DAPHabitat System

Environmental Product Declaration

www.daphabitat.pt

[according to ISO 14025, EN 15804:2012+A2:2019 and EN 15942]

Declaration number: DAP 004:2026

HYDRAULIC LIME HL 5

Issue date: 26/02/2026

Valid until: 25/02/2031

SECILTEK, S.A.

Cluster Habitat Sustentável

Version 1.6 Edition June 2025

Index

1. GENERAL INFORMATION 3

1.1. THE DAPHABITAT SYSTEM 3

1.2. EPD OWNER 3

1.3. INFORMATION CONCERNING THE EPD 4

1.4. VERIFICATION DEMONSTRATION 5

1.5. EPD REGISTRATION 5

1.6. RCP (REGRAS DE CATEGORIA DE PRODUTO) MODELO BASE APLICADA 5

1.7. C-PCR (COMPLEMENTARY PRODUCT CATEGORY RULES) 6

1.8. INFORMATION CONCERNING THE PRODUCT/PRODUCT CLASS 6

1.9. CALCULATION RULES OF THE LCA 8

1.10. USE OF THE AVERAGE ENVIRONMENTAL PERFORMANCE 9

1.11. TECHNICAL INFORMATION FOR REFERENCE SERVICE LIFE (RSL) 9

1.12. FLOW DIAGRAM OF INPUT AND OUTPUT OF THE PROCESS 10

2. CORE ENVIRONMENTAL IMPACT INDICATORS 11

2.1. DESCRIPTION OF THE SYSTEM BOUNDARIES 11

2.1.1. Justification for the exemption to declare modules C and D 14

2.2. CORE ENVIRONMENTAL IMPACT INDICATORS 16

2.3. ADDITIONAL ENVIRONMENTAL IMPACT INDICATORS 17

2.4. INDICATORS DESCRIBING RESOURCE USE 18

2.5. OTHER ENVIRONMENTAL INFORMATION DESCRIBING DIFFERENT WASTE CATEGORIES 19

2.6. ENVIRONMENTAL INFORMATION DESCRIBING OUTPUT FLOWS 19

2.7. INFORMATION DESCRIBING THE BIOGENIC CARBON CONTENT AT THE FACTORY GATE 19

3. REFERENCES 20

1. GENERAL INFORMATION

1.1. The DAPHabitat System

Programme operator:	Associação Plataforma para a Construção Sustentável www.clusterhabitat.pt geral@clusterhabitat.pt
Address:	R. Coronel Veiga Simão, Ed. CTCV Lufapo Hub 3025-307 Coimbra
Email address:	deptecnico@clusterhabitat.pt
Telephone number:	(+351) 234 401 576
Website:	www.daphabitat.pt
Logo:	

1.2. EPD owner

Name of the owner:	SECILTEK, S.A.
Production site:	Rua do Mercado, s/n, Gândara 2405-017 Maceira LRA Portugal
Address (head office):	Rua do Mercado, s/n, Gândara 2405-017 Maceira LRA Portugal
Telephone number:	(+351) 244 770 220
Email address:	comercial.seciltek@secil.pt
Website:	https://www.seciltek.com
Logo:	
Information concerning the applicable management Systems:	NP EN ISO 9001 – Quality Management System NP ISO 14001 – Environmental Management System
Specific aspects regarding production:	CAE 23640 - Mortars
Organization's	Commitments undertaken by SECILTEK integrated into the Sustainability Policy: • Enrich the communities where they operate through job creation, local hiring, and community

environmental policy:	engagement. • Invest in talent, equal opportunities, and employee diversity, promoting equity. • Prioritize Health and Safety as fundamental values integrated into all activities. • Ensure protection and prevention measures for all employees, fostering a culture of Health and Safety. • Commit to ZERO harm for employees, contractors, and the communities where they operate. • Make responsible use of natural resources and energy, promoting circularity throughout the product life cycle. • Aim for carbon neutrality through the use of alternative fuels, secondary raw materials, and the development of low-carbon products and solutions. • Promote the vitality and balance of the ecosystems in which they operate and landscape restoration, protecting biodiversity. • Continuously innovate with new manufacturing and management processes, creating safe solutions and quality products that generate more value for the Company, the Customer, and Society. • Value the application of the best production and control technologies, aiming for more efficient and cleaner production. • Create value for shareholders, customers, employees, suppliers, and other partners. • Pursue profitability and financial balance in operations to ensure business continuity and development.

