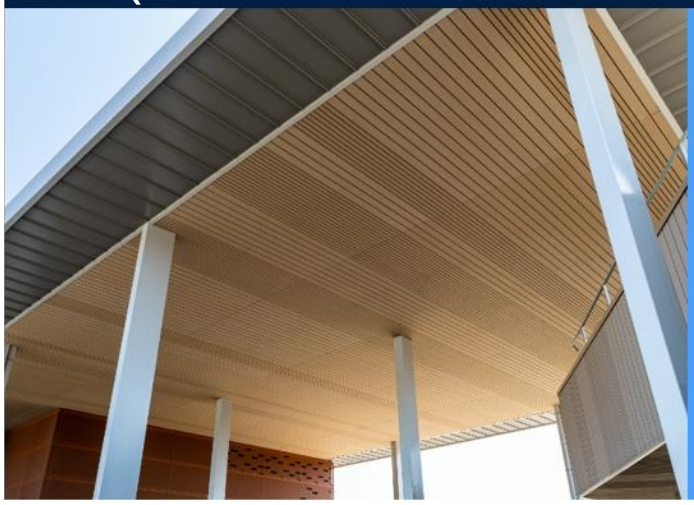
Environmental and health product declaration sheet

ENVIRONMENTAL AND HEALTH PRODUCT DECLARATION

In compliance with standard NF EN 15804+A2 and its national supplement NF EN 15804+A2/CN

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



Registration number: xxxx

Publication date: xx November 2024 Version: 1

neolife

1. Disclaimer

The information contained in this declaration is provided under the responsibility of Neolife (producer of the EHDS) in accordance with NF EN 15804+A2 and the national supplement NF EN 15804+A2/CN.

Any use, in whole or in part, of the information provided in this document must at least be accompanied by the full reference of the original EHDS and its producer, who will be able to provide a complete copy.

CEN standard EN 15804+A2 and the national supplement NF EN 15804+A2/CN serve as rules for defining product categories (RCP).

NOTE The literal translation in French of "EPD (Environnemental Product Declaration)" is "DEP" (Déclaration Environnementale de Produit). However, in France, the term FDES (Fiche de Déclaration Environnementale et Sanitaire) is commonly used, which includes both the Environmental Declaration and health information for the product covered by the FDES. The EHSDS is therefore a "EPD" supplemented by health information.

2. Reading guide

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

The following display rules apply:

- When the result of the inventory calculation is zero, then the value zero is displayed.
- Abbreviation used :
    - FU: Functional Unit
    - N/A: Not Applicable
- The units used are specified in front of each flow: the kilogram "kg", the gram "g", the kilowatt-hour "kWh", the megajoule "MJ", the square metre "$m^{(2)}$", the kelvin "K", the watt "W", the kilometre "km" and the millimetre "mm".

3. Precautions for using the EHDS to compare products

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

"Consequently, a comparison of the environmental performance of construction products using information from EPDs must be based on the use of the products and their impacts on the building, and must take into account the entire life cycle (all information modules)".

NOTE 1 Outside the framework of the environmental assessment of a building, EHSFs are not tools for comparing construction products and services.

NOTE 2 In assessing the contribution of buildings to sustainable development, a comparison of environmental aspects and impacts should be undertaken in conjunction with socio-economic aspects and impacts relating to the building.

NOTE 3 For the interpretation of a comparison, reference values are required.

General information

Name and address of registrant	Neolife Bâtiment Sendaï, 11 chemin des Anciennes Vignes, 69410 Champagne-au-Mont-d'Or, France
Production site covered	CJPlast Rue de la plasturgie 26270 Loriol-sur-Drôme FRANCE
Type of ESDS	From cradle to grave Range EHDS
Commercial references covered	NOMAD 6, NOMAD 4, NOMAD 9 AND NOMAD MIX
Scope of validity	The EHSF is valid for NOMAD 6, NOMAD 4, NOMAD 9 AND NOMAD MIX products.
Independent external verification carried out in accordance with the ISO 14025 (version 2010) environmental declaration programme by :	Marcel Gómez Consultoria Ambiental C/Navarra 66 Edificio B Bajos 3ª, 08320 El Masnou (Barcelona) info@marcelgomez.com

