RMT
RECUPERACION DE MATERIALES TEXTILES S.A.

ENVIRONMENTAL PRODUCT DECLARATION

According to the standards: ISO 14025 and EN UNE 15804 + A2

DAPcons®NTe.009

DECLARACIÓN AMBIENTAL DE PRODUCTO
ENVIRONMENTAL PRODUCT DECLARATION

According to the standards:
ISO 14025 y EN 15804 + A2:2020

cateb
Arquitectura Tècnica
Barcelona

dapcons®

DECLARACIÓN AMBIENTAL DE PRODUCTO
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According to the standards:

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GENERAL INFORMATION

Product

WOOLBAND

Company

RMT
RECUPERACION DE MATERIALES TEXTILES S.A.

Product description

WOOLBAND® treated sheep's wool tops are suitable for use as insulation between joints (perimeter window and door frames, gaps between logs and timber boards, etc.) and to ensure the airtightness of the house.

Reference RCP

UNE-EN 16783 Thermal insulation products. Product Category Rules (PCR) for products manufactured and formed in-situ, intended for the preparation of environmental product declarations.

Production plant

RMT, S.A. – Recuperación de Materiales Textiles S.A.
c/Narcís Monturiol 20-22
08187 Sta. Eulàlia de Ronçana - Barcelona (Spain)

Validity

From: 25/10/2021 Until: 25/10/2026

The validity of DAPcons®NTe.009 is subject to the conditions of the regulation DAPcons®. The current edition of this DAPcons® is the one that appears in the registry maintained by Cateb; for informational purposes, it is included on the Program website www.csostenible.net

EXECUTIVE SUMMARY

WOOLBAND

	DAPconstruction® PROGRAMME Environmental Product Declarations in the Construction sector www.csostenible.net
	Programme Manager Colegio de la Arquitectura Técnica de Barcelona (Cateb) Bon Pastor, 5 · 08021 Barcelona www.apabcn.cat
	Declaration Holder Recuperación de Materiales Textiles S.A. c/ Narcis Monuriol 20-22 08187 - BARCELONA (España)
	Statement made by: ReMa-INGENIERÍA, S.L. Calle Crevillente, 1, entlo., 12005 - CASTELLON, España

Declared product

WOOLBAND

Geographic representation

This declaration has been prepared using production data from RMT's plant in Sta. Eulàlia de Ronçana, Barcelona (Spain). Part of the production process is carried out in a plant in Guarda (Portugal).

Variability between different products

This document states the results of an individual product.

Declaration number

DAPcons®NTe.009

Registration date

09/03/2023

Validity

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

Programme Administrator Signature

Celestí Ventura Cisternas. President of Cateb

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36548201M CELESTINO VENTURA (R: Q0875009C) 28.03.2023 12:44:25 +0200

Programme Verifier Signature

Ferran Pérez Ibáñez. Verifier accredited by the administrator of the DAPcons® Programme

Fernando Pérez Ibáñez
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ENVIRONMENTAL PRODUCT DECLARATION

1. DESCRIPTION OF THE PRODUCT AND ITS USE

WOOLBAND® treated sheep's wool tops are suitable for use as insulation between joints (perimeter window and door frames, gaps between logs and timber boards, etc.) and to ensure the airtightness of the house. The wool is treated against fungi, insects and fire.

General characteristics:
- Great capacity as thermal and acoustic insulation.
- Composition based on 100% natural sheep's wool.
- Breathable and hygroscopic material (up to 33% of its weight).
- Recyclable material, from an organic and renewable source.
- Prevents condensation in insulation chambers.
- Product treated against fungi, insects and fire retardant.
- Free of toxic and/or allergenic agents.
- Very durable and resistant material over time.
- Non-abrasive material and very easy to install.

Thermal conductivity “λ” 0,034 W/(m·K)
Coil weight approx. 8-10 kg
Weight 40 g/m

2. DESCRIPTION OF THE STAGES OF THE LIFE CYCLE

2.1. Manufacturing (A1, A2 y A3)

Raw Materials (A1 y A2)

The main raw material of the product is wool from domestic (Pyrenean) meat/cheese sheep. The Ecoinvent 3.7 dataset "sheep production, for meat / sheep fleece in the grease [kg] RoW" modified to represent the Spanish scenario and current prices has been used to inventory the environmental burdens of wool.

The wool is transported to the RMT facilities by a 5t EUROVI truck over an average distance of 250 km. Throughout the production process, various auxiliary materials are used which are transported to the production plant by means of a 5t EUROVI van.