1.3. Information concerning the EPD

Authors:	1. CTCV – Centro Tecnológico da Cerâmica e do Vidro 2. SECILTEK, S.A.
Contact of the authors:	1. CTCV materials: habitat | iParque – Parque Tecnológico de Coimbra – Lote 6 | 3040-540 Antanhol – Portugal (T) +351 239 499 200 Marisa Almeida: marisa@ctcv.pt 2. Apartado 2 EC Maceira | 2406-909 Maceira LRA – Portugal (T) +351 244 770 220 Daniela Faísca: daniela.faisca@secil.pt Luís Carreira: luis.andre.carreira@secil.pt comercial.seciltek@secil.pt
Issue date:	26/02/2026
Registration date:	04/03/2025
Registration number:	DAP 004:2026
Valid until:	25/02/2031
Representativity of the EPD (location, manufacturer, group of manufacturers):	EPD of a single (1) product class, produced in a single (1) industrial unit, belonging to a single (1) producer (Secil - SECILTEK, S.A.)
DAP boundary:	Cradle-to-gate EPD (A1-A3)
Type of EPD	Specific EPD
Geographical representation	Portugal/Europe

1.4. Verification demonstration

External independent verification, accordingly, with the standard ISO 14025:2010 and EN 15804:2012+A2:2019	
Certification Body	Verifier(s)
	
(CERTIF – Associação para a Certificação)	(Helena Gervásio)

1.5. EPD registration

Programme Operator

(Plataform for Sustainable Construction)

1.6. RCP (regras de categoria de produto) modelo base aplicada

Name:	Base model PCR for construction products
Issue date:	June 2025 Edition
Number of registrations on the database:	RCP-mb001
Version:	Version 3.1
Identification and contact of the coordinator(s):	Marisa Almeida | marisa@ctcv.pt Luís Arroja | arroja@ua.pt José Dinis Silvestre | jose.silvestre@ist.utl.pt
Identification and contact of the authors:	Marisa Almeida | marisa@ctcv.pt Luís Arroja | arroja@ua.pt José Silvestre | jds@civil.ist.utl.pt Fausto Freire Cristina Rocha Ana Paula Duarte

	Ana Cláudia Dias Helena Gervásio Victor Ferreira Ricardo Mateus António Baio Dias
Composition of the Sectorial Panel:	-
Consultation period:	18/11/2015 - 18/01/2016 12/08/2023 – 30/11/2023
Valid until:	01/06/2027

CEN standard EN 15804 serves as the core Product Category Rules (PCR).

1.7. C-PCR (Complementary Product Category Rules)

Name:	EN 16908:2017+A1:2022 – Cement and building lime – Environmental product declarations – Product category rules complementary to EN 15804
Issue date:	March 2022
Number of registrations on the database:	EN 16908:2017+A1:2022
Version:	EN 16908:2017+A1:2022
Identification and contact of the coordinator(s):	Comité Européen de Normalisation (CEN)

1.8. Information concerning the product/product class

Identification of the product:	Hydraulic lime HL 5
Illustration of the product:	
Brief description of the product:	Hydraulic lime HL 5 is a hydraulic binder composed of calcium silicates and aluminates with a low content of calcium hydroxide, obtained by firing marl limestone followed by grinding. I tis classified as HL 5 according to NP EN 459-1. Hydraulic lime HL 5 is a binder that predominantly exhibits hydraulic setting but also shows some air

setting.

It is used in the preparation or production of construction and civil engineering materials.