CEN standard EN 15804 and NF 15804 CN serve as RCP[1] standards
Independent verification of the declaration, in accordance with standard NF EN ISO 14025 :2010
Third party verification[2]: Marcel Gómez
INIES registration number: xxxx
Publication date: xx November 2024
Verification date: xx November 2024
Period of validity: 5 years, i.e. until 31/12/2029

[1]Rules for defining product categories

[2]Optional for business-to-business communication, mandatory for communication between a company and its customers. customers (see EN ISO 14025:2010, 9.4)

Description of the functional unit and the product

Description of product and packaging

Cladding strips included in the NOMAD range. NOMAD cladding is made from reconstituted wood. Sawmill waste is used as the main material. This wood fibre is mixed with a thermo-binder and mineral pigments to produce a compound which is then extruded into profiles and transported to the installation site.

This range covers 4 products, the NOMAD 6, NOMAD 4, NOMAD 9 AND NOMAD MIX. These products vary in their number of waves. The composition, manufacturing process and installation are the same. The number of cladding strips per square metre is the same, because the different products have the same dimensions. Only the weight per square metre of cladding varies from one product to another.

Recycled content (allocation) and/or biomass balance (BMB) allocation approaches such as the "mass balance credits" method and/or the "Book and Claim" method in accordance with ISO 22095 cannot be used in the context of ECO EPDs**.**

Description of the functional unit

Functional unit: Protecting and cladding 1m² of facade, in the form of 16.8mm thick reconstituted wood cladding, over a typical life of 50 years, and including fixing elements (including primary battens).

The mass of the product in the functional unit is 7.7 kg/UF. This corresponds to the weighted average of the 3 products included, and the variability in relation to the average is below the 35% threshold for all the indicators. The functional unit also includes the packaging and additional products needed to install the cladding. In total, the reference flow (packaging + product) is 7.98 kg/UF. The additional products for the installation of the cladding have a mass of 1.46 kg/UF. The main performance of the functional unit is 1 m^2.

Description of the main components and/or materials of the product

Component, product	**Mass/UF, kg**	**Recycled content (post-consumer), w% (post-consumer)**	**Biogenic content, w**
Wood fibre	3,23	0%	100%
PVC resin	3,08	0%	0%
Additives (stabiliser, lubricant)	1,24	0%	2%
Pigment	0,15	0%	0%
Component, packaging	**Mass/UF, kg**	**Recycled content (post-consumer), w% (post-consumer)**	**Biogenic content, w%**
Pallet	0,26	0%	100%[3]
Plastic film in PELD	0,020	0%	0%
Component, additional products for application	**Mass/UF, kg**	**Recycled content (post-consumer), w% (post-consumer)**	**Biogenic content, w%**
Wooden lath (fir)	1,35	0%	100%
Screws and hooks	0,11	49%	0%

Substances on the REACH candidate list: no substance on the list in excess of 0.1% by mass.

[3]Ignoring the mass of the nails

Description of product use (areas of application)

The cladding strips are used as façade cladding for the following structures:

- Housing 1re, 2e, 3efamily A and B (IT 249)
- ERP 1reto 5ecategory (IT 249)
- Buildings classified under the Labour

Code Distribution channel: BtoB

Description of product characteristics

Parameter	Units (expressed per functional unit or per unit)
Reference lifetime	The selected service life is 50 years. This corresponds to the service life given in table H.2 of annex H of the national supplement NF EN15804/CN for wood cladding and all other cladding except terracotta cladding.
Declared properties of the product (on leaving the factory)	The design of the cladding complies with the requirements of current standards (NF EN 15534-5). The products leave the workshop finished and ready to be installed.
Theoretical application parameters (if imposed by the manufacturer), including references to appropriate requirements and application codes)	Compliance with ATEC ref 2.2/19-1797_V6 and any manufacturer's recommendations
Presumed quality of the work	Work complies with technical requirements. Compliance with DTU 41.2 and any manufacturer's recommendations
External environment	Facade cladding subject to the weather.
Indoor environment	Not concerned
Conditions of use	Outdoor use.
Maintenance scenario	No maintenance required.
Declared product properties and finishes, etc.	Protective, freely-expanding coating for framing framing or walls
Theoretical application parameters, including references to references to appropriate practices	NOMAD cladding is laid directly on wooden battens with screws directly on the building facade.
Assumed quality of workmanship, where installation complies with the manufacturer's instructions	Cladding complying with NF T54-405-1 NF EN15534 NF EN310
Outdoor environment (for outdoor applications), e.g. weather, pollutants, UV and wind exposure, building orientation, shading orientation, shading, temperature	Gross calorific value: 17 MJ/kg Boiling Water Resistance (BWR) (%): Δ average mass <7
Other technical specifications	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 (at leaving the plant)	1.97 kg C/UF
Biogenic carbon content of associated packaging (at factory gate)	0.11 kg C/UF