Manufacturing (A3)

The production process consists of the following stages:

-Shearing: The wool that covers the sheep's body is a type of natural fibre. The shearing process consists of cutting the wool from the sheep without hurting the animal or wasting the fibre.

-Triage: The wool received undergoes the triage process, which separates the wool from the straw and the wool in poor condition.

-Cleaning: The aim of this operation is to eliminate the natural impurities in the wool fibre (grease, suint) as well as additional impurities (dust, dirt). The washing process consists of a series of stages in which the wool is washed with hot water and detergent. This stage is carried out at Guarda (Portugal).

- Chemical treatment: This operation is aimed at preventing moth growth and consists of the application of an ecological treatment based on vegetable extracts.

- Carding in top format: The carding process consists of a mechanical operation carried out on the wool with the aim of parallelising and individualising the fibres to finally produce a wick or ribbon and generate the wool bumps. This stage is carried out in a plant located in Portugal.

- Packaging: Finally, the final Woolband is packed in cardboard boxes on pallets and covered with low density polyethylene shrink film, ready for transport to the customer.

2.2. Building (A4 y A5)

Transport of the product to the work (A4)

An average transport distance of 1020km has been calculated from country sales data for the products.

The truck used is Euro VI compliant, consumes 1.50E-05 kg of diesel/kg of load transported and km travelled.

Table 1. Scenarios applied for the transport of the product to the place of installation

Destinations	Type of transport	Percentage	Average km
Europe	25 t Truck	100	1020

Product installation process and construction (A5)

The installation of the product is manual and does not require the use of any electrical equipment, so there is no associated consumption.

It has been assumed that there is no product wastage during installation, as leftover scraps from one installation can be used in the insulation of another door or window. To characterise the packaging waste management scenario, EUROSTAT 2015 data for the European area have been used.

2.3. Product use (B1-B7)

Use (B1)

The product does not generate impacts at the use stage.

Maintenance (B2)

Thermal insulation products do not require maintenance during use under normal conditions and if applied correctly. In this case it is assumed that, by default, environmental impacts are zero.

Repair (B3)

Thermal insulation products are not repaired during use under normal conditions and if correctly applied. In this case it is assumed that, by default, the environmental impacts are zero.

Substitution (B4)

The product does not need replacement within its 50-year lifetime.

Rehabilitation (B5)

The product does not need refurbishment within its 50 years of useful life.

Operational energy use (B6)

The insulation products do not use energy during the use of the building. The default environmental impacts are zero.

Operational water use (B7)

The insulation products do not use water during the use of the building. The default environmental impacts are zero.

2.4. End of life (C1-C4)

Deconstruction and demolition (C1)

At the end of its useful life, the product will be removed, either as part of a building renovation or during demolition. In the context of the demolition of a building, the impacts attributable to the removal of the product are negligible.

Transportation (C2)

The following end-of-life scenario has been defined for the product under study: 90% of the residual material is recovered and used as organic fertiliser, while the remaining 10% is managed with the rest of the deconstruction materials and ends up in the landfill. Transport of the residual materials is carried out with a 14t Euro VI lorry and an average distance from the point of demolition to the point of composting has been estimated at 250km and 50km to the landfill.

Waste management for reuse, recovery and recycling (C3)

90% of the product is reused as compost. The loads assignable to the system under study associated with the management of waste for recycling are those of transport and are already accounted for in the previous section.

Ultimate elimination (C4)

10% of the product is sent to a controlled landfill.

2.5. Potential environmental benefits and burdens beyond the system boundary (D)

The benefits and burdens of using the material as organic compost by replacing the need to produce this material, as well as the impacts on the soil generated by decomposition in the soil, have been considered in Module D. In order to calculate these benefits and impacts, the composition of sheep wool as described in the document "Organised Framework of Main Possible Applications of Sheep Wool Fibers in Building Components" has been considered. To calculate these benefits and impacts, the composition of sheep wool described in the document "Organized Framework of Main Possible Applications of Sheep Wool Fibers in Building Components (Monica C.M. Parlato and Simona M.C. Porto, 2020)" has been taken into account and that the amount of nitrogen in the material replaces a conventional nitrogen organic fertiliser.

3. LIFE CYCLE ANALYSIS

The life cycle analysis on which this declaration is based has been performed following ISO 14040, ISO 14044 and

UNE-EN 15804 and UUNE-EN 16783:2017 "Thermal insulation products. Product category rules (PCR) for manufactured and formed-in-place products, intended for the elaboration of environmental product declarations". The EC-JRC characterisation factors (EN_15804, EF reference package 3.0, update November 2019), the Ecoinvent database v3.7 (2029) and the LCAmanager software have been used.