Main technical characteristics of the product:

Table 1: Chemical, mechanical and physical characteristics of Hydraulic Lime HL 5

Designation		Value	Units	Standards
Available lime $Ca(OH)_2$		≥ 4.0	%	EN 459-1
Sulfate		≤ 3.0	%	EN 459-1
Free water		≤ 1.0	%	EN 459-1
Fineness		90 µm ≤ 15.0 200 µm ≤ 5.0	%	EN 459-1
Expansibility		≤ 2.0	mm	EN 459-1
Penetration		> 10 e < 50	mm	EN 459-1
Air content		≤ 25.0	%	EN 459-1
Setting time	Start	> 1 ≤ 15	h	EN 459-1
	End			
Compressive strength (28 days)		≥ 5.0	MPa	EN 459-1

Description of the product's application/use:

Used in the production of mortars, soil treatment, soil-lime mixtures, or as filler for bituminous materials.

Therefore, Hydraulic lime HL 5 can be used in:

- Masonry mortar
- Plaster and finishing mortars
- As a filler substitute in bituminous pavements
- Soil treatment or asphalt mixtures

Mix the hydraulic lime HL5 with the aggregate first, then add water in the appropriate amount to achieve good workability.

Placing on the market / Rules of application in the market / Technical rules of the product:

EN 459-1:2010

Certificate: 1328 (CERTIF) - 1328-CPR-0215

Quality control

Not applicable

Special delivery conditions:

Not applicable

Components and substances to declare:

The product does not contain substances included in the 'Candidate List of Substances of Very High Concern (SVHCs) for authorisation' in concentrations exceeding the registration thresholds set by the European Chemicals Agency (ECHA), i.e., greater than 0.1% by weight (w/w).

The packaging materials include (kg/ton):

Packaging material	Kg/ton
Paper	9.78E-01
Plastic	6.65E-01
wood	9.56E+00

Where explanatory material may be obtained:

Hydraulic lime HL 5 is available for sale to the general public.

For product information, visit https://www.secil.pt.

History of the LCA studies:

-

1.9. Calculation rules of the LCA

Declared unit:	1000 kg of Hydraulic Lime HL 5
System boundaries:	The assessed system includes modules A1-A3 (product stage). A more detailed description of the system boundary is presented in Section 2.1.
Criteria for the exclusion:	In conducting the LCA, the processes considered include the extraction and processing of natural raw materials, the transport of secondary raw materials, the production of auxiliary materials, and the energy consumed in the manufacture of Hydraulic Lime HL5. Since raw stone (marl and limestone), sarrisca and bypass dust are the main raw materials, the extraction and processing of natural raw materials as well as the transport of secondary raw materials (waste from other industries) were also included. Waste management processes generated during lime production (up to the endo-of-waste status) were considered when inventory data were available. Processes not included in the elaboration of the EPD for Hydraulic Lime HL5 are covered by the exclusion criteria defined in EN 15804:2012+A2:2019+AC and the RCP –Base Model, document, namely when their mas sis less than 1% of the total mass of inputs, and when the total input mass of the unit processes does not exceed 5% of the total mass for the considered module, for example module A1-A3. In the LCA of Hydraulic Lime HL5, the energy and water consumption of administrative areas, as well as the generation of wastewater and waste from these areas, were excluded from the system boundary. Additionally, environmental loads associated with the construction and maintenance of infrastructures and equipment (capital goods) were also excluded.
Assumption and limitations:	The results of the environmental impacts and other indicators presented in this EPD refer to the year 2023.
Quality and other characteristics about the information used in the LCA:	The quality of the inventory data was assessed considering the criteria from the Product Environmental Footprint (PEF) Category Rules, as indicated in Table E.2 (Data quality and criteria from the Product Environmental Footprint Category Rules) of EN 15804:2012+A2:2019+AC, and based on the recommendations of the RCP – Base Model documents. The data quality was generally classified between fair and good on a five-level qualitative scale ranging from very poor to very good, in accordance with data quality requirements regarding temporal, geographical, and technological representativeness. The information related to the production of Hydraulic Lime HL 5 is less than five years old, mostly based on primary data collected directly from SECILTEK, S.A. For the operations associated with the manufacturing process of Hydraulic Lime HL 5, real and specific data from the production unit were used. Information for background processes not provided by SECIL and over which SECIL has no influence was obtained from generic data available in the Ecoinvent v3.9.1 database. These datasets were selected to ensure geographical and technological coverage compliant with the data quality criteria set out in Annex E of EN 15804:2012+A2:2019. The dataset used to model electricity production was adapted to the national context. The electricity mix was updated to the year 2023, using information from Redes Energéticas Nacionais (REN), the Entidade Reguladora dos Serviços Energéticos (ERSE), and the Direção-Geral de Energia e Geologia (DGEG), in order to obtain the most up-to-date results regarding the environmental impacts associated with the Portuguese electricity grid. The GHG emission from electricity was 0,361 kg CO_2 eq/kWh.

