



LEED

CERTIFICATION

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tilebar



BOTANIC COLLECTION



CHARACTERISTICS OF CERAMIC TILES

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| Product: ARECA 60x120XS (GARDEN/GLACIAR) |
| Classification: Tile, BIII Group |

Ceramic tiles have a useful life equal to that of the building, estimated at more than 50 years, without the need for replacement, repair, and/or substitution, and can be reused in the same place where they were originally installed or in another location (*).

Furthermore, the inherent safety of ceramic tiles, their **inert and sterile** nature, and **low water absorption capacity** give them resistance to possible **damage caused by moisture and mold** compared to competing coverings. These characteristics greatly simplify **Indoor Air Management Plans** during the construction phase and in the stages prior to occupancy of the building, as well as the procedures required for medical centers in relation to **infection control** and the establishment of **necessary precautionary measures**. Furthermore, the **easy maintenance** of ceramic tiles does not require the use of energy; cleaning can be carried out simply with a damp cloth and, if the surface is dirty or greasy, a neutral detergent with high cleaning power can be used, avoiding acidic and abrasive products.

CIFRE CERÁMICA also carries out technical tests in accordance with ISO 10545 to guarantee the above characteristics.

For more information on the technical performance of CIFRE CERÁMICA tiles and their suitability for use, please contact us by email at contacto@cifreceramica.com or visit our website at <https://cifreceramica.com>

The specific scores for the different LEED v4.1 Rating Systems are presented below:

| Rating System | Types of buildings | | Credits |
|--|----------------------------|----------------------------|---|
| Building Design + Construction | New Construction | Retail | Building life-cycle impact reduction Option 1. Building and material reuse |
| | Core and Shell | Data Centers | |
| | Schools | Hospitality | Construction indoor air quality management plan |
| | Healthcare | Warehouse and distribution | |
| Residential Building Design + Construction | Single family | | Durability Management |
| | Multifamily | | Building life-cycle impact reduction Option 1. Historic Building Reuse |
| | Multifamily Core and Shell | | Option 2: Renovation of Abandoned or Blighted Buildings Option 3: Building and Material Reuse Interior Moisture Management |
| Interior Design + Construction | Commercial interiors | | Interiors Life-Cycle Impact Reduction Option 1. Interior Furniture and Nonstructural Elements Reuse |
| | Retail | | |
| | Hospitality | | |
| Operations and Maintenance | Existing Buildings | Data Centers | Green Cleaning Policy Option 1. In-House Green Cleaning Policy |
| | Schools | Hospitality | |
| | Retail | Warehouse and distribution | |
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Environmental Product Declaration

Product: ARECA 60x120XS (GARDEN/GLACIAR)

Classification: Tiles, BIII Group

CIFRE CERÁMICA has carried out Life Cycle Analysis and Environmental Product Declaration studies, verified and registered in the GlobalEPD¹ program, which complies with ISO 14040-44, ISO 14025, EN 15804+A2, and EN 17160 standards.

The registration codes for the EPDs are as follows:

- For tiles in group BIa (porcelain stoneware): GlobalEPD EN 17160 – 032
- For tiles in group BIb (glazed stoneware): GlobalEPD EN 17160 – 033
- For tiles in group BIII (wall tiles): GlobalEPD EN 17160 – 034

This Environmental Product Declaration has a cradle-to-grave scope, i.e. it includes the product stages (A1-A3), distribution (A4), installation (A5), use (B1-B7) and end of life (C1-C4) as well as module D (potential environmental benefits and burdens arising from reuse, recovery and recycling activities).

The Functional Unit considered is *“Covering 1 m² of a surface in a dwelling with ceramic tiles for 50 years.”*

For more information, please contact us by email at contacto@cifreceramica.com or through our website <https://cifreceramica.com/>

<https://www.aenor.com/certificacion/certificacion-de-producto/declaraciones-ambientales-de-producto/declaraciones-globalepd-en-vigor>