This LCA is of the "cradle to gate with options" type (modules A+B+C+D), covering all stages of the product life cycle. Specific data from the RMT plant (Sta. Eulàlia de Ronçana, Barcelona - Spain) corresponding to the year 2019 have been used to inventory the manufacturing stage.

3.1. Functional Unit

The declared unit of the EPD is:

"1 linear m of WOOLBAND® thermal insulation product with lambda value 0.034 W/(m-K), 40 mm diameter and 40 g/m, used to insulate joints and a reference service life of 50 years."

The coil used for the calculations has the following characteristics: 210 linear m and 40 g/m.

3.2. System limits

Table 2. Declared modules

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

X = Declared module **MND** = Undeclared module

3.3. Life cycle analysis data (ACV)

Table 3. Parameters of environmental impact

Parameter	Unit	Life cycle stage														Module D
		Product stage	Construction Process Stage		Use stage							End of life stage				
		A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	
Climate change - total (GWP-total)	kg CO2 eq	-3,19E-02	9,38E-04	2,74E-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	2,76E-04	0,00E+00	1,40E-02	1,01E-01
Climate change - fossil (GWP-fossil)	kg CO2 eq	3,56E-02	9,38E-04	1,70E-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	2,76E-04	0,00E+00	6,68E-03	3,57E-02
Climate change - biogenic (GWP-biogenic)	kg CO2 eq	-6,85E-02	1,65E-07	2,57E-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	4,20E-08	0,00E+00	7,33E-03	6,60E-02
Climate change - land use and changes in land use (GWP-luluc)	kg CO2 eq	1,11E-03	7,61E-09	3,92E-09	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,94E-09	0,00E+00	0,00E+00	-4,90E-05
Ozone layer depletion (ODP)	kg CFC 11 eq	2,64E-09	5,53E-11	1,55E-12	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,41E-11	0,00E+00	0,00E+00	-3,10E-09
Acidification (AP)	mol H+ eq	3,17E-04	4,51E-07	5,38E-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	1,12E-07	0,00E+00	7,34E-04	6,47E-03
Eutrophication of fresh water (EP-freshwater)	kg P eq	7,38E-06	1,98E-09	1,27E-09	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,04E-10	0,00E+00	0,00E+00	-6,12E-06
Eutrophication of sea water (EP-marine)	kg N eq.	5,56E-05	5,81E-08	3,00E-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	1,29E-08	0,00E+00	3,23E-04	2,88E-03
Terrestrial eutrophication (EP-terrestrial)	mol N eq.	1,11E-03	7,57E-07	1,55E-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	1,76E-07	0,00E+00	3,27E-03	2,90E-02
Photochemical ozone formation (POCP)	kg NMVOC eq	6,67E-05	2,59E-07	1,05E-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	6,09E-08	0,00E+00	0,00E+00	-6,01E-05
Depletion of abiotic resources - minerals and metals (ADP-minerals&metals)	kg Sb eq	1,60E-07	1,20E-10	5,11E-11	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,04E-11	0,00E+00	0,00E+00	-8,88E-07
Depletion of abiotic resources - fossil fuels (ADP-fossil)	MJ, net calorific value	4,76E-01	3,35E-03	1,30E-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	8,52E-04	0,00E+00	0,00E+00	-4,27E-01
Water consumption (WDP)	m3 worldwide eq. private	3,32E-02	8,85E-06	4,62E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,25E-06	0,00E+00	0,00E+00	-2,84E-03
The Indicador includes all greenhouse gases included in GWP-total but excludes biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. This Indicador is thus equal to the GWP Indicador originally defined in EN 15804:2012+A1:2013. Can be obtained from IPCC characterization factors.																
Global Warming Potential (GHG)	kg CO2 eq	3,67E-02	9,38E-04	1,70E-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	2,76E-04	0,00E+00	6,68E-03	3,50E-02