Allocation rules:	To determine the inputs and outputs associated solely with the production of Hydraulic Lime HL 5, the unit process subdivision procedure was first adopted, following the recommendations of the RCP – Base Model document. Thus, only the operations related to the production of the product under study were considered, while the operations specific to the other products (NHL 2, NHL 3,5 e NHL 5) were excluded. Subsequently, for the included operations, an allocation procedure based on the mass of the different products produced was applied.
Software used for the assessment:	SimaPro, version 9.5.0.2
Background database used for the LCA:	Ecoinvent database version 3.9.1 published in March 2023; "cut-off" approach.
Comparability of EPD for construction products:	The EPD of construction products and services cannot be comparable in case they are not produced according to EN 15804 and EN 15942 and according to the comparability conditions determined by ISO 14025.

1.10. Use of the average environmental performance

Not applicable.

1.11. Technical information for Reference Service Life (RSL)

Not applicable.

1.12. Flow diagram of input and output of the process

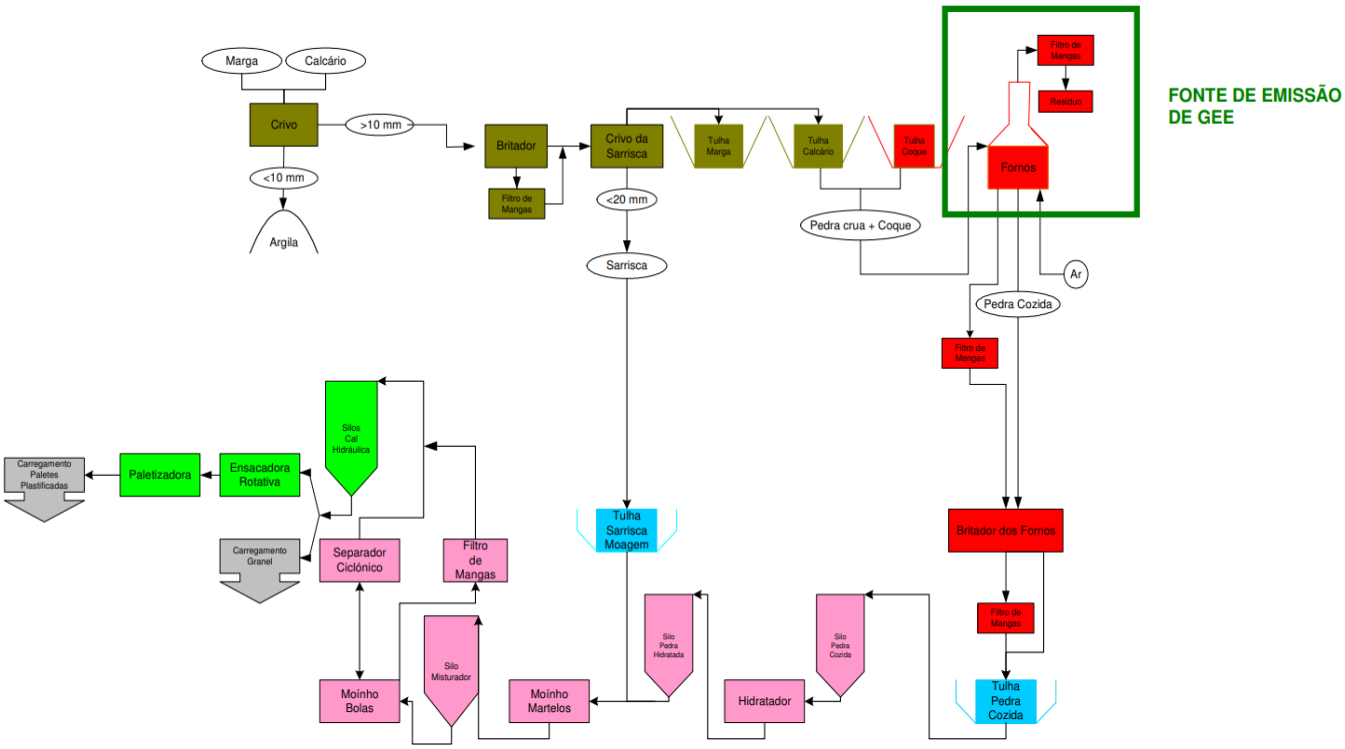

Figure 1: Manufacturing diagram – SECILTEK Maceira.

2. CORE ENVIRONMENTAL IMPACT INDICATORS

2.1. Description of the system boundaries

(✓= included; ND = module not declared)

PRODUCT STAGE			CONSTRUCTION PROCESS STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARY
Raw material supply	Transport	Manufacturing	Transport	Construction installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction and demolition	Transport	Waste process	Disposal	Reuse, recovery, potential recycling
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
✓	✓	✓	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Production Stage, A1-A3

In the A1-A3 module (production stage) of Hydraulic Lime HL 5 he extraction and processing of primary (natural) raw materials, production of secondary raw materials, and the transport of raw materials, additives, fuels, and electricity to the production facility are considered.

Module A1 includes the extraction of limestone and marl. Limestone is quarried in Carreirancha - Alqueidão da Serra, with blasting operations using explosives. Marl is extracted from a quarry located in Maceira. The excavation is carried out using a diesel-powered excavator.

