Once concentrated and rendered inert, they are recycled and reintroduced into the production process.

When it comes to the industrial treatment of liquid waste, Grespania leads the way in Spain. In 1976, it installed the first physical-chemical treatment system. In 1986, it invented the "zero waste" process in the ceramic sector, recycling both ceramic waste and water from the industrial process in the spray-drying facilities. In 1996, it became the first tile manufacturer to install a reverse osmosis system for the treatment and recycling of water from the industrial process.





The water from the polishing processes circulates in a closed circuit, where it is treated by decanting the suspended solids, which are then concentrated in a filter press and subsequently recycled. The water used in the glazing lines is also treated. Its pollutants are precipitated and then incorporated as inert material into the clay used to make the tiles.

All the inflows and outflows of the water treatment systems are subject to frequent analyses to determine the concentration of pollutants or the purity of the treated effluent.

In addition, all the cutting and rectification lines have been updated to work with dry machining, thus reducing the use of water in these processes.

Grespania is acutely aware of the need to look after and respect our water resources, which are central to sustainable progress and fundamental to the development of healthy ecosystems and human survival. Water is a scarce and irreplaceable resource that is crucial for people's well-being; it can only be considered a renewable resource if it is well managed.

3 Environmentally-friendly energy consumption

3.1 REDUCED ENERGY USE

Grespania has a strategic plan for the use of energy. Thanks to this approach, there has been a gradual reduction in the amount of energy consumed, and the necessary actions are being taken to continue cutting energy consumption.

More efficient machinery

The main aim of the ongoing investments in and upgrades of machinery is to ensure more efficient production, that is, production that consumes less energy. This can be achieved thanks to new technologies and the advances made through research.

Grespania also actively participates in studies aimed at reducing energy consumption and making use of renewable sources of energy, such as green hydrogen for kilns and dryers.

TPM System / LEAN Manufacturing

Grespania has a Total Productive Maintenance (TPM) system in its manufacturing plants. Since its implementation, process efficiency has improved and energy consumption has been reduced, which contributes to a more sustainable product. This project affects all phases of product manufacturing, and is complemented by staff members' greater involvement in the production process and the incorporation of their suggestions for how to improve it.



Energy audits and real-time energy consumption monitoring



Grespania has an Integrated Energy Management System. For several years now, it has been undergoing energy audits of its facilities. The aim is to optimize the current energy consumption of processes and facilities, and to detect opportunities for energy saving and efficiency measures, before subsequently implementing the identified measures.

In addition, Grespania monitors and constantly evaluates the energy consumption of its machinery. In this way, any anomalous consumption can be detected instantly, yielding real-time information that allows energy-saving decisions to be made.

Good practices

To ensure that all employees get involved in energy saving, Grespania promotes sustainability as one of the company's fundamental values. It conducts training and motivational workshops for its employees and incorporates a series of good practices into its processes:

-Replacing traditional lights with LED lighting.

-The roofing of all its warehouses has a high percentage of translucent panels to take advantage of natural lighting during the day. -In offices, documents are gradually being digitized to save paper.



The proper use of energy is both sensible and a way of caring for the future of one of our scarcest goods.

For their clay drying process, Grespania and the companies in its group use a 29MW cogeneration system, which allows the use of natural gas not only for drying the clay, but also for generating electrical energy, thereby enabling significant savings in primary energy consumption.

In addition, the waste heat from the kilns is recovered and used in the drying operations, thus optimizing the energy used.



Grespania makes investments to keep its machinery up-to-date and opts for technologies that contribute to energy savings. The kilns have been replaced by more efficient, modern ones that consume 22% less energy, emit 20% less CO,, and the burners are ready to run on 25% hydrogen.

Grespania is actively involved in research on the use of hydrogen as a fuel in kiln burners and dryers.







Grespania has broken new ground with the installation of a complete Industry 4.0 type factory at its facilities in Moncofar. This centre has two production lines that work with intelligent machines, through a sophisticated and interconnected process. The use of IoT (Internet of the Things) technology, which is a feature of Industry 4.0, means much more consumption monitoring, which in turn enables smarter and more responsible energy management.

Artificial intelligence, analytics and learning technologies are employed to ensure responsible, optimized production that can help combat the effects of climate change (while maintaining high standards of production). Caring for the environment begins in the product design stage. When designing tiles, Grespania takes into account not just their performance and appearance, but also the function they will perform throughout their useful life, including the time when the material is in place and at the end of its life cycle.