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

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

Parameter	Unit	Life cycle stage														Module D
		Product stage	Construction Process Stage		Use stage							End of life stage				
		A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	
Use of renewable primary energy excluding renewable primary energy resources used as feedstock	MJ, net calorific value	9,36E-02	6,64E-06	3,26E-06	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-06	0,00E+00	0,00E+00	-2,45E-02
Use of renewable primary energy used as raw material	MJ, net calorific value	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
Total use of renewable primary energy (primary energy and renewable primary energy resources used as feedstock)	MJ, net calorific value	9,36E-02	6,64E-06	3,26E-06	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-06	0,00E+00	0,00E+00	-2,45E-02
Non-renewable primary energy use, excluding non-renewable primary energy resources used as feedstock	MJ, net calorific value	4,82E-01	3,35E-03	1,30E-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	8,52E-04	0,00E+00	0,00E+00	-4,27E-01
Use of non-renewable primary energy used as raw material	MJ, net calorific value	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
Total use of non-renewable primary energy (primary energy and renewable primary energy resources used as feedstock)	MJ, net calorific value	4,82E-01	3,35E-03	1,30E-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	8,52E-04	0,00E+00	0,00E+00	-4,27E-01
Use of secondary materials	kg	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 renewable secondary fuels	MJ, net calorific value	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, net calorific value	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 resources	m3	8,24E-04	2,15E-08	1,99E-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	5,48E-09	0,00E+00	0,00E+00	-1,05E-04
Hazardous waste removed	kg	3,99E-07	9,07E-09	1,94E-10	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,31E-09	0,00E+00	0,00E+00	-6,07E-07
Non-hazardous waste eliminated	kg	1,42E-03	7,62E-07	3,90E-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	1,94E-07	0,00E+00	4,00E-03	6,09E-03
Radioactive waste disposed of	kg	5,78E-07	2,45E-08	7,29E-10	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,23E-09	0,00E+00	0,00E+00	-7,95E-07
Components for reuse	kg	2,34E-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	0,00E+00	0,00E+00	0,00E+00	3,60E-02	0,00E+00	0,00E+00
Materials for recycling	kg	8,02E-04	0,00E+00	1,43E-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	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Materials for energy recovery (energy recovery)	kg	0,00E+00	0,00E+00	2,35E-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	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy	MJ by energy vector	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	1,45E-03

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

Table 5. Kg of biogenic carbon

Contenido Carbono (biogénico) - embalaje	4,81E-04
Contenido Carbono (biogénico) - producto	2,00E-02

3.4. Recommendations of this DAP

Comparison of construction products should be done on the same functional unit and at building level, i.e. including the product's performance over its entire life cycle. Environmental product declarations of different type III eco-labelling programmes are not directly comparable, as the calculation rules may be different. This declaration represents the average performance of the RMT WOOLBAND® product.

3.5. Cutting rules

More than 95% of all mass and energy inputs and outputs of the system have been included, leaving out, among others, diffuse emissions in the factory.

3.6. Additional environmental information

During the life cycle of the product, no hazardous substances listed in the "Candidate List of Substances of Very High Concern (SVHC) for authorisation1" are used in a percentage greater than 0.1% of the weight of the product.

When accounting for the environmental impacts generated by the decomposition of the product in the landfill and in the field (use as fertiliser), the composition of the wool and the transformation of carbon into CO2 (Guidelines for conducting a LCA of the environmental performance of wool textiles. IWTO) and the transformation of nitrogen into N2O, NH3 and nitrates (Agrifood 4.0. IPCC guidelines). The decomposition has been assumed to be aerobic.

3.7. Other data

Waste from this product is included as non-hazardous waste in the European list of waste with LER code 04 02 21.

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4. ADDITIONAL TECHNICAL INFORMATION AND SCENARIOS

4.1. Transportation from the factory to the construction site (A4)

Parameter	Parameter expressed per functional unit
Type and fuel consumption, type of vehicle used for transportation	25 tn Truck: 1,50E-05 kg diésel/kgkm
Distance	Road transport: 1020 km
Capacity utilization (including empty return)	5% for road transport and 100% for cargo.
Apparent density of transported product	-
Useful capacity factor (1, <1 or >1 for products that are packed compressed or nested)	1

4.2. Installation processes (A5)

Parameter	Parameter expressed per functional unit
Auxiliary materials for construction (specifying each material)	No consumption of auxiliary materials
Water use	No water consumption
Use of other resources	No consumption of other resources
Quantitative description of the type of energy (regional mix) and consumption during the installation process	No energy consumption
Waste of materials in the work before the treatment of waste, generated by the installation of the product (specify by type)	No waste of materials on site before waste treatment, generated by the installation of the product.

Parameter	Parameter expressed per functional unit
Material outputs (specified by type) as a result of waste treatment on the building site. For example: collection for recycling, energy recovery, disposal (specified by route)	Packaging waste: Recycling: 1.32E-03 kg Energy recovery: 2.34E-04kg Landfill: 3.89E-04 kg .
Direct emissions to air, soil and water	No direct emissions to air, soil and water .