Life cycle stages

Life cycle diagram

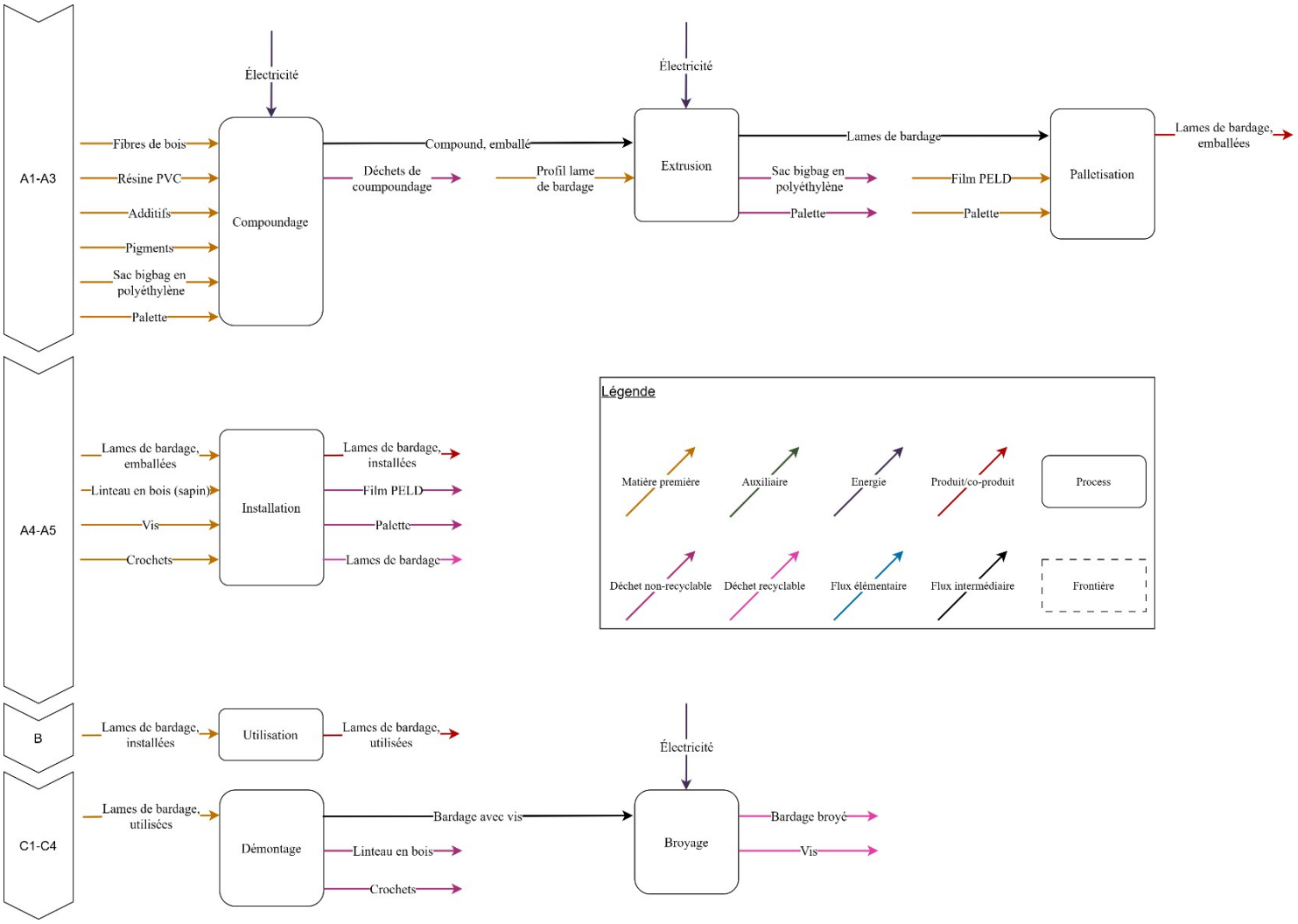


Figure 1: Life cycle diagram

DESCRIPTION OF SYSTEM BOUNDARIES (X = INCLUDED IN ACV; MND = MODULE NOT DECLARED)

