Environmental and Health Product Declaration

ENVIRONMENTAL AND HEALTH PRODUCT DECLARATION (EHPD)

In compliance with the NF EN 15804+A2 standard and its national complementary implementation annex NF EN 15804+A2/CN

Neolife - NOMAD 6, NOMAD 4, NOMAD 9 and NOMAD MIX (with installation elements)

Registration #: 20250443846

Date of publication: 30 April 2025

Version: 1

neolife

FDES VÉRIFIÉE inies

1. Caution

The information in this declaration has been provided exclusively under the responsibility of Neolife (entity producing the EHPD) in accordance with NF EN 15804+A2 and the French national complementary implementation annex NF EN 15804+A2/CN.

Any use of the information provided in this document, in part or in whole, must at least be accompanied by the full reference for the original EHPD and for its producer, who can provide a full copy.

The EN 15804+A2 standard issued by the CEN (European Committee for Standardisation) and the national complementary implementation annex NF EN 15804+A2/CN serve as the rules for defining products' categories (PCR).

PLEASE NOTE "EPD" and "Environmental Product Declaration" are literal translations of the French "*DEP*" and "*Déclaration Environnementale de Produit*", as is "HPD" and "Health Product Declaration" are for "*DSP*" and "*Déclaration Sanitaire de Produit*". However, in France, the term *FDES* or *Fiche de Déclaration Environnementale et Sanitaire (*'EHPD" in English) is often used, which covers both the EPD and HPD for the product subject to this EHPD. Therefore, the EHPD is effectively an EPD supplemented with the product's health information.

2. Reading guide

Reading example: -9.0 E -03 = -9.0 x 10-3

The following presentation rules are applied:

- When the inventory calculation results is nil, the value "zero" is presented.
- Abbreviations & acronyms used:
    - FU: Functional Unit
    - N/A: Not Applicable
- The units used are indicated before each flow: kilograms (kg), grams (g), kilowatt-hours (kWh), megajoules (MJ), square metres (m_2), kelvins (K), watts (W), kilometres (km), and millimetres (mm).

3. Precautions for using the EHPD for product comparisons

EHPDs for construction products may not be comparable if they do not comply with the NF EN 15804+A2 standard. The NF EN 15804+A2 standard defines the conditions under which construction products may be compared in § 5.3 Comparability of EPDs* for construction products, based on the information provided by the EHPD:

"As a result, any comparison of the environmental performance of construction products which uses information from EPDs must be based on the use made of the products and their impacts on the building, and it must take into account the entire life cycle of the products (all information modules)"

NOTE 1: Outside of the context of environmental assessments for buildings, EHPDs are not tools for comparing construction products and services.

NOTE 2: To assess a building's contribution to sustainable development, its environmental impacts must be compared along with its socio-economic aspects and impacts.

NOTE 3: Reference values are required in order to effectively interpret a comparison.

General information

Declaring party's name and address	Neolife 52 allée des Cèdres 69760 Limonest, France
Production site covered	CJPlast Rue de la plasturgie 26270 Loriol-sur-Drôme FRANCE
EHPD type	Cradle-to-Grave Individual range EHPD
Commercial references covered	NOMAD 6, NOMAD 4, NOMAD 9 and NOMAD MIX
Scope of validity	This EHPD is valid for NOMAD 6, NOMAD 4, NOMAD 9 and NOMAD MIX products.
Independent external verification confirmed in accordance with the ISO 14025-certified environmental declaration programme (2010 version) by:	Marcel Gómez Consultoria Ambiental C/Navarra 66 Edificio B Bajos 3ª, 08320 El Masnou, Barcelona (Spain) info@marcelgomez.com

The EN 15804 standard issued by the CEN and the NF 15804 CN standard serve as the PCR[1]
Independent verification of the declaration, in compliance with the NF EN ISO 14025:2010 standard
Third-party verification[2]: Marcel Gómez
INIEST (French national reference database for environmental and health data on construction products and equipment) registration no.: 20250443846
Date of publication: 30 April 2025
Verification date: 30 April 2025
Validity period: 5 years or until 29/04/2030

[1] Product category rules

[2] Optional for B2B communications, required for B2C communications (see EN ISO 14025:2010, 9.4)

Description of the functional unit and product

Description of the product and its packaging

Cladding boards included in the NOMAD range. NOMAD cladding is made of recomposed wood. Sawmill wood offcuts/waste are used as the primary material. This wood fibre is mixed with a thermal binder and mineral pigments to product a compound that is then extruded into profiles and transported to the installation site.

This range covers four products, the NOMAD 6, NOMAD 4, NOMAD 9 and NOMAD MIX. These products vary in terms of their number of waves. The composition, production process and installation are the same for all of them. The number of cladding boards per square metre is the same because the different products all have the same dimensions. Only the weight per square metre of cladding varies between products.

The recycled material content attribution and/or BMB (biomass balance) approaches —such as the mass balance method and/or the book and claim method according to the ISO 22095 standard— may not be used for ECO EPDs**.**

Description of the functional unit

Functional unit Protecting and covering 1 m^2 of façade, in the form of recomposed wood measuring 16.8 mm in thickness, over a typical standard service life of 50 years and including fixing (primary batten framework included).