4.3. Reference life (B1)

Parameter	Parameter expressed per functional unit
Reference Lifetime (RSL)	50 Years
Characteristics and properties of the product	Thermal insulation material
Requirements (conditions of use, frequency of maintenance, repair, etc.)	-

4.4. Maintenance (B2), Repair (B3), Substitution (B4), or Rehabilitation (B5)

Maintenance (B2)

Parameter	Parameter expressed per functional unit
Maintenance process, for example; cleaning agent, surfactant type	No maintenance required
Maintenance cycle	-
Auxiliary materials for the maintenance process (specifying each material)	-
Energy inputs for the maintenance process (quantity and type of energy vector)	-
Net consumption of fresh water during maintenance or repair	-
Material waste during maintenance (specifying the type)	-

Repair (B3)

Parameter	Parameter expressed per functional unit
Repair process	No repairs required
Proceso de inspección	-
Repair cycle	-
Auxiliary materials (specifying each material], for example lubricant	-
Interchange of parts during the product life cycle	-
Energy inputs during maintenance, type of energy, example: electricity, and quantity	-
Energy input during the repair, renovation, replacement process if applicable and relevant (quantity and type of energy vector)	-
Material waste during repair (specifying each material)	-
Consumo neto de agua dulce	-

Substitution (B4)

Parameter	Parameter expressed per functional unit
Energy input during substitution, for example for the use of cranes (quantity and energy vector)	No replacement required
Change of worn parts in the product life cycle (specifying each material)	-
Net freshwater consumption	-

Rehabilitation (B5)

Parameter	Parameter expressed per functional unit
Rehabilitation process	No rehabilitation required
Rehabilitation cycle	-

Parameter	Parameter expressed per functional unit
Energy input during rehabilitation, for example for the use of cranes (quantity and energy vector)	-
Input material for rehabilitation, including auxiliary materials (specifying by material)	-
Waste of material during rehabilitation (specifying each material)	-
Other scenario development assumptions	- .

4.5. Reference life

Parameter	Parameter expressed per functional unit
Reference life	50 years
Declared properties of the product, finishes, etc.	Thermal and acoustic insulation for joints (doors, windows, between logs...)
Application design parameters (manufacturer's instructions)	Avoid contact with water, seal with suitable tape
Estimation of the quality of execution, when installed according to the manufacturer's instructions	Aim for a density between 15 and 60 kg/m3.
Outdoor environment for outdoor applications. For example, weather, pollutants, UV radiation, temperature, etc.	Not applicable
Indoor environment for indoor applications. For example, temperature, humidity, chemical exposure	-
Terms of use. For example, frequency of use, mechanical exposure, etc.	Not applicable
Maintenance. For example, the required frequency, etc.	Maintenance-free

4.6. Use of energy (B6) and water (B7) in service

Parameter	Parameter expressed per functional unit
Auxiliary materials (specified by material)	No water or energy required

Parameter	Parameter expressed per functional unit
Type of energy vector. For example, electricity, natural gas, district heating	-
Equipment output power	-
Net freshwater consumption	-
Characteristic features (energy efficiency, emissions, etc.)	-
Other scenario development assumptions. For example, transportation	-

4.7. End of life (C1-C4)

	Process				
	Collection processes (specified by types)	Recovery systems (specified by type)			Elimination
	kg collected with mixed construction waste	kg for reuse	kg for recycling	kg for energy recovery	kg for final disposal
	4.00E-2	3.60E-2	0	0	4.00E-3
Assumptions for scenario development	The transport of waste materials is carried out with a 14t-20t EURO VI lorry and an average distance from the demolition point to the management point has been estimated at: 50 km for landfill and 250 km for composting.				

5. ADDITIONAL INFORMATION

WOOLBAND® does not generate emissions to indoor air, soil and water during the use stage.

Specific heat 1.760 J/kgK
Thickness 20-60 mm
Resistance coefficient
to water vapour diffusion 1 μ
water vapour diffusion
Water absorption ≥ 2 kg/m2
Hygroscopicity up to 33% of its weight
Reaction to fire F (UNE-EN-ISO 11925-2)

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6. RCP AND VERIFICATION

This statement is based on Document

UNE-EN 16783 Thermal insulation products. Product Category Rules (PCR) for products manufactured and formed in-situ, intended for the preparation of environmental product declarations. Thermal insulation

Independent verification of the declaration and data, in accordance with ISO 14025 and IN UNE-EN 16783

☑ External

Third party Verifier

Ferran Pérez Ibáñez
Accredited by the administrator of the DAPcons® Programme

Verification date:

28/03/2023

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