PRODUCTION STAGE		STAGE IN THE CONSTRUCTION PROCESS		USE STAGE						END-OF-LIFE STAGE				BENEFITS AND COSTS BEYOND THE BOUNDARIES OF THE SYSTEM
Production		Transport	Construction process Installation	Use	Maintenance	Repair	Replacement	Rehabilitation	Energy use during the use phase	Water use during use stage	Demolition/ Deconstruction	Transport	Waste treatment	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 subdivided into three modules: A1, raw material supply; A2, transport and A3, manufacturing.

The supply of raw materials corresponds to the impact of the extraction of raw materials and their transformation up to their use in the production of cladding. The biogenic carbon absorbed by the wood is included in this stage.

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

Stage A3 corresponds to the impact of cladding production, which includes the impact of energy, packaging production, production of production aids and treatment of production waste. Sawmill waste is used as the main material. This wood fibre is mixed with a thermo-binder and mineral pigments to make a compound which is then extruded into profiles and transported to the installation site.

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

Construction stage, A4-A5

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

Transport to the building site

The values used in the analysis are given in the table below. This corresponds to an average scenario. This scenario is not suitable for all sites where cladding will be used. It is therefore recommended that the user of the cladding recalculates the impact of transporting the product for his site.

Scenario information	Value
Type of fuel and consumption of the vehicle or type of vehicle used for transport, e.g. long-distance lorry, boat, etc.	Truck with a MMA greater than 32t, EURO 6. 36 litres/100km.
Distance	327 km
Capacity utilisation (including empty returns)	ecoinvent default value: 53%.
Bulk density of products transported	97.2 m² per pallet and 17 pallets per lorry. 7.7 kg/m²of cladding.

Installation in the building

This module includes the production and transport of products complementary to the installation, the treatment of waste generated during the installation of the wall, the additional production generated to compensate for losses and the treatment of site waste.

Parameter	Value
Auxiliary inputs for installation (specified by material)	Batten: 1.35 kg/m² Screws and hooks: 110 g/m²
Use of water	Not relevant
Use of other resources	Not concerned

Quantitative description of the type of energy (regional mix) and consumption during the installation process	Circular saw power: 1200 W Operating time: 2 min/m² Screwdriver, nailer power: 550 W Operating time: 2 min/m² Power consumption per UF 0.058 kWh per UF
Material waste on construction site prior to treatment of waste generated by product installation (specified by type)	5% loss rate, based on Neocollect data.
Outgoing materials (specified by type) generated by the treatment of waste on the construction site, e.g. collection for recycling, energy recovery, disposal (specified by route)	Cladding off-cuts: 14.6% of off-cuts are recovered via Neolife's Neocollect programme and recycled. The remaining 85.4% is sent to landfill. Scrap wood: 49% incineration (59% cogeneration with an electrical and thermal efficiency of 20% and 55% respectively, 41% in boilers with an energy efficiency of 85%), 8% landfill, 43% recycling. This is based on the study on the management of end-of-life wood construction product waste (GDBAT) in France. Plastic packaging: 17% recycling, 9% energy recovery and 74% landfill. Source: Proposition d'une trajectoire pour le 1er agrément - Performances de traitement de la filière REP PMCB, ADEME 2021. Pallet: 25 reuses, so 96% reused, 4% incinerated.
Direct emissions into the air, soil and water	Not concerned

Use stage, B1-B7

The cladding does not require any particular maintenance over its 50-year lifespan. There are therefore no inputs/outputs related to the 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 all components is taken into account. components is taken into account.

Process	Value
Collection process specified by type	9.15 kg collected individually
Assumptions for developing scenarios (e.g. transport) transport)	Deconstruction by hand, no energy consumption. Energy for unscrewing is shared by all construction products on site.