The product's weight in the functional unit (FU) is 7.7 kg/FU. This corresponds to the weighted average of the 4 products covered, the variability relative to the average is below the 35% threshold for all indicators. The functional unit also includes the packaging and any additional products required to install the cladding. In total, the reference flow (packaging + product) is 7.98 kg/FU. The additional products required to install the cladding weigh 1.46 kg/FU. The primary performance of the functional unit is 1 m_2.

The suitability-for-use tests are defined in the ATEC technical appraisal ref. 2.2/19-1797_V6.

Description of the product's key components and/or materials

Component, product	Weight/FU, kg	Recycled content (post-consumer), w%	Biogenic content, w%
Wood fibres	3.23	0%	100%
PVC resin	3.08	0%	0%
Additives (stabiliser, lubricant)	1.24	0%	2%
Pigment	0.15	0%	0%
Component, packaging	**Weight/FU, kg**	**Recycled content (post-consumer), w%**	**Biogenic content, w%**
Pallet	0.26	0%	100%[3]
LDPE plastic film	0.020	0%	0%
Component, additional products for installation	**Weight/FU, kg**	**Recycled content (post-consumer), w%**	**Biogenic content, w%**
Wood batten (pine)	1.35	0%	100%
Screws and hooks	0.11	49%	0%

Substances included in the REACH regulation candidate list: no substances included in the list representing more than 0.1% of the weight.

Description of the product's use (fields of application)

The cladding boards are used as façade coverings for the following structures:

- Category 1, 2 and 3 family housing units - A and B (IT 249)
- Public buildings - categories 1 to 5 (IT 249)
- French Labour Code classified buildings

Distribution circuit: BtoB

[3] Disregarding the weight of nails

Description of product characteristics

Parameter	Units (expressed per functional unit or per unit)
Reference service life	The selected service life is 50 years. This corresponds to the service life indicated in Table H.2 in Appendix H of the French complementary implementation annex NF EN15804/CN for wooden cladding and all other cladding, except for terracotta cladding.
Declared properties of the product (ex-factory)	The cladding's design complies with the applicable standard requirements (standard NF EN 15534-5). The ex-factory products are finished and ready for installation.
Theoretical application parameter (if imposed by the manufacturer), including references to the appropriate requirements and application codes)	Compliance with ATEC appraisals ref. 2.2/19-1797_V6 and any recommendations from the manufacturer
Presumed work quality	Work compliant with technical requirements. Compliance with DTU (French building regulations technical document) 41.2. And any recommendations from the manufacturer
Outdoor environment	Cladding on façade exposed to weather.
Indoor environment	Not concerned
Conditions of use	Outdoor use.
Repair scenario for maintenance	No maintenance required.
Reported product properties and finishes, etc.	Protective covering, with free expansion, for framework or walls
Theoretical application parameters, including references to suitable practices	NOMAD cladding is fitted directly onto wooden battens using screws, directly onto the façade of buildings
Presumed work quality, when the installation complies with the manufacturer's instructions	Cladding compliant with NF T54-405-1 NF EN15534 NF EN310
Outdoor environment (for outdoor applications), for example weather, pollutants, UV and wind exposure, building orientation, shade, temperature	Gross calorific value: 17 MJ/kg Boiling water resistance (BWR) (%): Δ average weight <7%
Other technical characteristics	See appendix

Information on biogenic carbon content

Biogenic carbon content	Unit (expressed per functional unit or per declared unit)
Biogenic carbon content of the product (ex-factory)	1.97 kg C/FU
Biogenic carbon content of the associated packaging (ex-factory)	0.11 kg C/FU