Grespania is committed to high-performance raw materials and a meticulous manufacturing process to achieve resistant, durable tiles. Furthermore, it has reduced the thickness of its products while ensuring their performance remains the same, thus saving on fuel used to transport them and cutting the consequent emissions.





4 Environmental impact

4.1 ATMOSPHERIC EMISSIONS

The emission of solid particles into the atmosphere has adverse effects on air quality, damaging human health and agricultural productivity.

Mindful of this fact, Grespania has installed baghouse filters in all processes that may produce dust, thus preventing the emission of particles to the outside. These particles are reintroduced into the production process and reused.

To verify that the emissions lie within the legally-permitted ranges and are not harmful to people or the environment, regular measurements are carried out by an independent laboratory and the relevant government body is informed of the results.



4.2 HAZARDOUS WASTE AND CONTAINERS



All hazardous waste generated at the Grespania facilities is collected and treated by an authorized waste management agent. Moreover, the transport and management of this waste is monitored to ensure that it is carried out properly.

Grespania regularly draws up plans to minimize hazardous waste in all its plants. As a result, the amount and hazard level of this waste is reduced every year.

4.3 ZERO WASTE



Waste reduction

Grespania reduces the waste generated by 6% annually. This reduction is achieved thanks to the following actions:

- -Improved production efficiency. Through the implementation of the TPM, quality is gradually improved and the amount of product rejected during manufacturing decreases. -Reducing the thickness of the tiles means less scrap during the manufacturing process.
- -Industry 4.0 at the Moncofar plant means product quality is monitored in real time and possible production failures are detected immediately.

Waste reuse

All the production scrap generated during the manufacturing phase is reintroduced into the beginning of the process, so that it is reused as raw material. By so doing, more than 99% of the waste generated at the facilities is reused or recycled, preventing it from ending up in landfill or being incinerated.

Waste valorization

Production scrap that cannot be reintroduced at the beginning of the process is recovered and employed as a raw material for other uses



order to reduce its environmental impact and not burden the planet with waste, Grespania is committed to the reduction, reuse and valorization (in this order) of the waste it generates.

5 (Natural) Composition of ceramic tiles

5.3 RECYCLED CONTENT

The compounds that Grespania uses to manufacture its products contain a high percentage of recycled material. For example, the spray-dried powder used to produce porcelain contains 16% recycled material on average, and the powder used in wall tiles more than 70%.

These percentages have been calculated following ISO 14021 guidelines.

5.1 RAW MATERIALS

More than 90% of the raw materials of the tiles are of natural origin. The clays and the other components used are renewable resources and abundant in nature.

When choosing its raw material suppliers, Grespania takes into account the distance from where they are extracted and gives preference to the closest ones. It also ensures that these materials are guarried in sustainable mining operations and are of the highest quality, free of impurities.

Furthermore, thanks to technological developments, Grespania is committed to manufacturing ever thinner tiles that still retain all the same technical features.

5.2 NO VOLATILE ORGANIC COMPOUNDS (VOCs)



Grespania's ceramic stoneware tiles contain no trace whatsoever of volatile organic compounds (VOCs). No VOCs will be emitted during their use, under any conditions.

This is because they are manufactured by firing in an oxidizing atmosphere, at high temperatures of between 1,100°C and 1,200°C. During this firing process in the presence of oxygen, all organic compounds in the ceramic material are oxidized.





(1) R1 % Recycled from cyclone spray dryer

(2) R2 % Recycled from tank waste recoverd liquid

(3) R3 % Recycled from solid waste managed (LER 101208, LER 101203 y LER 101201)

(4) R4 % Waste sludge from liquid waste managed (LER 080203 y LER 080202)

(5) LER101208/101203 Recovered recycled solid

(6) LER80202/80203 Sludges and ueos suspe





In addition to assuring the sustainability of the processes and the provenance of the raw materials, Grespania guarantees that all its employees have a safe and ethical workplace where people's rights and dignity are respected.

All products manufactured by Grespania are guaranteed to be free of toxic or polluting substances. Furthermore, they are completely inert and do not produce electrostatic charges. To ensure that this is the case, the raw materials are monitored and the products are regularly tested in accredited external laboratories.

5.5 LOW PERCENTAGE OF RESPIRABLE **CRYSTALLINE SILICA**

Thanks to technological advances, Grespania has managed to reduce the amount of silica in the composition of its tiles, without reducing their performance. The silica content in Coverlam Top countertops is currently less than 11%.