C2 Transport to waste treatment

Transport of waste to a sorting/treatment centre.

Process	Value
Assumptions for developing scenarios (e.g. transport) transport)	Truck with a MMA greater than 32t, EURO 6. 36 litres/100km. Distance of 25 km based on the study on the management of end-of-life wood construction product waste (GDBAT) in France (FCBA, 2022). Transport between the sorting centre and the treatment centres (incineration, landfill, etc.) are included in modules C3 and C4.

C3 Processing waste for reuse, recovery and/or recycling

Shredding of cladding, battens and hangers.

Process	Value
Recovery system specified by type	Battens : 0.035 kg for energy recovery 0.012 kg for recycling
Assumptions for scenario development (e.g. transport) transport)	Cladding: Standard scenario of annex L.7 of the national supplement to standard EN 15804+A2 for PVC floor coverings (NF EN 15804+A2/CN, 2022). Chosen as the standard scenario for PVC products. Laths: study on the management of end-of-life wood construction product waste (GDBAT) in France (FCBA, 2022). Metal hangers: standard scenario in Annex L.7 of the national supplement to EN 15804+A2 for reinforcing steel (conservative scenario) (NF EN 15804+A2/CN, 2022).

C4 Elimination

Burial of the cladding and the rest of the waste.

Process	Value
Disposal specified by type	Siding : 7.7 kg destined for landfill Lathing : 0.1 kg for landfill Metal hangers : 18.7 g destined for landfill
Scenario assumptions (e.g. transport) transport)	Cladding: conservative assumption, 100% landfill. Slats: study on the management of end-of-life wood construction product waste (GDBAT) in France (FCBA, 2022).

	Metal fasteners: standard scenario in appendix L.7 of the national supplement to standard EN 15804+A2 for reinforcing steel (conservative scenario) (NF EN 15804+A2/CN, 2022). For the degradation of wood products with burial, the CODIFAB assumptions were followed. followed.

Benefit and cost, D

This stage includes the benefits associated with recycling and energy recovery from the treatment of waste from the installation stage (A5) and from the end of the product's life

(C3). The main contributions to module D are described below.

Recovered materials leaving the system boundaries	Recycling processes beyond system boundaries	Materials /energy saved	Associated quantities
Scrap cladding at installation	Reintroduction of off-cuts into the Neolife manufacturing process	New cladding avoided	0.059 kg
Slats (offcuts + dismantling)	Manufacture of particleboard	Virgin wood particles	0.65 kg
Lumber and packaging	Incineration with energy recovery	Heat in the form of steam	2.81 MJ
Scrap and packaging	Boiler	Heat from natural gas combustion	2.81 MJ
Shavings and packaging	Incineration with energy recovery	French electricity	1.01 MJ

Information for calculating the life cycle analysis

RCP used	Standard EN 15804+A2 and the national supplement NF EN 15804+A2/CN (October 2022) serve as rules for defining product categories (RCP).
System boundaries	From cradle to grave
Allocations	There is no allocation of co-products within the Neolife manufacturing process. The economic allocation is used by default in the ecoinvent database for secondary data. Factory data is allocated per kg of product and then reduced to the functional unit in m^2.
Geographical and temporal representativeness	Primary data: France, 2023. Generic data: ecoinvent v3.10.
Cut-off rules	The following flows were excluded from the study: • Raw material packaging • Internal transport of goods on the manufacturing site • Machine lubricants At least 95% of the energy and raw materials used per module and at least 99% of the total energy and raw materials were included.
Variability	As a range EHSF, the variability of the results for the products in the range is within the limits imposed by standard NF EN 15804+A2 and the national supplement NF EN 15804/CN. The range of variation of the positive bound of each control indicator with the weighted average is less than x%. The results of the study are therefore representative of the range of products studied. This is below the 35% threshold and the weighted average results are therefore presented. At the negative bound, the variability is less than -x%.

Results of the life cycle analysis

The tables below summarise the results of the LCA.