The specific scores for the different LEED v4.1 Rating Systems are presented below:

| Rating System | Types of buildings | | Credits |
|--|----------------------------|----------------------------|--|
| Building Design + Construction | New Construction | Retail | Building life-cycle impact reduction Option 2: Whole-Building life-cycle assessment |
| | Core and Shell | Data Centers | |
| | Schools | Hospitality | Environmental Product Declaration Option 1: Environmental Product Declaration |
| | Healthcare | Warehouse and distribution | |
| Residential Building Design + Construction | Single family | | N/A |
| | Multifamily | | Building life-cycle impact reduction Option 4: Whole-Building life-cycle assessment |
| | Multifamily Core and Shell | | Environmentally Preferable Products Option 1: Environmentally Preferable Products |
| Interior Design + Construction | Commercial interiors | | Interiors Life-Cycle Impact Reduction Option 2: Building Interiors Life Cycle Assessment |
| | Retail | | |
| | Hospitality | | Environmental Product Declaration Option 1: Environmental Product Declaration |
| Operations and Maintenance | Existing Buildings | Data Centers | Purchasing Option 2: Building materials |
| | Schools | Hospitality | |
| | Retail | Warehouse and distribution | Green Cleaning Policy Option 1. In-House Green Cleaning Policy |



COMPLIANCE WITH RESPONSIBILITY PROGRAM

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| Product: ARECA 60x120XS (GARDEN/GLACIAR) |
| Classification: Tiles, Bill Group |

CIFRE CERÁMICA participates in the Integrated Packaging Management System of **ECOEMBES** (ECOEMBALAJES ESPAÑA, S.A.) and in the Extended Producer Responsibility System for professional packaging **GENCI**, registered in the Product Manufacturers Register under number ENV/2023/000009062. Both systems guarantee responsible management of the waste generated.

In addition, CIFRE CERÁMICA submits its annual Packaging Declaration and participates in the Sectoral Prevention Plans, promoting innovative solutions to reduce environmental impact, enhance recyclability, and optimize the design of both packaging and products.

For more information, please contact us by email at contacto@cifreceramica.com or through our website <https://cifreceramica.com/>

The specific scores for the different LEED v4.1 Rating Systems are presented below:

| Rating System | Types of buildings | | Credits |
|--|----------------------------|----------------------------|---|
| Building Design + Construction | New Construction | Retail | Sourcing of Raw Materials Responsible sourcing of raw materials |
| | Core and Shell | Data Centers | |
| | Schools | Hospitality | |
| | Healthcare | Warehouse and distribution | |
| Residential Building Design + Construction | Single family | | Environmentally Preferable Products Option 2. Environmentally Preferable Products |
| | Multifamily | | |
| | Multifamily Core and Shell | | |
| Interior Design + Construction | Commercial interiors | | Sourcing of Raw Materials |
| | Retail | | |
| | Hospitality | | |
| Operations and Maintenance | Existing Buildings | Data Centers | N/A |
| | Schools | Hospitality | |
| | Retail | Warehouse and distribution | |

N/A: No Aplica



Recycled content

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|---|
| Product: ARECA 60x120XS (GARDEN/GLACIAR) |
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Recycled content



36%

Minimum content of recycled and recovered material pre-consumer, including water and mineral raw materials

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| Rating System | Types of buildings | | Credits |
|--|----------------------------|----------------------------|---|
| Building Design + Construction | New Construction | Retail | Sourcing of Raw Materials Responsible sourcing of raw materials |
| | Core and Shell | Data Centers | |
| | Schools | Hospitality | |
| | Healthcare | Warehouse and distribution | |
| Residential Building Design + Construction | Single family | | Environmentally Preferable Products Option 2: Environmentally Preferable Products |
| | Multifamily | | Environmentally Preferable Products |
| | Multifamily Core and Shell | | Option 1: Environmentally Preferable Products Option 3: Sourcing of Raw Materials |
| Interior Design + Construction | Commercial interiors | | Sourcing of Raw Materials Responsible sourcing of raw materials |
| | Retail | | |
| | Hospitality | | |
| Operations and Maintenance | Existing Buildings | Data Centers | Purchasing Option 2: Building materials |
| | Schools | Hospitality | |
| | Retail | Warehouse and distribution | |



CASRN (Chemical Abstract Service) number

Product: ARECA 60x120XS (GARDEN/GLACIAR)

Classification: Tile, BIII Group

CIFRE CERÁMICA has a register of substances used by its raw material suppliers, which identifies, through the CASRN number, the substances and materials present in ceramic tiles, both in terms of the substrate and the glazing materials, thus enabling an inventory to be made of the raw materials used in the manufacture of ceramic tiles.