Regarding transport (module A2), the raw materials are delivered to the facility by road using a 48-ton truck for marl and a 26-ton truck for limestone, covering distances of 3.6 km and 20.5 km respectively.

The production stage of the product includes the following phases:

- Crushing

- Baking ovens

- Griding

- Bagging, palletizing and wrapping

- Dispatch

Hydraulic lime is a binder composed of lime and other materials such as cement, ground granulated blast-furnace slag, fly ash, limestone filler and other suitable materials. It hardens when mixed with water, with carbon dioxide from the air contributing to the hardening process.

Crushing

Limestone and marl from the quarries are stored in a stockyard and then transported by mechanical shovels to a rotary conveyor hopper feeding the jaw crusher.

Upstream of the jaw crusher, a clay separations screen removes the clay fraction from the marl and limestone, sending it outside the plant.

The jaw crusher has a capacity of 70 t/h, reducing aggregates to a particle size between 10 and 80 mm.

Downstream of the crusher, there is another screening that separates the crushed aggregates with a particle size of approximately less than 20 mm. This fraction, called sarrisca, is reused in the grinding, with the excess being sent back to the quarry.

The crushed marl and limestone, with a particle size greater than 20 mm and less than 80 mm, are transported by conveyor belt to the marl and limestone hoppers, with capacities of 300 t and 250 t, respectively. Determined amounts of each of these aggregates, whose mixture is called raw stone, are dosed with petroleum coke and subsequently sent to the calcination kilns, where they are fired.

The entire discharge and crushing area is dust-controlled by a bag filter with a capacity of 5000 m^3/h and an efficiency of 80%.

Baking ovens

Baking is carried out in six static vertical kilns, each 10 m high and 3m in diameter, dating from 1921.

Each kiln originally had a 27 m high natural draft chimney. However, these natural draft chimneys are no longer in use, as in February 2003 a dust filtration system and a single 30 m high chimney, common to all six kilns, were installed.

The baking process in batch-operated, functioning in cycles.

At the beginning of each baking cycle, the kiln is loaded with 8.000 kg of raw stone mixed with petroleum coke, through the feed chutes.