Totals may not add up due to rounding. MND: Module Not Declared

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

benchmark environmental impact indicators															
Environmental impact	Production stage	Construction stage		Use stage							End-of-life stage				D Benefits and burdens beyond system boundaries
	A1/A2/A3	A4 Transport	A5 Installation	B1 Use	B2 Maintenance	B3 Repairs	B4 Replacement	B5 Rehabilitation	B6 Use of energy	B7 Use of water	C1 Deconstruction /demolition	C2 Transport	C3 Waste treatment	C4 Disposal	
Climate change - total *kg CO2 equiv/UF*	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	-6.52E-01
Climate change - fossil fuels *kg CO2 equiv/UF*	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	-7.43E-01
Climate change - biogenic *kg CO2 equiv/UF*	-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	9.25E-02
Climate change - land use and land use change *kg CO2 equiv/UF*	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	-1.34E-03
Depletion of the ozone layer *kg CFC 11 equiv /UF*	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	-4.24E-08
Acidification *mole of H+ equiv / UF*	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	-1.42E-03
Aquatic eutrophication, fresh water *kg P equiv / UF*	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	-1.23E-04
Marine aquatic eutrophication kg N equiv / UF	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	-3.80E-04
Terrestrial eutrophication *mole of N equiv / UF*	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	-3.86E-03
Photochemical ozone formation *kg NMCOV equiv/UF*	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	-1.96E-03
Depletion of abiotic resources (minerals & metals) *kg Sb equiv/UF*	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	-1.37E-06

Depletion of abiotic resources (fossil fuels) *MJ/UF*	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	-1.43E+01
Water demand *m3 deprivation equiv in the world / UF*	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	-9.17E-02

ADDITIONAL ENVIRONMENTAL IMPACT INDICATORS

Environmental impact	Production stage	Construction stage		Use stage							End-of-life stage				
	A1/A2/A3	A4 Transport	A5 Installation	B1 Use	B2 Maintenance	B3 Repairs	B4 Replacement	B5 Rehabilitation	B6 Use of energy	B7 Water use	C1 Deconstruction /demolition	C2 Transport	C3 Waste treatment	C4 Disposal	D Benefits and burdens beyond system boundaries
Fine particle emissions *Disease index / UF*	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	-1.93E-08
Ionising radiation (human health) *kBq of U235 equiv / UF*	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	-1.68E-01
Ecotoxicity (fresh water) *CTUe / UF*	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	-1.60E+01
Human toxicity, carcinogenic effects *CTUh / UF*	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	-5.75E-08
Human toxicity, non-carcinogenic effects *CTUh / UF*	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	-2.48E-09
Impacts related to land use / Soil quality quality *Dimensionless / UF*	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	-3.50E+01

USE OF RESOURCES															
Environmental impact	Production stage	Construction stage		Use stage							End-of-life stage				D Benefits and burdens beyond system boundaries
	A1/A2/A3	A4 Transport	A5 Installation	B1 Use	B2 Maintenance	B3 Repairs	B4 Replacement	B5 Rehabilitation	B6 Use of energy	B7 Water use	C1 Deconstruction /demolition	C2 Transport	C3 Waste treatment	C4 Disposal	
Renewable primary energy use, excluding renewable primary energy resources used as raw materials - *MJ/UF*	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	7.51E+00
Use of renewable primary energy resources as raw materials - *MJ/UF*	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	-7.53E+00
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials) - *MJ/UF*	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	-2.24E-02
Non-renewable primary energy use, excluding non-renewable primary energy resources used as raw materials - *MJ/UF*	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	-1.37E+01
Use of non-renewable primary energy resources as raw materials - *MJ/UF*	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	-5.11E-01
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials) - *MJ/UF*	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	-1.42E+01
Use of secondary raw materials - *kg/UF*	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/UF*	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/UF*	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 freshwater use - *m^3/UF*	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	-2.45E-03

WASTE CATEGORY															
Environmental impact	**Production stage**	**Construction stage**		**Use stage**							**End-of-life stage**				
	A1/A2/A3	**A4 Transport**	**A5 Installation**	**B1 Use**	**B2 Maintenance**	**B3 Repairs**	**B4 Replacement**	**B5 Rehabilitation**	**B6 Use of energy**	**B7 Use of water**	**C1 Deconstruction /demolition**	**C2 Transport**	**C3 Waste treatment**	**C4 Disposal**	**D Benefits and burdens beyond system boundaries**
Hazardous waste disposed of - *kg/UF*	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	-8.99E-05
Non-hazardous waste disposed of - *kg/UF*	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	-2.59E-02
Radioactive waste disposed of - *kg/UF*	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	-4.89E-05