The substances contained in the product listed in the "List of substances of very high concern (SVHC) for authorization" do not exceed 0.1% by weight of the product.

"Tiles, bricks, roof tiles, tableware, sanitary ware, refractory bricks and pieces, and products decorated by third firing, among many others, meet the legal definition of "article." The mandatory registration of substances contained in articles is only applicable if the substances present in them are intended to be released under normal or reasonably foreseeable conditions of use, and is therefore NOT applicable to ceramic articles.

Likewise, notification to the ECHA of a substance present in articles must be made when all three of the following requirements are met:

1. It is a substance of very high concern (SVHC) and has been included in the list of substances subject to authorization.
2. It is present in articles in a total annual quantity of more than 1 ton/year per producer or importer.
3. The concentration of the substance in the article is greater than 0.1% by weight/weight.

Currently, there is no evidence of the presence of any substance included in the list of substances subject to Authorization in ceramic articles, so the notification obligation does not apply to these products. Consequently, there is currently no obligation to inform customers or consumers about the safe use of articles containing any substance on that list in a concentration greater than 0.1% by weight/weight.

Reference: The REACH Regulation in the industrial fabric of the Valencian Community. Valencia: Regional Ministry of Industry, Trade and Innovation. Valencian Regional Government, 2009

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The specific scores for the different LEED v4.1 Rating Systems are presented below:

| Rating System | Types of buildings | | Credits |
|--|----------------------------|----------------------------|--|
| Building Design + Construction | New Construction | Retail | Material Ingredients Option 1. Material Ingredient Reporting (Inventory indicating CASRN) OPTION 2. Material Ingredient Optimization (International Alternative Compliance Path – REACH Optimization) |
| | Core and Shell | Data Centers | |
| | Schools | Hospitality | |
| | Healthcare | Warehouse and distribution | |
| Residential Building Design + Construction | Single family | | N/A |
| | Multifamily | | Environmental Preferable Products Option 4: Material Ingredient |
| | Multifamily Core and Shell | | |
| Interior Design + Construction | Commercial interiors | | Material Ingredients Option 1: Material Ingredient Reporting Option 2: Material Ingredient Optimization |
| | Retail | | |
| | Hospitality | | |
| Operations and Maintenance | Existing Buildings | Data Centers | N/A |
| | Schools | Hospitality | |
| | Retail | Warehouse and distribution | |

N/A: No Aplica



Waste generated during construction and demolition/renovation

Product: ARECA 60x120XS (GARDEN/GLACIAR)

Classification: Tile, Bill Group

During the construction of the building project, CIFRE CERÁMICA tiles generate packaging waste and ceramic waste from the cutting of the pieces. On the other hand, at the end of the building's useful life (demolition) or during its renovation, the ceramic pieces are removed, making it necessary to manage them as waste:

Packaging waste

- Cardboard: 120 g/m². Selective separation is recommended for subsequent recycling into other products with the same or different functionalities, including composting or biomethanization.

- Plastic: 28 g/m². Selective separation is recommended for subsequent recycling into other products with the same or different functionalities, including composting or biomethanization.

- Wood: 418 g/m². It is recommended that pallets be reused as many times as possible, with or without repair. When it is not possible to extend the useful life of this product, it is considered waste and should be recycled, composted, or biomethanized.

Waste from cutting ceramic pieces and tiles at the end of their useful life

Although the estimated amount of this type of waste depends on the design of the building project and, therefore, it is not possible to quantify the waste generated *a priori*, the company estimates that it will be around 3% of the surface area to be covered.

This waste is inert in nature, i.e., it does not undergo significant physical, chemical, or biological transformations. It is not soluble or combustible, does not react physically or chemically in any other way, is not biodegradable, and does not adversely affect other materials with which it comes into contact in a way that could lead to environmental pollution or harm human health.

In this regard, it is proposed, for example, to recover the waste as a filler in backfilling operations, replacing other virgin materials such as gravel, which in this type of operation leads to an optimization of natural resource consumption.