The raw stone (marl and limestone) intended for the kilns is dosed through an automatic dosing system, consisting of continuous weighing scales, and transported to a feed hopper of a bucket elevator.

Simultaneously, the petroleum coke is dosed in another automatic dosing system, also consisting of continuous weighing scales, and sent to the feed hopper of the bucket elevator, where it is mixed with the raw stone.

The mixture of raw stone and petroleum coke is transported by the bucket elevator and subsequently distributed, via conveyor belt, to the different kilns

After loading, the forced-air blower is turned on, thus supplying the air necessary for the combustion of the petroleum coke.

The baking of the raw stone is carried out at approximately 900 ºC.

The following reactions occur:

$CaCO_3$ + clay (8-20%) → hydraulic lime

The process envolves the followinf phases:

- at 800-850ºC, decomposition of limestone:

$CaCO_3 \rightarrow CaO + CO_2$

- at 900ºC, reaction of sílica and alumina from the clay with calcium oxide, forming silicates and aluminates:

SiO_2 + CaO → calcium silicate (SiO_2 . 2CaO)

Al_2O_3 + CaO → calcium aluminate (Al_2O_3 . 3CaO)

The end of the baking cycle is determined when the exhaust gases reach 300 ºC, as measured by temperature probes placed in each kiln chimney at the connection point to the common chimney duct. The forced-air blower is turned off, and the charge is immediately discharged to allow the start of a new baking cycle.

The baking cycles in the six kilns are staggered.

During discharge, the hydraulic control grates are opened, filling wagons which are then transported by an electric cart to the bucket elevator feeding the kiln crusher. Normally, five wagons are removed per baking cycle.

The production capacity of the six kilns is 14 t/h, with an installed thermal power of 1 MW.

Before entering the storage hoppers, the fired stone passes through a hammer mill, reducing its particle size to approximately 40 mm.

The various types of fired stone are stored in hoppers and subsequently transported via conveyor belts to the grinding silos. The storage capacity of the hoppers is approximately 6.000 t.

The kiln area is equipped with a dust collection system based on bag filters, with an efficiency of 98%: it consists of 12 filtration modules, each module containing 78 filter bags, arranged in 6 rows of 13 bags each, and an exhaust chimney 30 m high and 1.5 m in diameter, shared by the six existing vertical kilns. Additionally, at the lower part of the kilns (discharge area), there is a dust filter with a capacity of 10.000 m^3/h and an efficiency of 80%.

Grinding

The grinding of the hydraulic lime raw materials is carried out in two stages: pre-grinding in a hammer mill with a production capacity of 25 t/h, and secondary grinding in a ball mill with a production capacity of 14 t/h.

The grinding cycle begins with filling the fired stone silo. At the base of this silo, there is a rotary plate volumetric feeder that supplies the hydrator. This equipment allows the proper dosing and homogenization of the fired stone with the stoichiometric amount of water required for the hydration reaction:

$CaO + H_2O \rightarrow Ca(OH)_2 + heat$

The hydrator has an hourly capacity of processing up to 16 t of fired stone with a maximum of 3 m^3 of water.

The hydrated stone is transported via a bucket elevator to the hydrated stone silo. For natural hydraulic limes (NHL 2; NHL 3.5 e NHL 5), no additions are made, and the hydrated stone is sent to the hammer mill, followed by the mixing silo, and finally to the ball mill. For HL 5, a predetermined amount of sarrisca is added on the conveyor belt connecting the hydrated stone silo to the hammer mill. The material then follows the same NHL circuit.

In the ball mill, the final particle size of the hydraulic lime is achieved. Downstream of the ball mill, a cyclone separator removes coarse particles, returning them to the mill. A bag filter collects the fine material from the mill, sending it to the drag conveyor, where it is combined with the fine material from the cyclone separator, and transported to the hydraulic lime silos.

Bagging, Palletization and wrapping

Hydraulic lime can be dispatched in 25 kg paper bags or in bilk, loaded directly into tanker trucks.