OUTGOING FLOWS															
Environmental impact	Production stage	Construction stage		Use stage							End-of-life stage				D Benefits and burdens beyond system boundaries
	A1/A2/A3	A4 Transport	A5 Installation	B1 Use	B2 Maintenance	B3 Repairs	B4 Replacement	B5 Rehabilitation	B6 Use of energy	B7 Water use	C1 Deconstruction /demolition	C2 Transport	C3 Waste treatment	C4 Disposal	
Components for re-use - *kg/UF*	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	0.00E+00
Materials for recycling - *kg/UF*	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	0.00E+00
Materials for energy recovery - *kg/UF*	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	0.00E+00
Electrical energy supplied externally - *MJ/UF*	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	1.01E+00
Steam energy supplied externally - *MJ/UF*	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	2.81E+00
Gas and process energy supplied externally - *MJ/UF*	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	2.81E+00

benchmark environmental impact indicators					
Environmental impact	**Production stage**	**Construction stage**	**Use stage**	**End-of-life stage**	**D Benefits and burdens beyond system boundaries**
Climate change - total *kg CO2 equiv/UF*	5.78E+00	6.41E-02	0.00E+00	8.49E+00	-6.52E-01
Climate change - fossil fuels *kg CO2 equiv/UF*	1.19E+01	1.71E+00	0.00E+00	4.67E-01	-7.43E-01
Climate change - biogenic *kg CO2 equiv/UF*	-6.28E+00	-1.66E+00	0.00E+00	8.02E+00	9.25E-02
Climate change - land use and land use change *kg CO2 equiv/UF*	1.38E-01	1.01E-02	0.00E+00	8.72E-05	-1.34E-03
Depletion of the ozone layer *kg CFC 11 equiv /UF*	2.91E-06	1.69E-07	0.00E+00	2.85E-08	-4.24E-08
Acidification *mole of H+ equiv / UF*	4.35E-02	7.32E-03	0.00E+00	1.10E-03	-1.42E-03
Aquatic eutrophication, fresh water *kg P equiv / UF*	7.00E-03	6.62E-04	0.00E+00	2.98E-05	-1.23E-04
Marine aquatic eutrophication kg N equiv / UF	1.00E-02	1.89E-03	0.00E+00	3.14E-03	-3.80E-04
Terrestrial eutrophication *mole of N equiv / UF*	8.90E-02	1.79E-02	0.00E+00	3.85E-03	-3.86E-03
Photochemical ozone formation *kg NMCOV equiv/UF*	5.78E-02	8.31E-03	0.00E+00	1.67E-03	-1.96E-03
Depletion of abiotic resources (minerals & metals) *kg Sb equiv/UF*	1.48E-04	2.19E-05	0.00E+00	4.28E-07	-1.37E-06
Depletion of abiotic resources (fossil fuels) *MJ/UF*	2.99E+02	3.05E+01	0.00E+00	4.22E+00	-1.43E+01
Water requirements *m3 of deprivation equiv in the world / UF*	1.11E+01	7.57E-01	0.00E+00	1.03E-01	-9.17E-02

ADDITIONAL ENVIRONMENTAL IMPACT INDICATORS					
Environmental impact	**Production stage**	**Construction stage**	**Use stage**	**End-of-life stage**	**D Benefits and burdens beyond system boundaries**
Fine particle emissions *Disease index / UF*	3.98E-07	1.47E-07	0.00E+00	2.47E-08	-1.93E-08
Ionising radiation (human health) *kBq of U235 equiv / UF*	2.76E+00	2.57E-01	0.00E+00	4.25E-02	-1.68E-01
Ecotoxicity (fresh water) *CTUe / UF*	9.38E+01	1.52E+01	0.00E+00	1.73E+01	-1.60E+01
Human toxicity, carcinogenic effects *CTUh / UF*	5.61E-08	2.75E-08	0.00E+00	8.68E-10	-5.75E-08
Human toxicity, non-carcinogenic effects *CTUh / UF*	1.37E-07	2.31E-08	0.00E+00	4.85E-09	-2.48E-09
Impacts related to land use / Soil quality quality *No dimension / UF*	1.12E+02	2.62E+02	0.00E+00	6.27E+00	-3.50E+01