Life cycle stages

Life cycle diagram

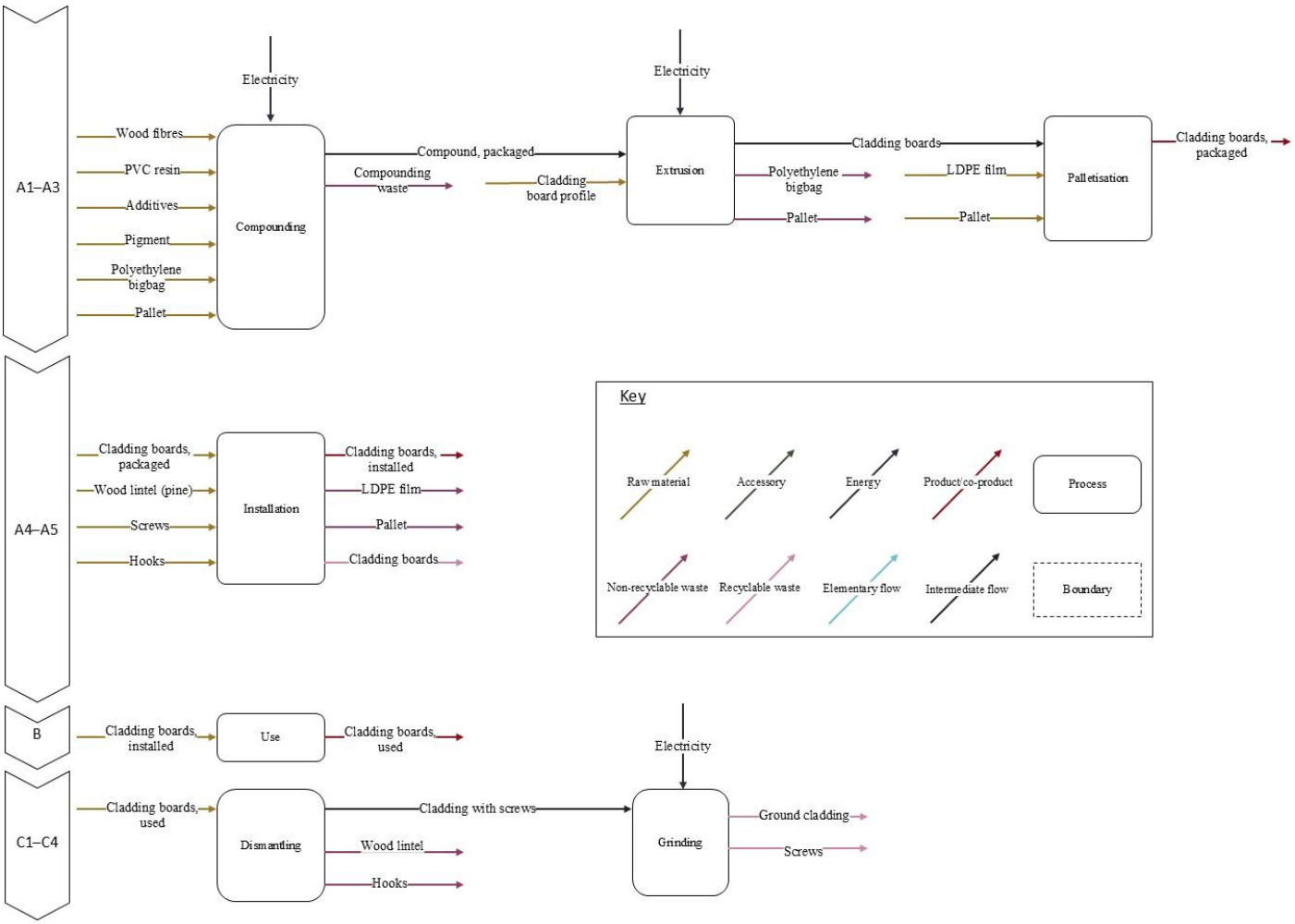

Figure 1: Life cycle diagram

DESCRIPTION OF THE SYSTEM'S BOUNDARIES (X = INCLUDED IN THE LCA; MND - MODULE NOT DECLARED)

PRODUCTION STAGE		CONSTRUCTION PROCESS STAGE		USE STAGE						END-OF-LIFE STAGE				BENEFITS AND IMPACTS BEYOND THE SYSTEM'S BOUNDARIES
Production		Transport	Installation construction process	Use	Maintenance	Repairs	Replacement	Reconditioning	Energy consumed during the use stage	Water consumed during the use stage	Demolition/ Deconstruction	Transport	Waste processing	Disposal	Possibility of reuse, recovery, recycling

A1–A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Figure 2: Life cycle stages

Production stage, A1–A3

The production stage is divided into three modules: A1 - raw material supply; A2 - transport; and A3 - production.

Raw material supply corresponds to the impact of the extraction of raw materials and their transformation, right up to their use in the production of cladding. Biogenic carbon absorbed by the wood is included in this stage.

Stage A2 corresponds to the transport (road, river or rail) of these raw materials to the production site.

Stage A3 corresponds to the impact of the production of the cladding, which includes impacts generated by energy consumed, packaging production, production accessory manufacturing, and the processing of production waste. Sawmill wood offcuts/waste are used as the primary material. This wood fibre is mixed with a thermal binder and mineral pigments to product a compound that is then extruded into profiles and transported to the installation site.

The energy used for production is modelled using the national electricity mixes (for France and Germany) for production sites, which respectively represent a carbon intensity of 0.0878 kgCO2e/kWh and 0.455 kgCO2e/kWh.

Construction stage, A4–A5

The construction stage is divided into two modules: A4 covers transport to the construction site whilst A5 covers installation in the building.

Transport to the worksite

The values used in the analysis are presented in the table below. This corresponds to an average scenario. This scenario is not necessarily compatible with all worksites where the cladding will be used. It is therefore recommended that cladding users recalculate the impact of the product's transport for their specific worksite.

Scenario information	Value
Fuel type and vehicle consumption or vehicle type used for transport. E.g., long-distance lorry, boat, etc.	Lorry with a maximum authorised weight of 32T, Euro 6, 36 litres/100 km.
Distance	327 km
Capacity use (including empty return journeys)	Ecoinvent default value: 53%
Bulk volumetric weight of products transported	97.2 m² per pallet and 17 pallets per lorry. 7.7 kg/m2 of cladding.

Installation in the building

This module covers the production and transport of additional products for the installation, the processing of waste generated during wall installation, additional production required to compensate losses, and the processing of worksite waste.