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The specific scores for the different LEED v4.1 Rating Systems are presented below:

| Rating System | Tipos de edificios | | Créditos |
|--|----------------------------|----------------------------|--|
| Building Design + Construction | New Construction | Retail | Construction and Demolition Waste Management Option 1. Diversion Option 2. Reduction of Total Waste Material |
| | Core and Shell | Data Centers | |
| | Schools | Hospitality | |
| | Healthcare | Warehouse and distribution | |
| Residential Building Design + Construction | Single family | | Construction and Demolition Waste Management Option 1. Diversion Option 2. Reduction of Total Waste |
| | Multifamily | | Construction and Demolition Waste Management Planning Construction and Demolition Waste Management Option 1. Diversion Option 2. Waste prevention |
| | Multifamily Core and Shell | | |
| Interior Design + Construction | Commercial interiors | | Construction and Demolition Waste Management Option 1. Diversion Option 2. Waste prevention |
| | Retail | | |
| | Hospitality | | |
| Operations and Maintenance | Existing Buildings | Data Centers | Facility Maintenance and Renovations Policy |
| | Schools | Hospitality | |
| | Retail | Warehouse and distribution | |



Product free of volatile organic compounds and other pollutants

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| Product: ARECA 60x120XS (GARDEN/GLACIAR) |
| Classification: Tiles, BIII Group |

Ceramic tiles for floor and wall coverings that do not contain adhesives, waxes, or any type of coating applied after the firing stage are considered materials that meet the highest indoor air quality criteria without any testing, because during the firing stage, the tiles are fired at high temperatures (>1,100°C), resulting in an **inert final product free of volatile organic compounds.**

At such high temperatures, any organic matter that may be present in the clays or any additives used in their manufacture is completely decomposed, resulting in an inert product with no VOCs that can be emitted.

It should also be noted that all our boxes, in compliance with the French decree of February 20, 2012, regarding VOC emission levels, are labeled to indicate that the ceramic tiles do not emit this type of compound, and are therefore classified as A+ emissions.

"Inherently non-emitting sources. Product is an inherently non-emitting source of VOCs (stone, ceramic, powder-coated metals, plated or anodized metal, glass, concrete, clay brick, and unfinished or untreated solid wood) and has no integral organic-based surface coatings, binders, or sealants."

Referencia: LEED v.4.1

The pollutants emitted during the installation and use of these ceramic tiles are detailed in the following table. It should be noted that this information applies to ceramic tiles and not to any adhesive material selected during the construction process.

| Limited contaminant in LEED | Information declared on the tiles |
|---|---|
| Formaldehyde | Does not emit formaldehyde |
| Particles (PM ₁₀ and PM _{2.5}) | During the construction phase, the use of water jet tile cutters is recommended to avoid particle emissions During the use phase, they do not emit any type of particles |
| Ozone (O ₃) | They do not emit ozone |
| Total Volatile Organic Compounds | They do not emit Volatile Organic Compounds if the tiles do not have an additional organic coating |
| Carbon Monoxide (CO) | During the construction stage, the use of tools that emit CO is not required. During the use stage, they do not emit CO. |
| Respirable crystalline silica | Wet cutting or the score and snap method is recommended during installation. Improper installation techniques could expose the installer to harmful silica dust inhalation. Dry cutting using power tools is not recommended during installation; this method could present a risk of acute lung injury. If adequate ventilation cannot be achieved, use a mask or respirator. |



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| Rating System | Types of buildings | | Credits |
|--|----------------------------|----------------------------|---|
| Building Design + Construction | New Construction | Retail | Low Emitting Materials Indoor Air Quality Assessment Option 2. Air Testing |
| | Core and Shell | Data Centers | |
| | Schools | Hospitality | |
| | Healthcare | Warehouse and distribution | |
| Residential Building Design + Construction | Single family | | Low Emitting Products |
| | Multifamily Core and Shell | | |
| | Multifamily | | Low Emitting Materials Indoor Air Quality Assessment Option 1 & 2 |
| Interior Design + Construction | Commercial interiors | | Low Emitting Materials Indoor Air Quality Assessment Option 2. Air Testing |
| | Retail | | |
| | Hospitality | | |
| Operations and Maintenance | Existing Buildings | Data Centers | Purchasing Option 2: Building materials Indoor Environmental Quality Performance Option 2. Air Testing |
| | Schools | Hospitality | |
| | Retail | Warehouse and distribution | |
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