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

WASTE CATEGORY					
Environmental impact	**Production stage**	**Construction stage**	**Use stage**	**End-of-life stage**	**D Benefits and costs beyond system boundaries**
Hazardous waste disposed of - *kg/UF*	5.15E-03	3.34E-04	0.00E+00	4.95E-06	-8.99E-05
Non-hazardous waste disposed of - *kg/UF*	1.40E+00	9.92E-01	0.00E+00	9.91E+00	-2.59E-02
Radioactive waste disposed of - *kg/UF*	7.34E-04	6.54E-05	0.00E+00	4.79E-06	-4.89E-05

OUTGOING FLOWS					
Environmental impact	**Production stage**	**Construction stage**	**Use stage**	**End-of-life stage**	**D Benefits and burdens beyond system boundaries**
Components for re-use - *kg/UF*	1.49E-01	2.68E-01	0.00E+00	0.00E+00	0.00E+00
Materials for recycling - *kg/UF*	7.36E-01	1.24E-01	0.00E+00	6.82E-01	0.00E+00
Materials for energy recovery - *kg/UF*	2.66E-02	4.16E-02	0.00E+00	6.63E-01	0.00E+00
Electrical energy supplied externally - *MJ/UF*	2.00E-01	6.84E-02	0.00E+00	9.39E-01	1.01E+00
Energy Steam supplied externally - *MJ/UF*	5.50E-01	2.28E-01	0.00E+00	2.58E+00	2.81E+00
Gas and process energy supplied externally - *MJ/UF*	5.50E-01	2.28E-01	0.00E+00	2.58E+00	2.81E+00

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

Indoor air

VOCs and formaldehyde (if relevant)

Not relevant

Resistance to fungal growth (if relevant)

The product does not claim any performance on this subject

Radioactive emissions (if relevant)

Not relevant

Soil and water (if relevant)

No tests performed

Contribution of the product to the quality of life inside of buildings

Product characteristics contributing to the creation of hygrothermal comfort conditions in buildings

The product does not claim any performance on this subject

Product features involved in creating acoustic comfort conditions in buildings

The product does not claim any performance on this subject

Product features involved in creating visual comfort conditions in the building

Not relevant

Characteristics of the product involved in creating conditions of olfactory comfort in the building

Not relevant

neolife®

Appendix: technical characteristics

Permissible pressure values for NOMAD (technical notice no. 2.2/19-1797_V6)

Centre distance between spacing (mm)	Name	Vacuum value WELS (Pa)
600	NOMAD 6	2841

Characteristics of NOMAD slats (technical notice no. 2.2/19-1798_V6)

Characteristics	Test method or standard	Requirements	Specifications	Unit	Tolerance
Linear mass	NFT 54-405-1	Declared value	2,33	kg/ml	+/- 0,30kg/ml
Bending on product 20° C and 65% RH	NF EN 15534-1 NF EN 15534-5 NF EN 310	Declared value	Average Fm= 700	MPa	Above specification
Impact resistance 5J normal condition and< 0°c	NFT 54-405-1 NF EN ISO 6603-1	Maximum 1 break for 5 samples	No breakage	U	1/5
Resistance to boiling water (BER)	NF EN 1087-1 NF EN 319	Δ average mass <7% Δ average indiv mass >9%	Average mass <7%	%	Δ indiv mass <9
Heat shrinkage 100° /IH	NF EN 15534-1 NF EN 15534-5 NF EN 479	<average 2% < indiv 3%	<2% average	%	<indiv 3%
Colorimetry (d/8° , D65 10°)	NF EN 15534-1 DIN EN ISO 11664	Declared value	ΔE< 3	ΔE Lab	ΔE< 4
Thermal expansion	ISO 11359-2 adapted	δL<= 50.0.10-6	δL= 31.6.10-6 (blade blade)	°K-1	δL<= 50,0.10-6
Water absorption at 28 days	NF EN 317	<= 15%	Average 4.3	%	<=15%
Combustible mass	NF EN 13238	Declared value	132	MJ/m²	-