Parameter	Value
Accessory inputs for installation (specified per material)	Batten: 1.35 kg/m2 Screws and hooks: 110 g/m2

Water consumption	Not concerned
Consumption of other resources	Not concerned
Quantitative description of the energy type (regional mix) and consumption during the installation process	Circular saw power: 1200 W Usage time: 2 min/m² Screwdriver/nail gun power: 550 W Usage time: 2 min/m² 0.058 kWh per FU
Material waste on the construction site before the processing of waste generated by the installation of the product (specified by type)	Loss rate of 5%, from the Neocollect database.
Output materials (specified by type) produced by the processing of waste on the construction site, such as collection for recycling, energy recovery or disposal (specified by method)	Cladding offcuts: 14.6% of offcuts are recovered and then recycled through Neolife's Neocollect programme. The remaining 85.4% are sent to landfill. Batten offcuts: 49% incineration (59% cogeneration with power and heat yields of 20% and 55%, respectively, 41% in boilers with a power yield of 85%), 8% landfill, 43% recycling. This is based on a study which reviewed the management of waste from end-of-life wood construction products in France. Plastic packaging: 17% recycling, 9% energy reuse and 74% landfill. Source: Proposal of a trajectory for first approval - Processing performances of the BPM EPR (Building Products and Materials - Extended Producer Responsibility), ADEME 2021. Pallet: 25 reuses, therefore 96% reused, 4% incineration.
Direct emissions into ambient air, ground and water	Not concerned

Use stage, B1–B7

The cladding does not require any particular maintenance throughout the service life considered, which is set at 50 years. There is therefore no input/output associated with this use phase.

End-of-life stage, C1–C4

Description of scenarios and additional technical information:

C1 Deconstruction, demolition

The deconstruction and/or manual dismantling of the wall and the loading of the assembly of components is taken into account.

Process	Value
Collection process, specified by type	9.15 kg collected individually
Hypotheses for scenario elaboration (e.g. transport)	Deconstruction by hand, no energy consumed. The energy for unscrewing is pooled for all construction products on the worksite.

C2 Transport to waste processing location

Transport of waste to a sorting/processing centre.

Process	Value
Hypotheses for scenario elaboration (e.g. transport)	Lorry with a maximum authorised weight of 32T, Euro 6, 36 litres/100 km. 25-kilometer distance based on the study reviewing management of waste from end-of-life wood construction products in France (FCBA, 2022). Transport between the sorting centre and the processing centres (incineration, landfill, etc.) are included in modules C3 and C4.

C3 Waste processing for reuse, recovery and/or recycling

Grinding of cladding, battens and attachments.

Process	Value
Recovery system, specified by type	Battens: 0.663 kg for energy recovery 0.584 kg for recycling
Hypotheses for scenario elaboration (e.g. transport)	Cladding: Standard scenario from Appendix L.7 of the French national complementary implementation annex for standard EN 15804+A2 for PVC flooring (NF EN 15804+A2/CN, 2022). Chosen as the standard scenario for PVC products. Battens: study reviewing management of waste from end-of-life wood construction products in France (FCBA, 2022). Metal attachments: Standard scenario from Appendix L.7 of the French national complementary implementation annex for standard EN 15804+A2 (conservative scenario) (NF EN 15804+A2/CN, 2022).

C4 Disposal

Landfill depositing of cladding and the rest of the waste.

Process	Value
Disposal, specified by type	Cladding: 7.7 kg for landfill Battens: 0.1 kg for landfill Metal attachments: 18.7 g for landfill
Hypotheses for scenario elaboration (e.g. transport)	Cladding: Conservative hypothesis, 100% landfill. Battens: study reviewing management of waste from end-of-life wood construction products in France (FCBA, 2022).

Metal attachments: Standard scenario from Appendix L.7 of the French national complementary implementation annex for standard EN 15804+A2 (conservative scenario) (NF EN 15804+A2/CN, 2022).

For the degradation of wooden products with landfill, the hypotheses established by the CODIFAB were followed.

Benefit and impact, D

This stage includes the benefits associated with the recycling and energy reuse from the processing of waste from the installation stage (A5) and the product's end-of-life (C3). The primary contributions to module D are described below.

Output materials reused outside system's boundaries	Recycling process beyond the system's boundaries	Materials/ energy saved	Associated quantities
Installation cladding offcut	Reintegration of offcuts into Neolife's production processes	New cladding avoided	0.059 kg
Battens (offcuts + dismantling)	Chipboard production	Virgin wood chips	0.65 kg
Battens and packaging	Incineration with energy recovery	Heat in the form of steam	2.81 MJ
Battens and packaging	Boiler	Heat created by natural gas combustion	2.81 MJ
Battens and packaging	Incineration with energy recovery	French electricity	1.01 MJ

Information for calculating the life cycle analysis

PCR used	The NF EN 15804+A2 standard and its national complementary implementation annex NF EN 15804+A2/CN (October 2022) serve as the rules for defining products' categories (PCR).
System boundaries	Cradle-to-Grave
Allocations	There are no derived product allocations for Neolife's production processes. The economic allocation is used by default in the Ecoinvent database for secondary data. Factory data is allocated by kg of product and then calculated as a functional unit in m_2.
Geographic and time representativity	Primary data: France, 2023. Generic data: Ecoinvent v3.10.
Cut-off rules	The following flows were cut from the study: • Packaging for raw materials • Internal transport of goods across the production site • Machinery lubricants At least 95% of the energy and raw materials used were included for each module, and at least 99% of the total raw materials and energy.
Variability	As an individual range EHPD, the variability of the results for products in the range is within the limits imposed by the NF EN 15804+A2 standard and its national complementary implementation annex NF EN 15804/CN. The variation range between the highest value of each control indicator and the weighted average is below 7%. The results of the study are therefore representative of the product range covered. This is lower than the 35% threshold and the results of the weighted average are therefore presented. In terms of the lowest value, the variability is below -7%.

