

ENVIRONMENTAL PRODUCT DECLARATION



Environmental and Health Product Declaration

In accordance with standard NF EN ISO 14025, NF EN 15804 + A1 and its national complement NF EN 15804 / CN



WARNING

The information contained in this declaration is provided under the responsibility of ETEX Building Performance (producer of the EPD) according to NF EN 15804 + A1 and the national supplement NF EN 15804/CN.

Any use total or partial of the information provided in this document must at least be accompanied by a full reference to the original EPD as well as to its producer who can provide a full copy.

The CEN standard NF EN 15804 + A1, the national supplement EN 15804/CN serve for the definition of product categories rules (PCR).

This document is a translation of French EPD "PRODUIT DE FINITION PROMASPRAY P300". It's provided under the responsibility of ETEX Building Performance. The original EPD was third party verified, this translation had no additional check by a third party.

READING GUIDE

Significant figures

The results of environmental impacts and indicators of use of resources, categories of waste and outgoing flows, appearing in §5 are presented with only three significant figures, in order to reflect the usual levels of uncertainty associated with the LCA results (around 20 to 30%).

Example: a calculated value of 15.124 g eq. CO₂ will be displayed as 15.100 g eq. CO₂ (or 15.1 kg CO₂ eq); likewise, a value of 15.055 g eq. CO₂ will also be displayed as 15.100 g eq. CO₂ (or 15.1 kg CO₂ eq).

Considering three significant digits. i.e, in the previous example considering that we manage to differentiate results other than 100 g eq. CO₂, amounts to considering that the relative uncertainty is 100 / 15.000 or 0.67% which is already much lower than the usual uncertainty of LCA results.

Results display format

The data are presented in the form of scientific notation.

As example : -4 .23 E-06 = -4.23 x 10⁻⁶.

PRECAUTION OF USING THE EPD FOR THE COMPARISON OF PRODUCTS

The EPD of construction products may not be comparable if they do not comply with standard NF EN 15804 + A1.

NF EN 15804 + A1 defined in § 5.3 Comparability of DEP * for construction products, the conditions under which construction products can be compared. on the basis of information provided by the EPD:

"Comparison of the environmental performance of construction products using the EPD information shall be based on the product's use in and its impacts on the building, and shall consider the complete life cycle (all information modules)."

* Note 1 of the foreword to the national supplement defines "the literal French translation of EPD (Environmental Product Declaration) is DEP (Declaration of Environmental Product). 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 this EPD. The EPD is therefore indeed a "DEP" supplemented by health information. "

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General Information

Name and address of manufacturers

The information contained in this declaration is provided under the responsibility of the manufacturer, the company Etex France Building Performance.

Address :

Zone Agroparc
500 rue Marcel demonque, CS 70088
84019 AVIGNON Cedex

Contact : fdes.efbp@etexgroup.com

The site(s), the manufacturer or the group of manufacturers or their representatives for which the EPD is representative: The EPD is representative of the production of finition product Promaspray P300, in Le Pin, France.

Type of EPD: This EPD is an individual EPD that represents the product life cycle "from cradle to grave".

Verifier : This EPD has been verified internally by Solinnen and externally by third party Tifenn GUENNEC and Estelle VIAL, FCBA.

A report accompanying the declaration was produced in 2021. The information relating to the validity of the EPD is consistent with the specifications contained in the project report.

Date of verification: This EPD was verified in June 2022.

Product identification:

The commercial references covered :

- Promaspray P300

End of validity date: This EPD is valid until September 2026 (validity period 5 years)

Distribution channel: BtoB / BtoC

Description of the functional unit and the product

Description of the functional unit

Taking into account the functions of the product, the functional unit is as follows:

"Provide a function of 1 m² of facing fixed and jointed on any type of framework, in the form of a rigid panel intended to receive any type of finish. "

Product Description

Fire protective board in accordance with standard ETA 20/0932.

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

The products studied are fire protective boards which are intended for ceilings, partitions and walls with framework in metal and wood. Their implementation is defined by ETA 20/0932.

Main performance of the functional unit

The water vapor diffusion resistance factor and the thermal conductivity of the boards are presented in the Contribution of the product to the quality of life inside buildings section.

Other technical characteristics not included in the functional unit

The other technical characteristics of the products covered by this EPD are presented on the PROMAT brand sites (www.promat.com).

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

The main components of the fire protective boards are presented below.