Transportation to the bagging station is carried out via drag conveyors and bucket elevators.

The rotary bagger has a filling capacity of 1350 bags per hour (54 t/h) and is equipped with four filling heads.

Dispatch

Hydraulic lime is shipped as follows:

- Direct bulk loading into tanker trucks;

- Loading on pallets, with ou without plastic wrapping.

2.1.1. Justification for the exemption to declare modules C and D

Hydraulic Lime HL 5 meets all the requirements of EN 15804:2012+A2:2019+AC and EN 16908:2017+A, to be considered as having a cradle-to-gate life cycle, namely:

• the hydraulic lime is used in mixtures with other materials, resulting in homogeneous products that are chemically and physically bound together, making physical separation at the end of life impossible;

• the physical and chemical transformation processes that the lime undergoes throughout its life cycle cause the material to no longer be identifiable at the end of that cycle;

• the lime does not contain biogenic carbon.

2.2. Core environmental impact indicators

	Global warming potential - total;	Global warming potential fossil;	Global warming potential - biogenic;	Global warming potential land use and land use change;	Depletion potential of the stratospheric ozone layer;	Acidification potential;
	GWP-total	GWP-fossil	GWP-biogenic	GWP-luluc	ODP	AP
Unit	kg CO_2 eq.	kg CO_2 eq.	kg CO_2 eq.	kg CO_2 eq.	kg CFC 11 eq.	mol H^+ eq.
Modules A1-A3	3.80E+02	4.00E+02	-2.05E+01	2.32E-01	1.22E-05	2.27E+00

LEGEND:

Product stage

Units expressed by declared unit (1000 kg of Hydraulic Lime HL 5).

	Eutrophication potential aquatic freshwater;	Eutrophication potential aquatic marine;	Eutrophication potential terrestrial;	Formation potential of tropospheric ozone;	Abiotic depletion potential for non-fossil resources;	Abiotic depletion potential for fossil resources potential;	Water (user) deprivation potential;
	EP-freshwater	EP-marine	EP-terrestrial	POCP	ADP-minerals&metals	ADP-fossil	WDP
Unit	kg P eq.	kg N eq.	mol N eq.	Kg COVNM eq.	kg Sb eq.	MJ, P.C.I	m^3 World eq. deprived
Modules A1-A3	6.64E-04	2.20E-01	2.40E+00	1.91E+00	6.86E-06	2.30E+03	2.25E+01

LEGEND:

Product stage

P.C.I. – Net calorific value

Units expressed by declared unit (1000 kg of Hydraulic Lime HL 5).

The results obtained for the indicators “Abiotic depletion potential for non-fossil resources (ADP-minerals&metals)”, “Abiotic depletion potential for fossil resources potential (ADP-fossil)” and “Water (user) deprivation potential (WDP)” should be used with caution since the uncertainties associated with them are high or there is little experience with the indicator

2.3. Additional environmental impact indicators

	Potential incidence of disease due to PM emissions	Potential Human exposure efficiency relative to U235	Potential Comparative Toxic Unit for ecosystems	Potential Comparative Toxic Unit for humans, cancer effects	Potential Comparative Toxic Unit for humans, not cancer effects	Potential soil quality index
	PM	IRP	ETP-fw	HTP-c	HTP-nc	SQP
Unit	Incidência de doença	kBq U 235 eq.	CTUe	CTUh	CTUh	-
Modules A1-A3	1.52E-05	2.12E+00	1.11E+03	3.83E-08	9.58E-07	2.04E+03

LEGEND:

Product stage

P.C.I. – Net calorific value.

Units expressed by declared unit (1000 kg of Hydraulic Lime HL 5).

The impact indicator "Potential Human exposure efficiency relative to U235" focuses mainly on the possible impact of a low dose of ionising radiation on human health resulting from the nuclear fuel cycle. It does not consider effects arising from possible nuclear accidents, occupational exposure or the disposal of radioactive waste in underground facilities. Potential ionising radiation from soil, radon and some building materials is also not measured by this indicator.