Results of the life cycle analysis

The tables below summarise the results of the LCA.

Due to rounding, the totals might not correspond to the total of the rounded figures.

MND: Module Not Declared

For the energy indicators used as raw material: a negative value corresponds to the change of use, transitioning from raw materials to fuels (in the event of incineration, for example). Application of Appendix I of NF EN 15804+A2/CN.

The following exemptions should be taken into account for certain environmental indicators.

Exemption 1: This impact category primarily concerns the potential impact of ionising radiation from the nuclear fuel cycle on human health. It does not account for the consequences of any nuclear accidentals, professional exposure or the disposal of radioactive waste in underground facilities. The potential ionising radiation from the ground, radium and certain construction materials are also not measured by this indicator.

Exemption 2: The results of this environmental impact indicator should be used with caution, as the uncertainty of these results is high and because there is limited experience associated with this indicator.

Indicator	Exemption
Ionising radiation (human health)	1
Exhaustion of abiotic resources (minerals & metals)	2
Exhaustion of abiotic resources (fossil fuels)	2
Water required	2
Ecotoxicity (fresh water)	2
Human toxicity, carcinogenic effects	2
Human toxicity, non-carcinogenic effects	2
Impacts associated with ground occupancy/ground quality	2

REFERENCE ENVIRONMENTAL IMPACT INDICATORS																
Environmental impacts	**Production stage**	**Construction stage**		**Use stage**							**End-of-life stage**				**TOTAL**	**D Benefits and impacts beyond the system's boundaries**
	A1/A2/A3	**A4 Transport**	**A5 Installation**	**B1 Use**	**B2 Maintenance**	**B3 Repairs**	**B4 Replacement**	**B5 Reconditioning**	**B6 Energy consumed**	**B7 Water consumed**	**C1 Deconstruction /demolition**	**C2 Transport**	**C3 Waste processing**	**C4 Disposal**	**Total of A1 to C4 - Total CDV**	
Climate change - total *kg CO2 equiv/FU*	5.78E+00	2.71E-01	-2.07E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.75E-02	1.90E+00	6.54E+00	1.43E+01	-6.52E-01
Climate change - fossil fuels *kg CO2 equiv/FU*	1.19E+01	2.71E-01	1.44E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.74E-02	1.54E-02	4.04E-01	1.41E+01	-7.43E-01
Climate change - biogenics *kg CO2 equiv/FU*	-6.28E+00	1.45E-04	-1.66E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.54E-05	1.88E+00	6.14E+00	8.08E-02	9.25E-02
Climate change - land cover and changes in land cover *kg CO2 equiv/FU*	1.38E-01	9.59E-05	1.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.68E-05	8.44E-06	6.19E-05	1.48E-01	-1.34E-03
Ozone layer depletion *kg of CFC 11 equiv/FU*	2.91E-06	5.64E-09	1.63E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.89E-10	2.87E-10	2.72E-08	3.11E-06	-4.24E-08
Acidification *mole of H+ equiv/FU*	4.35E-02	6.39E-04	6.68E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E-04	1.26E-04	8.57E-04	5.19E-02	-1.42E-03
Water eutrophication, fresh water *kg of P equiv/FU*	7.00E-03	1.90E-05	6.43E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.34E-06	5.84E-06	2.06E-05	7.69E-03	-1.23E-04
Marine water eutrophication kg of equivalent N/FU	1.00E-02	1.68E-04	1.73E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.94E-05	6.28E-05	3.05E-03	1.50E-02	-3.80E-04
Land eutrophication *mole of N equiv/FU*	8.90E-02	1.81E-03	1.61E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.18E-04	5.91E-04	2.94E-03	1.11E-01	-3.86E-03
Photochemical ozone formation *kg of VOCMN equiv/FU*	5.78E-02	1.11E-03	7.20E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.95E-04	1.53E-04	1.32E-03	6.77E-02	-1.96E-03
Exhaustion of abiotic resources (minerals & metals) *kg Sb equiv/FU*	1.48E-04	7.56E-07	2.11E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-07	5.26E-08	2.43E-07	1.70E-04	-1.37E-06

Exhaustion of abiotic resources (fossil fuels) *MJ/FU*	2.99E+02	4.06E+00	2.64E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.12E-01	7.78E-01	2.73E+00	3.34E+02	-1.43E+01
Water required *m3 of equivalent deprivation in the world/FU*	1.11E+01	1.93E-02	7.38E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.39E-03	6.20E-03	9.35E-02	1.19E+01	-9.17E-02