6 Containers and packaging

6.1 EFFICIENT, RECYCLED AND RECYCLABLE CONTAINERS

Packaging is crucial for transporting and protecting materials, and forms part of Grespania's environmental policy.

All containers used in Grespania's factories are covered by the deposit refund system (DRS). The cardboard used for the boxes is recycled and recyclable, as are the pallets used to transport the material.

Grespania also has a recovery plan for packaging such as wooden pallets (many of which are euro pallets) and metal A-frame pallets, in order to reuse them in later shipments.

Grespania continuously introduces improvements to reduce the use of packaging without compromising the safety of the material during its handling and transportation.



6.2 ECOEMBES AND SCRAPS

Grespania has signed agreements with ECOEMBES (Spanish agency responsible for the selective collection and recovery of packaging waste) and with INTERSEROH (German agency for the recovery and valorization of packaging). As a result of these agreements, these two agencies are responsible, in the Spanish and German markets, for the collection of all types of packaging used with Grespania products (pallets, plastic straps and cardboard). The result is a significant reduction in the waste generated by Grespania's packaging

Grespania is also an adherent of SCRAP (Sistema Colectivo de Responsabilidad Ampliada del Productor, or Extended Producer Responsibility Group System) for managing its industrial and commercial packaging waste.







More sustainable producs and systems

7.1 VENTILATED FACADES WITH CERAMIC CLADDING

1000 HILL | 10

A ventilated facade with Grespania materials allows the insulation to be placed on the outside of the building enclosure; as a result, the building has greater mass, which in turn increases its thermal inertia.

Secondly, the insulation is installed as a continuous cover over the entire building enclosure, preventing structural elements from becoming thermal bridges. In addition, the brackets that are attached to the enclosure to install the ventilated facade have an integrated thermal break system. This reduces the flow of heat between the inside and outside of the building.

What is more, the tile acts as a screen, reflecting a great deal of the solar radiation-especially if light colours are used-and preventing it from entering the building.



Thanks to roller press technology, Grespania can produce technical stone of minimal thickness (Coverlam), as thin as 3.5 mm. Among other advantages, by reducing the thickness of the pieces, less energy is required for their production and transport.



7.3 H&C TILES FOR EXTERIORS

These days, one of the main threats to the environment and human health is environmental pollution due to the presence of NOx (nitrogen oxides) generated by vehicles and certain industrial processes. Facades with H&C Tiles play a key role in removing this compound from the atmosphere.

H&C Tiles is the result of the application of Hydrotec® technology to the field of ceramics. Hydrotect® is a titanium dioxide coating that helps reduce environmental pollution and endows ceramic materials with certain valuable features, such as self-cleaning properties.

Thanks to the photocatalytic properties of titanium dioxide, facades treated with H&C Tiles generate active oxygen and hydroxyl ions, which transform NOx into NO₃⁻ and reduce the adhesion of dirt particles on the tile surface. The NO³ and dirt is then washed off the facade by rainwater.



The process used by H&C Tiles for exterior applications does not require any connections, mechanisms, or energy other than sunlight to activate the chemical reaction on its surface. Therefore, by clearly improving air quality and keeping surfaces clean for longer, it is a solution that helps protect people now and meets the highest standards required to ensure the future sustainability of our planet.

7.4 H&C TILES FOR INTERIORS

Conscious of the importance of healthy conditions in buildings, Grespania offers an application for its tiles that endows them with antibacterial properties. It is a formula based on titanium dioxide and precious metals that works by destroying the bacteria present on the surfaces, eliminating the odours caused by bacterial action in the decomposition of certain organic products.



It is a very useful product for the home, as well as for hospitals, public bathrooms, spas, etc. In other words, places that are prone to the proliferation of bacteria, and where there are likely to be children, thus protecting them from these pathogens.





SELF CLEANING



AIR PURIFYING

H&C Tiles offer major environmental benefits. When used as ceramic cladding on the buildings in any city, they can create genuine islands of decontamination that purify the air by means of a chemical reaction occurring on the tile surface. A group of buildings with 10,000 m² of facades covered with H&C Tiles has the same air purification capacity as a forested area equivalent in size to nine football pitches; as such, the NOx removal is equivalent to the amount emitted by 740 cars in one day.