The results of the indicators "Potential Comparative Toxic unit for ecosystems (ETP-fw)", "Potencial Comparative Toxic Unit for humans, cancer effects", "Potential Comparative Toxic Unit for humans, not cancer effects" and "Potential soil quality index" should be used with caution as the uncertainties associated with them are high or there is little experience with the indicator.

2.4. Indicators describing resource use

	Primary energy					
	EPR	RR	TRR	EPNR	RNR	TRNR
Unit	MJ, P.C.I.	MJ, P.C.I.	MJ, P.C.I.	MJ, P.C.I.	MJ, P.C.I.	MJ, P.C.I.
Modules A1-A3	4.34E+02	0.00E+00	4.34E+02	2.30E+03	2.60E-06	2.30E+03

LEGEND:

Product stage

EPR = use of renewable primary energy excluding renewable primary energy resources used as raw materials; RR = use of renewable primary energy resources used as raw materials; TRR = total use of renewable primary energy resources (EPR + RR); EPNR = use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; RNR = use of non-renewable primary energy resources used as raw materials; TRNR = total use of non-renewable primary energy resources (EPRN + RNR);

P.C.I. – Net calorific value.

Units expressed by declared unit (1000 kg of Hydraulic Lime HL 5).

	Secondary materials and fuels, and use of water			
	MS	CSR	CSNR	Net use of fresh water
Unit	kg	MJ, P.C.I.	MJ, P.C.I.	m^3
Modules A1-A3	2.92E+02	8.22E-02	1.08E-01	5.43E-01

LEGEND:

Product stage

MS = use of secondary material; CSR = use of renewable secondary fuels; CSNR = use of non-renewable secondary fuels; Freshwater = use of the net freshwater value

P.C.I. – Net calorific value.

Units expressed by declared unit (1000 kg of Hydraulic Lime HL 5).

2.5. Other environmental information describing different waste categories

	Hazardous waste disposed	Non-hazardous waste disposed	Radioactive waste disposed
Unit	kg	kg	kg
Modules A1-A3	2.09E-02	6.65E-01	1.06E-03

LEGEND:

Product stage

Units expressed by declared unit (1000 kg of Hydraulic Lime HL 5).

The characteristics that make waste hazardous are described in the applicable legislation in force, for example, in the European Waste Framework Directive.

2.6. Environmental information describing output flows

	Components for re-use	Materials for recycling	Materials for energy recovery	Exported energy
Unit	kg	kg	kg	MJ
Modules A1-A3	0.00E+00	6.35E-01	3.76E-01	3.43E+00

LEGEND:

Product stage

Units expressed by declared unit (1000 kg of Hydraulic Lime HL 5).

The characteristics that make waste hazardous are described in the applicable legislation in force, for example, in the European Waste Framework Directive.

2.7. Information describing the biogenic carbon content at the factory gate

Biogenic carbon content *	Units**	Modules A1-A3 (results)
Biogenic carbon content in product	Kg C	Not applicable
Biogenic carbon content in accompanying packaging	Kg C	5.20E-03

* 1 kg biogenic carbon is equivalent to 44/12 kg of CO2.

** This information can be omitted whenever the content of biogenic carbon in the product, or in the respective packaging, is less than 5% of the mass of the product, or the respective packaging.

3. REFERENCES

- ✓ Instruções Gerais do Sistema DAPHabitat, Versão 3.1, june 2025 (em www.daphabitat.pt).
- ✓ RCP – modelo base para produtos e serviços de construção. Sistema DAPHabitat. Versão 3.1 june 2025 (em www.daphabitat.pt).
- ✓ NP ISO 14025:2009 Rótulos e declarações ambientais – Declarações ambientais Tipo III – Princípios e procedimentos.
- ✓ EN 15804:2012+A2:2019 Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products.
- ✓ EN 15942:2021 Sustainability of construction works – Environmental product declarations – Communication format business-to-business.
- ✓ Diretrizes ECO Platform. 2024.
- ✓ EN 16908:2017+A1:2022 Cement and building lime – Environmental product declarations – Product category rules complementary to EN15804. Comité Européen de Normalisation.