

# ENVIRONMENTAL PRODUCT DECLARATION (EPD)

## CEM II/B-L 32,5R



### DAPcons<sup>®</sup>.N.Te.247

DECLARACIÓN AMBIENTAL DE PRODUCTO  
ENVIRONMENTAL PRODUCT DECLARATION

According to the standards:

ISO 14025 and UNE-EN 15804:2012+A2:2020/AC:2021



# DECLARACIÓN AMBIENTAL DE PRODUCTO ENVIRONMENTAL PRODUCT DECLARATION

DAPcons®.NTe.247

According to the standards:

ISO 14025 and UNE-EN 15804:2012+A2:2020/AC:2021



## GENERAL INFORMATION

### Product

**CEM II/B-L 32,5R**

### Company



### Product description

Composite Portland cement, designed for use in both concrete and mortar.

### Reference RCP

UNE-EN 16908:2019+A1:2022 Product category rules for cement and building lime.

### Production plant

Cementos La Cruz, S.L.

### Validity

From: 01/09/2025      Until: 01/09/2030

The validity of DAPcons®.NTe.247 is subject to the conditions of the regulation DAPcons®. The current edition of this DAPcons® is the one that appears in the registry maintained by Cateb; for informational purposes, it is included on the Program website [www.dapcons.com](http://www.dapcons.com)

## EXECUTIVE SUMMARY

### CEM II/B-L 32,5R



#### DAPconstruction® Programme Operator

Environmental Product Declarations in the Construction sector  
[www.dapcons.com](http://www.dapcons.com)



#### Programme Manager

Colegio de la Arquitectura Tècnica de Barcelona (Cateb)  
 Bon Pastor, 5 · 08021 Barcelona [www.cateb.cat](http://www.cateb.cat)



#### Owner of the declaration

CEMENTOS LA CRUZ, S.L.  
 PARAJE LOS TRES SANTOS, S/N 30640 - ABANILLA (España)  
[www.cementoscruz.com](http://www.cementoscruz.com)



#### Author of the Life cycle assessment:

Cementos La Cruz, S.L  
 Paraje Los Tres Santos, S/N, 30640 - MURCIA, España  
[www.cementoscruz.com](http://www.cementoscruz.com)

### Declared product

CEM II/B-L 32,5R

### Geographic representation

Spain

### Variability between different products

In this document the results of each of the products are declared individually.

#### Declaration number

DAPcons®.NTe.247

#### Issue date

07/07/2025

### Validity

This verified declaration authorizes its holder to carry the logo of the operator of the ecolabelling program DAPconstruction®. The declaration is applicable exclusively to the mentioned product and for five years from the date of registration. The information contained in this statement was provided under the responsibility of:

**CEMENTOS LA CRUZ, S.L.**

#### Programme Administrator Signature

Celestí Ventura Cisternas. President of Cateb

#### Verifier Signature

Ferran Pérez Ibáñez. Institut de Tecnologia de la Construcció de Catalunya - ITeC. Verifier accredited by the administrator of the DAPcons® Programme

## ENVIRONMENTAL PRODUCT DECLARATION

### 1. PRODUCT DESCRIPTION AND USE

CEM II/B-L 32.5R cement is a type of composite Portland cement, especially suitable for use in mass and reinforced concretes, offering good workability and a fast initial setting.

It reaches a strength of 32.5 MPa at 28 days, which makes it ideal for structures that require good load-bearing capacity and durability. Its rapid strength development allows faster and more reliable progress in construction works.

It strictly complies with EN 197-1:2011, which regulates the requirements of common cements. In addition, it complies with the specifications of RC-16, included in R.D. 256/2016 on cement acceptance, as well as with the Structural Code approved on June 29, 2021. Altogether, this ensures a safe, efficient product with high quality standards, ideal for large-scale projects.

#### 1.1 Content information

##### Product components

Composition of CEM II/B-L 32.5R cement according to UNE-EN 197-1:

Clinker: 65-79%

Limestone: 21-35%

Minor components: 0-5%

These values refer to the cement core, excluding calcium sulfate and any additives.

##### Packaging materials

Bulk cement.



## 2. DESCRIPTION OF THE STAGES OF THE LIFE CYCLE

### 2.1. Manufacturing (A1, A2 y A3)

#### Raw Materials and transport (A1 y A2)

The raw materials used in the manufacture of CEM II/B-L 32.5R cement include clinker, limestone, and gypsum. Clinker is produced in international plants, considering the environmental impact of the production processes. Limestone and gypsum are obtained from regional quarries, including the stages of extraction, crushing, and preparation.

Clinker is transported from the production plants by sea to the destination port, and from there by road to the grinding plant in Abanilla.