ANTI-BACTERIA AND ODOUR REMOVING

8 Contributing through energy assessment systems in construction

8.1 LEED CERTIFICATION

As a company concerned about sustainable architecture, Grespania contributes to improving the energy efficiency of existing buildings or new builds by incorporating the new LEED standards throughout the life cycle of its products, from the design phase to final installation.

The LEED (Leadership in Energy and Environmental Design) standard is the most widely-used building certification system in the United States, and it is becoming increasingly widespread in more than 95 countries worldwide, including Spain, the United Kingdom, Canada, Switzerland, Germany, France, Italy, Norway and Poland. Developed by the U.S. Green Building Council, LEED credits certify the requirements for a building to be able to "operate" in energy self-sufficiency and sustainability mode, and to generate minimal environmental impact throughout its entire life cycle.

The system is based on assigning credits or points for each of the requirements that characterize the sustainability of the building. The total number of points determines the level of certification awarded. The possible qualification levels for buildings are as follows:

- · 40 to 49 points: CERTIFIED
- · 50 to 59 points: SILVER
- · 60 to 79 points: GOLD
- · More than 80 points: PLATINUM



· MR 1.2 Building reuse



One of the main properties of ceramic is its durability, meaning its lifespan matches that of the building where it is installed. This can help a construction project score 1 point, contributing to building reuse by retaining a percentage of its elements, including ceramic tiles.

MR 2.1 y 2.2. Construction and demolition waste management

Once a building has reached the end of its lifespan, ceramic can be used as a filler material since it is inert. If 50% or 75% of non-hazardous construction and demolition waste is recycled or recovered in a building, 1 or 2 LEED points, respectively, will be awarded.

• Existence of an Environmental Product Declaration (EPD)

Up to 1 point can be scored for the use of at least 20 permanently installed products with an EPD, from at least five different manufacturers. Grespania's products have Type III EPD and qualify as a complete product for the purposes of calculating credit scores.

MR 4.1 and 4.2. Recycled material content

LEED requirements stipulate that the builder must use materials with a minimum recycled content. If the sum of post-consumer recycled content (that is, when the product has become waste) plus half of the pre-consumer recycled content (that is, at the time the product is manufactured or constructed) represent at least 10% or more (by weight) of total project materials, 1 point is awarded. If they represent 20% or more, 2 points are awarded.

• MR 5.1 and 5.2. Regional materials

Ceramic products can help to achieve l or 2 points if 10% or 20%, respectively, of the total cost of the project materials is extracted, manufactured or recovered within an 800-km radius of the project site. This reduces the environmental impact caused by the transportation of these materials.

• SS 7.1 Heat island effect

The aim is to mitigate the heat island effect (the temperature difference between cities and rural areas). Among the different strategies that LEED proposes in this section is the use of paving materials with a Solar Reflectance Index (SRI) value above 29, which earns 1 point. Since light-coloured ceramic products have high SRI values, they can be used instead of traditional exterior paving materials, minimizing thermal absorption and the heat island effect.







· EQ 4.3 Low-VOC-emitting materials

There is growing concern about the potential impact of Volatile Organic Compounds (VOCs) on human health. LEED seeks to reduce the amount of indoor air in a building that is irritating or dangerous for users' health and well-being. Specifically, the use of non- or low-VOC-emitting materials can help reduce problems with air caused by the vaporization of carbon compounds. Therefore, the use of ceramic products for general tiling inside a building earns the maximum score in this category, 1 point.

· ID 1 Innovation in design

Up to 5 points are awarded for exceeding credit requirements and/or presenting a project strategy that is not covered by the LEED rating system but that provides quantifiable environmental benefits. For example, choosing tiles with "H&C Tiles" technology can merit up to 5 LEED points.



Building Research Establishment Environmental Assessment Method (BREEAM®) is a system for assessing sustainability in construction projects. It was developed in the United Kingdom by the BRE (Building Research Establishment) in the early 1990s.

This private and voluntary certification assesses impacts in 10 categories: Management, Health and Well-being, Energy, Transport, Water, Materials, Waste, Ecological Land Use, Pollution and Innovation. It assigns a final score that, along with the Technical Manual on the methodology, serves as a guide to more sustainable construction in the design phase as well as in the execution and maintenance phases, providing different evaluation and certification schemes depending on the type and use of the building.



The results translate into the following overall scores: Pass, Good, Very Good, Excellent and Outstanding.