ADDITIONAL ENVIRONMENTAL IMPACT INDICATORS

Environmental impacts	Production stage	Construction stage		Use stage							End-of-life stage				TOTAL	
	A1/A2/A3	A4 Transport	A5 Installation	B1 Use	B2 Maintenance	B3 Repairs	B4 Replacement	B5 Reconditioning	B6 Energy consumed	B7 Water consumed	C1 Deconstruction /demolition	C2 Transport	C3 Waste processing	C4 Disposal	Total of A1 to C4 - Total CDV	D Benefits and impacts beyond the system' s boundaries
Fine particle emissions *Disease index/FU*	3.98E-07	2.64E-08	1.21E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.62E-09	1.47E-09	1.86E-08	5.70E-07	-1.93E-08
Ionising radiation (human health) *kBq of U235 equiv/FU*	2.76E+00	4.93E-03	2.52E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.65E-04	3.09E-02	1.08E-02	3.06E+00	-1.68E-01
Ecotoxicity (fresh water) *CTUe/FU*	9.38E+01	9.62E-01	1.43E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E-01	1.41E-01	1.70E+01	1.26E+02	-1.60E+01
Human toxicity, carcinogenic effects *CTUh/FU*	5.61E-08	1.73E-09	2.58E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.03E-10	2.09E-10	3.55E-10	8.45E-08	-5.75E-08
Human toxicity, non-carcinogenic effects *CTUh/FU*	1.37E-07	2.61E-09	2.05E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.57E-10	1.34E-09	3.05E-09	1.65E-07	-2.48E-09
Impacts associated with land cover/ Soil quality *No dimensions / FU*	1.12E+02	4.09E+00	2.58E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.16E-01	7.15E-02	5.48E+00	3.80E+02	-3.50E+01

USE OF RESOURCES																
Environmental impacts	**Production stage**	**Construction stage**		**Use stage**							**End-of-life stage**				**TOTAL**	**D Benefits and impacts beyond the system´ s boundaries**
	A1/A2/A3	**A4 Transport**	**A5 Installation**	**B1 Use**	**B2 Maintenance**	**B3 Repairs**	**B4 Replacement**	**B5 Reconditioning**	**B6 Energy consumed**	**B7 Water consumed**	**C1 Deconstruction /demolition**	**C2 Transport**	**C3 Waste processing**	**C4 Disposal**	**Total of A1 to C4 - Total CDV**	
Use of renewable primary energy, excluding renewable primary energy resources used as raw materials - *MJ/FU*	2.01E+01	6.25E-02	2.50E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-02	8.03E+00	6.88E-02	5.33E+01	7.51E+00
Use of renewable primary energy resources as raw materials *MJ/FU*	5.19E+01	0.00E+00	1.87E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.50E+01	0.00E+00	5.57E+01	-7.53E+00
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials) - *MJ/FU*	7.20E+01	6.25E-02	4.37E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-02	-6.93E+00	6.88E-02	1.09E+02	-2.24E-02
Use of non-renewable primary energy, excluding non-renewable primary energy resources used as raw materials - *MJ/FU*	2.08E+02	4.06E+00	2.22E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.12E-01	7.78E-01	2.73E+00	2.39E+02	-1.37E+01
Use of non-renewable primary energy resources as raw materials - *MJ/FU*	8.94E+01	0.00E+00	3.49E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.29E+01	-5.11E-01
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials) - *MJ/FU*	2.98E+02	4.06E+00	2.57E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.12E-01	7.78E-01	2.73E+00	3.32E+02	-1.42E+01
Use of secondary material - *kg/FU*	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-7.60E-01
Use of renewable secondary fuels - *MJ/FU*	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Use of non-renewable secondary fuels - *MJ/FU*	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Net use of freshwater - *m^3/FU*	1.03E-01	6.08E-04	1.17E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-04	3.31E-04	2.28E-03	1.18E-01	-2.45E-03

WASTE CATEGORY																
Environmental impacts	**Production stage**	**Construction stage**		**Use stage**							**End-of-life stage**				**TOTAL**	**D Benefits and impacts beyond the system's boundaries**
	A1/A2/A3	**A4 Transport**	**A5 Installation**	**B1 Use**	**B2 Maintenance**	**B3 Repairs**	**B4 Replacement**	**B5 Reconditioning**	**B6 Energy consumed**	**B7 Water consumed**	**C1 Deconstruction /demolition**	**C2 Transport**	**C3 Waste processing**	**C4 Disposal**	**Total of A1 to C4 - Total CDV**	
Hazardous waste eliminated - *kg/FU*	5.15E-03	2.67E-05	3.07E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.68E-06	2.75E-07	0.00E+00	5.48E-03	-8.99E-05
Non-hazardous waste eliminated - *kg/FU*	1.40E+00	3.47E-01	6.45E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E+00	6.08E-02	6.63E-01	7.83E+00	1.23E+01	-2.59E-02
Radioactive waste eliminated - *kg/FU*	7.34E-04	1.22E-06	6.42E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E-07	4.58E-06	0.00E+00	8.04E-04	-4.89E-05

OUTGOING FLOWS																
Environmental impacts	**Production stage**	**Construction stage**		**Use stage**							**End-of-life stage**				**TOTAL**	**D Benefits and impacts beyond the system's boundaries**
	A1/A2/A3	**A4 Transport**	**A5 Installation**	**B1 Use**	**B2 Maintenance**	**B3 Repairs**	**B4 Replacement**	**B5 Reconditioning**	**B6 Energy consumed**	**B7 Water consumed**	**C1 Deconstruction /demolition**	**C2 Transport**	**C3 Waste processing**	**C4 Disposal**	**Total of A1 to C4 - Total CDV**	
Components for reuse - *kg/FU*	1.49E-01	0.00E+00	2.68E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.17E-01	0.00E+00
Materials for recycling - *kg/FU*	7.36E-01	0.00E+00	1.24E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.82E-01	0.00E+00	1.54E+00	0.00E+00
Materials for energy recovery - *kg/FU*	2.66E-02	0.00E+00	4.16E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.63E-01	0.00E+00	7.31E-01	0.00E+00
Electrical energy provided to exterior - *MJ/FU*	2.00E-01	0.00E+00	6.84E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.39E-01	0.00E+00	1.21E+00	1.01E+00
Steam energy provided to exterior - *MJ/FU*	5.50E-01	0.00E+00	2.28E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.58E+00	0.00E+00	3.36E+00	2.81E+00
Gas energy and process provided to exterior - *MJ/FU*	5.50E-01	0.00E+00	2.28E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.58E+00	0.00E+00	3.36E+00	2.81E+00