Limestone and gypsum, being of regional origin, are transported directly from the quarries by road.

#### Manufacturing (A3)

Cement production is carried out through a grinding and controlled mixing process of the raw materials. These are stored, dosed, and transported through mechanized systems to the production unit. Once the final product is obtained, the cement is dispatched in bulk for commercial distribution.

### 2.2. Construction process stage (A4 y A5)

#### Transport to the building site (A4)

Undeclared

#### Product installation process and construction (A5)

Undeclared

### 2.3. Product use (B1-B7)

#### Use (B1)

Undeclared

#### Maintenance (B2)

Undeclared

#### Repair (B3)

Undeclared

#### Replacement (B4)

Undeclared

#### Refurbishment (B5)

Undeclared

#### Operational energy use (B6)

Undeclared

### **Operational water use (B7)**

Undeclared

## **2.4. End of life (C1-C4)**

### **Deconstruction and demolition (C1)**

Undeclared

### **Transport to waste processing (C2)**

Undeclared

### **Waste processing for reuse, recovery and/or recycling (C3)**

Undeclared

### **Disposal (C4)**

Undeclared

## **2.5. Reuse/recovery/recycling potential (D)**

Undeclared

## **3. LIFE CYCLE ASSESSMENT**

The Life Cycle Assessment (LCA) supporting the Product Environmental Declaration has been developed in accordance with the most recognized European standards for sustainability in construction. In particular, the following standards have been applied: UNE-EN 15804:2012+A2:2020/AC:2021, which defines the core rules for environmental product declarations of construction products; UNE-EN 16908:2019, which complements this standard for products such as cements and limes; and UNE-EN ISO 14040:2006, which establishes the principles and framework for life cycle assessment within environmental management.

The scope of the study covers all stages from raw material extraction to the dispatch of cement from the plant, under the “cradle-to-gate” approach, considering exclusively internal processes up to the point at which the product is ready for distribution. The system boundary defines the unit processes that must be included in the model.

The establishment of these boundaries is based on two fundamental principles:

- Modularity principle: Processes that affect the environmental performance of the product during its life cycle must be allocated to the life cycle module in which they occur. All environmental aspects and impacts must be declared in the stage of the life cycle where they take place.
- Polluter pays principle: Processes related to waste treatment are assigned to the system of the product generating the waste, until the end-of-waste condition is reached.

Consequently, the LCA results do not include emissions generated by the treatment of waste derived from the use of the product.

### 3.1. Declared Unit

For the production of CEM II/B-L 32.5R cement, the declared unit is 1,000 kg, equivalent to 1 ton of product.

### Additional comments

As with any industrial activity, cement production involves the use of natural resources and generates environmental impacts that may contribute to global challenges such as climate change.

This Life Cycle Assessment (LCA) enables an objective evaluation of the environmental impacts associated with the manufacture of CEM II/B-L 32.5R cement, taking into account all stages of the process, from raw material acquisition to the dispatch of the product from the plant.

### 3.2. Scope and modules that are declared

**Table 2. Declared modules**

Product stage			Construction Process Stage		Use stage							End of life stage				Benefits and loads beyond the system boundaries
Raw materials supply	Transport	Manufacturing	Transport	Construction - Installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction	Transport	Waste processing	Disposal	Reuse, recovery, recycling potential
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	X	X	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND

X = Declared module      MND = Undeclared module

### 3.3. LCA results of potential environmental impact referred to the declared unit (ACV)

**Table 3. Parameters of environmental impact**

Parameter	Unit	Life cycle stage																Module D
		Product stage			Construction Process Stage		Use stage							End of life stage				
		A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	
Climate change - total (GWP-total)	kg CO2 eq	5.73E+02	1.84E+01	1.06E+01	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND
Climate change - fossil (GWP-fossil)	kg CO2 eq	5.63E+02	1.84E+01	1.05E+01	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND
Climate change - biogenic (GWP-biogenic)	kg CO2 eq	9.88E+00	1.97E-03	8.06E-02	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND
Climate change - land use and changes in land use (GWP-luluc)	kg CO2 eq	2.01E-01	1.36E-02	8.35E-02	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND
Ozone layer depletion (ODP)	kg CFC 11 eq	1.43E-05	3.81E-06	7.61E-07	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND
Acidification (AP)	mol H+ eq	1.40E+00	3.95E-01	8.95E-02	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND
Eutrophication of fresh water (EP-freshwater)	kg P eq	4.94E-02	8.98E-04	3.80E-03	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND
Eutrophication of sea water (EP-marine)	kg N eq.	4.04E-01	9.08E-02	1.43E-02	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND
Terrestrial eutrophication (EP-terrestrial)	mol N eq.	4.62E+00	1.01E+00	1.48E-01	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND
Photochemical ozone formation (POCP)	kg NMVOC eq	6.18E+00	2.71E-01	3.98E-02	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND
Depletion of abiotic resources - minerals and metals (ADP-minerals&metals)	kg Sb eq	6.30E-05	3.43E-05	1.24E-05	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND
Depletion of abiotic resources - fossil fuels (ADP-fossil)	MJ, net calorific value	1.66E+03	2.49E+02	2.51E+02	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND
Water consumption (WDP)	m3 worldwide eq. private	-3.43E+01	6.73E-01	6.86E+00	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND
Eco-toxicity - freshwater (ETP-fw)	CTUe	3.56E+03	1.76E+02	1.59E+02	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND
Human toxicity, cancer effect (HTP-c)	CTUh	2.45E-07	1.08E-08	3.50E-09	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND
Human toxicity, non-cancer effects (HTP-nc)	CTUh	3.72E-06	1.42E-07	1.07E-07	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND
The Indicator includes all greenhouse gases included in GWP-total but excludes biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. This Indicator is thus equal to the GWP Indicator originally defined in EN 15804:2012+A1:2013. Can be obtained from IPCC characterization factors.																		
Global Warming Potential (GHP)	kg CO2 eq	5.73E+02	1.84E+01	1.06E+01	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND

A1 Supply of raw materials. A2 Transport to waste processing. A3 Manufacturing. A4 Transport to waste processing. A5 Installation and construction processes. B1 Use. B2 Maintenance. B3 Repair. B4 Replacement. B5 Refurbishment. B6 Operational energy use. B7 Operational water use. C1 Deconstruction and demolition. C2 Transport to waste processing. C3 Waste management for reuse, recovery and recycling. C4 Fine removal. D Environmental benefits and burdens beyond the system boundary. MND Undeclared module.

**Table 4. Parameters for the use of resources, waste and output material flows**

Parameter	Unit	Life cycle stage																Module D
		Product stage			Construction Process Stage		Use stage							End of life stage				
		A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	
Use of renewable primary energy excluding renewable primary energy resources used as feedstock	MJ, net calorific value	7.09E+01	2.23E+00	5.54E+01	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND
Use of renewable primary energy used as raw material	MJ, net calorific value	0.00E+00	0.00E+00	0.00E+00	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND
Total use of renewable primary energy (primary energy and renewable primary energy resources used as feedstock)	MJ, net calorific value	7.09E+01	2.23E+00	5.54E+01	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND
Non-renewable primary energy use, excluding non-renewable primary energy resources used as feedstock	MJ, net calorific value	1.76E+03	2.65E+02	2.60E+02	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND
Use of non-renewable primary energy used as raw material	MJ, net calorific value	0.00E+00	0.00E+00	0.00E+00	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND
Total use of non-renewable primary energy (primary energy and renewable primary energy resources used as feedstock)	MJ, net calorific value	1.76E+03	2.65E+02	2.60E+02	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND
Use of secondary materials	kg	0.00E+00	0.00E+00	0.00E+00	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND
Use of renewable secondary fuels	MJ, net calorific value	0.00E+00	0.00E+00	0.00E+00	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND
Use of non-renewable secondary fuels	MJ, net calorific value	0.00E+00	0.00E+00	0.00E+00	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND
Net use of freshwater resources	m3	0.00E+00	0.00E+00	0.00E+00	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND
Hazardous waste removed	kg	0.00E+00	0.00E+00	8.60E-03	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND
Non-hazardous waste eliminated	kg	0.00E+00	0.00E+00	5.13E-02	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND
Radioactive waste disposed of	kg	0.00E+00	0.00E+00	0.00E+00	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND
Components for reuse	kg	0.00E+00	0.00E+00	0.00E+00	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND
Materials for recycling	kg	0.00E+00	0.00E+00	0.00E+00	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND
Materials for energy recovery (energy recovery)	kg	0.00E+00	0.00E+00	0.00E+00	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND
Exported energy	MJ by energy vector	0.00E+00	0.00E+00	0.00E+00	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND
Exported electrical energy (AEE)	MJ	0.00E+00	0.00E+00	0.00E+00	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND
Exported thermal energy (EET)	MJ	0.00E+00	0.00E+00	0.00E+00	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND

A1 Supply of raw materials. A2 Transport to waste processing. A3 Manufacturing. A4 Transport to waste processing. A5 Installation and construction processes. B1 Use. B2 Maintenance. B3 Repair. B4 Replacement. B5 Refurbishment. B6 Operational energy use. B7 Operational water use. C1 Deconstruction and demolition. C2 Transport to waste processing. C3 Waste management for reuse, recovery and recycling. C4 Fine removal. D Environmental benefits and burdens beyond the system boundary. MND Undeclared module.