Grespania products can help achieve certification for compliance in the following sections:

- MAT 1 Life cycle impacts
- MAT 3 Responsible sourcing of materials

Grespania can provide a series of documents to developers, builders, distributors, consultants or any other agent managing the certification. It also has the necessary documents to support the requirements outlined above. The following certificates are available:

- EPD (Environmental Product Declaration) downloadable PDF
- ISO 14001 (Environmental Management System) downloadable PDF
 ISO 14021 (Recycled Content Declaration) downloadable PDF

As proof of how Grespania's products and systems can help to obtain certification, the 2017 BREEAM award was won by the architectural studio Bo2 Paul Goldstein, in recognition of its building for the Royal Agio Cigars headquarters. Said building includes a ventilated facade built using Coverlam.



9 **Beyond the product**

Companies, as social agents, must play an active role in caring for the environment. As well as engaging in environmentally-friendly practices and incorporating sustainability into all their production and distribution processes, they must also go a step further and attempt to "heal" the planet.

Grespania is keenly aware of this need and makes an active effort to improve atmospheric conditions and reduce its carbon footprint.

9.1 REDUCTION OF NITROGEN OXIDES

Tiles treated with the H&C Tiles application (explained in detail in section 7.3) contribute to NOx removal. Since it is a photocatalytic product, when exposed to sunlight it breaks down the water in the air, releasing active oxygen and reacting with the NOx, which are the oxides responsible for the formation of photochemical ozone (smog).

The presence of high concentrations of ozone in the air we breathe is very dangerous, as it can cause or exacerbate respiratory diseases.

Moreover, when these NOx combine with the humidity in the air, it forms acid rain, which is also harmful to the health of people and animals as well as damaging to the environment and architectural heritage.

Therefore, the installation of facades treated with the H&C Tiles application can reduce atmospheric pollution, cleaning the air of NOx. A group of buildings with 10,000 m² of facades covered with H&C Tiles has the same air purification capacity as a forested area equivalent in size to nine football pitches; as such, the NOx removal is equivalent to the amount emitted by 740 cars in one day. This makes a real contribution to the health of the atmosphere.



The current context of climate change requires active efforts to removing CO₂ from the atmosphere. The most natural way of doing this is to help nature itself to do it. Vegetation-in this case, citrus orchards-have the capacity to capture and store polluting gases.

The Grespania Group owns and maintains 155 hectares of citrus trees in Spain.





According to studies by Eduardo Primo, from the Valencian Institute for Agricultural Research, at these latitudes, citrus fruits have very stable CO₂ assimilation capacity and metabolism that adapt to changing conditions, which makes them a very useful and promising crop from the perspective of climate change mitigation. Evergreen trees have a greater capacity to absorb greenhouse gases. As pointed out in the studies by Eduardo Primo, the potential for CO, removal offered by orange groves-through the biomass of their trunks, the weeds that grow around them, the organic matter of the leaves and fruits that decompose in the soil-is enormous, far higher per hectare than any forest or rainfed cultivation. Primo advises that this natural wealth should be valued because it is fundamental for the conservation of the environment.

One hectare of citrus fruits in full production captures between 20 and 25 tons of CO, annually, according to the Valencian Institute of Agricultural Research. Thanks to its orchards, the Grespania Group helps to remove 3,800 tons of CO₂ annually.

Cultivating these crops therefore contributes to the maintenance of the ecosystem and the removal of CO, from the atmosphere.

GRESPANIA S.A. CV-16 Ctra. Castellón-Alcora km 2,200 P.O.Box 157 12080 Castellón (Spain) tel +34 964 34 44 11 fax +34 964 34 44 01 mail@grespania.com

GRESPANIA S.A. uses a managment system within its' facilities of Nules, Moncofar and Castellón in accordance with ISO 9001:2015 certificate Nº 44 100 127697 and ISO 14001:2015 certificate Nº 44 104 127697.

WWW. GRESPANIA.COM

GRESPANIA S.A. DISPONE DE UN SISTEMA DE GESTIÓN DE ACUERDO A LAS NORMAS ISO 9001:2015 CERTIFICADO Nº 44100127697 E ISO 14001:2015 CERTIFICADO Nº 44104127697 EN SUS PLANTAS DE NULES, MONCOFAR Y CASTELLON. GRESPANIA S.A. USES DE MANAGEMENT SYSTEM WITHIN ITS FACILI-TIES OF NULES, MONCOFAR AND CASTELLON IN ACCORDANCE WITH ISO 9001:2015 CERTIFICATE W 44100127697 AND ISO 14001:2015 CERTIFICATE