REFERENCE ENVIRONMENTAL IMPACT INDICATORS						
Environmental impacts	**Production stage**	**Construction stage**	**Use stage**	**End-of-life stage**	**TOTAL**	**D Benefits and impacts beyond the system's boundaries**
Climate change - total *kg CO2 equiv/FU*	5.78E+00	6.41E-02	0.00E+00	8.49E+00	1.43E+01	-6.52E-01
Climate change - fossil fuels *kg CO2 equiv/FU*	1.19E+01	1.71E+00	0.00E+00	4.67E-01	1.41E+01	-7.43E-01
Climate change - biogenics *kg CO2 equiv/FU*	-6.28E+00	-1.66E+00	0.00E+00	8.02E+00	8.08E-02	9.25E-02
Climate change - land cover and changes in land cover *kg CO2 equiv/FU*	1.38E-01	1.01E-02	0.00E+00	8.72E-05	1.48E-01	-1.34E-03
Ozone layer depletion *kg of CFC 11 equiv/FU*	2.91E-06	1.69E-07	0.00E+00	2.85E-08	3.11E-06	-4.24E-08
Acidification *mole of H+ equiv/FU*	4.35E-02	7.32E-03	0.00E+00	1.10E-03	5.19E-02	-1.42E-03
Water eutrophication, fresh water *kg of P equiv/FU*	7.00E-03	6.62E-04	0.00E+00	2.98E-05	7.69E-03	-1.23E-04
Marine water eutrophication kg of equivalent N/FU	1.00E-02	1.89E-03	0.00E+00	3.14E-03	1.50E-02	-3.80E-04
Land eutrophication *mole of N equiv/FU*	8.90E-02	1.79E-02	0.00E+00	3.85E-03	1.11E-01	-3.86E-03
Photochemical ozone formation *kg of VOCMN equiv/FU*	5.78E-02	8.31E-03	0.00E+00	1.67E-03	6.77E-02	-1.96E-03
Exhaustion of abiotic resources (minerals & metals) *kg Sb equiv/FU*	1.48E-04	2.19E-05	0.00E+00	4.28E-07	1.70E-04	-1.37E-06
Exhaustion of abiotic resources (fossil fuels) *MJ/FU*	2.99E+02	3.05E+01	0.00E+00	4.22E+00	3.34E+02	-1.43E+01
Water required *m3 of equivalent deprivation in the world/FU*	1.11E+01	7.57E-01	0.00E+00	1.03E-01	1.19E+01	-9.17E-02

ADDITIONAL ENVIRONMENTAL IMPACT INDICATORS						
Environmental impacts	**Production stage**	**Construction stage**	**Use stage**	**End-of-life stage**	**TOTAL**	**D Benefits and impacts beyond the system's boundaries**
Fine particle emissions *Disease index/FU*	3.98E-07	1.47E-07	0.00E+00	2.47E-08	5.70E-07	-1.93E-08
Ionising radiation (human health) *kBq of U235 equiv/FU*	2.76E+00	2.57E-01	0.00E+00	4.25E-02	3.06E+00	-1.68E-01
Ecotoxicity (fresh water) *CTUe/FU*	9.38E+01	1.52E+01	0.00E+00	1.73E+01	1.26E+02	-1.60E+01
Human toxicity, carcinogenic effects *CTUh/FU*	5.61E-08	2.75E-08	0.00E+00	8.68E-10	8.45E-08	-5.75E-08
Human toxicity, non-carcinogenic effects *CTUh/FU*	1.37E-07	2.31E-08	0.00E+00	4.85E-09	1.65E-07	-2.48E-09
Impacts associated with land cover/Quality of soil *No dimensions / FU*	1.12E+02	2.62E+02	0.00E+00	6.27E+00	3.80E+02	-3.50E+01

USE OF RESOURCES						
Environmental impacts	**Production stage**	**Construction stage**	**Use stage**	**End-of-life stage**	**TOTAL**	**D Benefits and impacts beyond the system's boundaries**
Use of renewable primary energy, excluding renewable primary energy resources used as raw materials - *MJ/FU*	2.01E+01	2.51E+01	0.00E+00	8.11E+00	5.33E+01	7.51E+00
Use of renewable primary energy resources as raw materials - *MJ/FU*	5.19E+01	1.87E+01	0.00E+00	-1.50E+01	5.57E+01	-7.53E+00
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials) - *MJ/FU*	7.20E+01	4.38E+01	0.00E+00	-6.85E+00	1.09E+02	-2.24E-02
Use of non-renewable primary energy, excluding non-renewable primary energy resources used as raw materials - *MJ/FU*	2.08E+02	2.63E+01	0.00E+00	4.22E+00	2.39E+02	-1.37E+01
Use of non-renewable primary energy resources as raw materials - *MJ/FU*	8.94E+01	3.49E+00	0.00E+00	0.00E+00	9.29E+01	-5.11E-01
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials) - *MJ/FU*	2.98E+02	2.98E+01	0.00E+00	4.22E+00	3.32E+02	-1.42E+01
Use of secondary material - *kg/FU*	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-7.60E-01
Use of renewable secondary fuels - *MJ/FU*	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels - *MJ/FU*	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Net use of freshwater - m^3/FU	1.03E-01	1.23E-02	0.00E+00	2.72E-03	1.18E-01	-2.45E-03