**Table 5. Kg of biogenic carbon**

Carbon content (biogenic) - packaging	0.00E+00
Carbon content (biogenic) - product	0.00E+00

### 3.4. Recommendations of this EPD

Environmental Product Declarations from different calculation programs are not directly comparable, since the calculation rules may differ. This declaration reflects the environmental performance of the product CEM II/B-L 32.5R cement, manufactured by Cementos La Cruz S.L.

### 3.5. Cut-off rules

The Environmental Product Declaration has been carried out in accordance with the standard UNE-EN 16908:2019+A1:2022 "Cements and building limes – Environmental Product Declarations – Product Category Rules complementary to EN 15804."

According to this standard, the EPD provides quantified environmental information on a construction product, based on a scientific and harmonized approach. Its purpose is to provide the basis for evaluating and identifying those products that exert lower pressure on the environment.

More than 95% of all mass and energy inputs and outputs of the system have been included, taking into account the exclusion of additives used in the production of this cement, as well as steel ball losses, due to lack of data and their contribution of less than 1% to the overall environmental impact. Likewise, the bagging process is omitted, since the product is supplied in bulk.

### 3.6. Additional environmental information

Cement is classified as an irritant and harmful product; however, once set, cement is not hazardous to the environment, becoming an inert product that does not release dangerous substances.

Cementos La Cruz holds various certifications that support its commitment to quality, sustainability, and energy efficiency. Since 2017, the company has been certified under ISO 9001:2015, awarded by AENOR, which endorses the implementation of a management system focused on continuous improvement and customer satisfaction. That same year, it also obtained ISO 14001:2015, recognizing responsible environmental management aimed at preventing impacts and controlling the risks derived from its activity.

In 2023, Cementos La Cruz strengthened its commitment to sustainability by obtaining ISO 50001:2018, which establishes the foundations for efficient and optimized energy management.

These certifications reflect the company's approach towards a responsible, efficient, and environmentally respectful operation, aligned with the principles of sustainability and continuous improvement.

### 3.7. Other data

The Life Cycle Assessment (LCA) of CEM II/B-L 32.5R cement has enabled a detailed evaluation of the environmental impacts associated with its production, from the extraction of raw materials to the final manufacturing stage. This assessment has provided key information regarding resource consumption, emissions generation, and waste derived from the production process.

The results highlight the importance of optimizing the use of raw materials and improving energy efficiency in cement production. Likewise, the need to continue promoting measures that minimize environmental impact is evident, such as the use of alternative fuels, the incorporation of renewable energy sources, and improvements in transport logistics to reduce CO<sub>2</sub> emissions.

## 4. ADDITIONAL TECHNICAL INFORMATION AND SCENARIOS

### 4.1. Transport to the building site (A4)

Undeclared

### 4.2. Installation processes (A5)

Undeclared

### 4.3. Reference life (B1)

Undeclared

### 4.4. Maintenance (B2), Repair (B3), Replacement (B4), or Refurbishment (B5)

#### Maintenance (B2)

Undeclared

#### Repair (B3)

Undeclared

#### Replacement (B4)

Undeclared

#### Refurbishment (B5)

Undeclared

### 4.6. Operational energy use (B6) and operational water use (B7)

Undeclared

#### 4.7. End of life (C1-C4)

Undeclared

### 5. ADDITIONAL INFORMATION

### 6. PCR AND VERIFICATION

#### This statement is based on Document

UNE-EN 16908:2019+A1:2022 Product category rules for cement and building lime. Cement and building lime.

#### Independent verification of the declaration and data, in accordance with ISO 14025 and IN UNE-EN 16908:2019+A1:2022

External

#### Third party Verifier

Ferran Pérez Ibáñez

Accredited by the administrator of the DAPcons®  
 Programme



#### Verification date:

01/09/2025

#### References

- UNE-EN 16908:2019+A1:2022 “Construction cements and limes – Environmental product declarations – Product category rules complementary to EN 15804.”
- UNE-EN 15804:2012+A2:2020/AC:2021 “Sustainability in construction – Environmental product declarations – Core rules for the product category of construction products.”
- Ecoinvent 3.
- International Reference Life Cycle Data System (ILCD) Handbook.
- UNE-EN ISO 14040:2006. Environmental Management and Life Cycle Assessment – Principles and framework.
- UNE-EN ISO 14044:2006. Environmental Management and Life Cycle Assessment – Requirements and guidelines.

#### Programme Manager

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