WASTE CATEGORY						
Environmental impacts	**Production stage**	**Construction stage**	**Use stage**	**End-of-life stage**	**TOTAL**	**D Benefits and impacts beyond the system's boundaries**
Hazardous waste eliminated - *kg/FU*	5.15E-03	3.34E-04	0.00E+00	4.95E-06	5.48E-03	-8.99E-05
Non-hazardous waste eliminated - *kg/FU*	1.40E+00	9.92E-01	0.00E+00	9.91E+00	1.23E+01	-2.59E-02
Radioactive waste eliminated - *kg/FU*	7.34E-04	6.54E-05	0.00E+00	4.79E-06	8.04E-04	-4.89E-05

OUTGOING FLOWS						
Environmental impacts	**Production stage**	**Construction stage**	**Use stage**	**End-of-life stage**	**TOTAL**	**D Benefits and impacts beyond the system's boundaries**
Components for reuse - *kg/FU*	1.49E-01	2.68E-01	0.00E+00	0.00E+00	4.17E-01	0.00E+00
Materials for recycling - *kg/FU*	7.36E-01	1.24E-01	0.00E+00	6.82E-01	1.54E+00	0.00E+00
Materials for energy recovery - *kg/FU*	2.66E-02	4.16E-02	0.00E+00	6.63E-01	7.31E-01	0.00E+00
Electrical energy provided to exterior - *MJ/FU*	2.00E-01	6.84E-02	0.00E+00	9.39E-01	1.21E+00	1.01E+00
Steam energy provided to exterior - *MJ/FU*	5.50E-01	2.28E-01	0.00E+00	2.58E+00	3.36E+00	2.81E+00
Gas energy and process provided to exterior - *MJ/FU*	5.50E-01	2.28E-01	0.00E+00	2.58E+00	3.36E+00	2.81E+00

Additional information on the release of hazardous substances into indoor air, the ground and water during the use stage

Interior air

VOC and formaldehyde (if relevant)

Not concerned

Fungal growth development resistance (if relevant)

The product does not have any performance claims for this matter

Radioactive emissions (if relevant)

Not concerned

Soil and water (if relevant)

No tests performed

Product's contribution to indoor quality of life building façades.

Characteristics of products used to create hygrothermal comfort conditions in the building

The product does not have any performance claims for this matter

Characteristics of the product used to create hygrothermal comfort conditions in the building

The product does not have any performance claims for this matter

Characteristics of the product used to create visual comfort conditions in the building

Not concerned

Characteristics of the product used to create olfactory comfort conditions in the building

Not concerned

Appendix: Technical characteristics

Values of permitted depressions of the NOMAD process (technical appraisal no. 2.2/19-1797_V6)

Centre distance between uprights (mm)	Name	WELS depression value (Pa)
600	NOMAD 6	2841

NOMAD board characteristics (technical appraisal no. 2.2/19-1798_V6)

Specifications	Testing method or standard	Requirements	Specifications	Unit	Tolerance
Lineic mass	NFT 54-405-1	Reported value	2.33	kg/ml	+/- 0.30 kg/ml
Flexion on finished product 20 °C and 65% RH	NF EN 15534-1 NF EN 15534-5 NF EN 310	Reported value	Favg = 700	MPa	Above specification
5J impact resistance normal condition and < 0 °C	NFT 54-405-1 NF EN ISO 6603-1	Maximum 1 breakage per 5 samples	No breakages	U	1/5
Boiling water resistance (BWR)	NF EN 1087-1 NF EN 319	Δ average weight <7% Δ average indiv weight >9%	A average weight <7%	%	Δ indiv. weight <9%
Heat shrinkage 100°/IH	NF EN 15534-1 NF EN 15534-5 NF EN 479	< average 2% < indiv. 3%	< average 2%	%	< indiv. 3%
Colorimetric (d/8°, D65 10°)	NF EN 15534-1 DIN EN ISO 11664	Reported value	ΔE < 3	ΔE Lab	ΔE < 4
Thermal dilation	ISO 11359-2 adapted	δL<= 50.0.10-6	δL= 31.6.10-6 (board not fixed)	°K-1	δL<= 50.0.10-6
Water recovery at 28 days	NF EN 317	<= 15%	Average 4.3%	%	<=15%
Combustible mass	NF EN 13238	Reported value	132	MJ/m²	-

This EHPD has been translated exclusively under the responsibility of Neolife. Only the original French version is authoritative with regard to French regulatory compliance. This translated version does not constitute sufficient grounds for any claims concerning non-compliance with a declaration programme other than INIES.