Parameter		Value	Unit
Weight of the product		1.817	Kg/m ²
Additive		0.013	Kg/m ²
Distribution packaging	Pallet	9.18	g/m ²
	Film Polysyrene	0.75	g/m ²
	Packaging for compound	14.9	g/m ²
Complementary product for posing	Water for dry compound	1.83	L/m ³

Specify whether the product contains substances from the candidate list according to the REACH regulation (if greater than 1% by mass)

No substance belonging to the list is present in the product in an amount of more than 1% by mass.

Description of the reference service life

The lifespan of fire protective board is similar to that of a building as long as the component is part of it.

Parameter	Value
Reference slife	50 years
Declared properties of the product (leaving the factory) and finishes. etc.	Promaspray P300 comply with standard NF EN 14496.
Theoretical application parameters (if imposed by the manufacturer), including references to appropriate practices	Installation according to the manufacturer's recommendations, and according to ETAG 018-3 and DTU 27-2.
Assumed quality of the work, when the installation complies with the manufacturer's instructions	Installation according to the manufacturer's recommendations, and according to ETAG 018-3 and DTU 27-2.
Outdoor environment (for outdoor applications), e.g. weather, pollutants, UV and wind exposure, building orientation, shade, temperature	Not applicable
Indoor environment (for indoor applications),e.g. temperature, humidity, exposure to chemicals	Installation of fire protective board in interior rooms, in accordance with the specified ETA. Promaspray P300 need to be mixed with water before using. Support's preparation is not included in the EPD.

Parameter	Value
Conditions of use, e.g. frequency of use, mechanical exposure	Not applicable
Maintenance, e.g. frequency required, type and quality and replacement of replaceable components	Not applicable

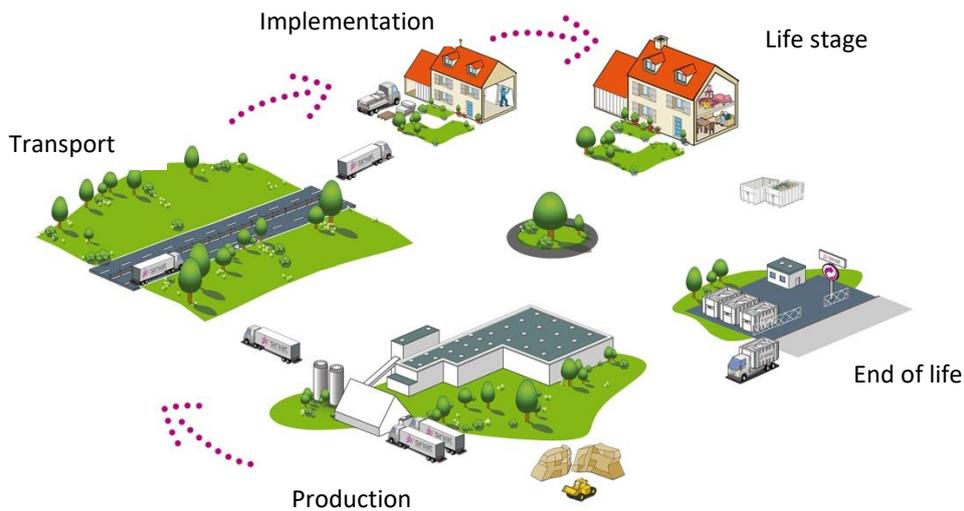
Biogenic carbon content

So-called "biogenic" carbon is the carbon constituting the plant, resulting from the process of photosynthesis from the CO₂ present in the air (during the growth of plants – trees, Crops, etc.).

The quantity stored during the working life of this product is 0 KgC / FU.

This amount of stored biogenic carbon is considered an informative indicator and is not counted towards the product life cycle total.

Diagram of life cycle



Production stage A1-A3

The production stage takes into account the following three stages :

- o A1 Raw material supply: extraction calcium sulphate di-hydrate, and its transformation into calcium sulphate hemihydrate, additives as calcium silicate
- o A2 Upstream transport of raw materials and packaging to the manufacturing site;
- o A3 Manufacture of fire protective board (see diagram below) and production of packaging.

The aggregation of modules A1, A2 and A3 is a possibility given by standard EN 15804 + A1. This rule is applied to this EPD.

Construction stage A4-A5

The construction stage consists of two modules: A4, the transport of the product from the factory to the site and A5, the installation in the building.

A4 - Transport to the site:

This module includes transportation from the manufacturing site to the construction site. Transport is calculated according to a scenario including the following parameters:

Parameters	Values
Type of fuel and consumption of the vehicle or type of vehicle used for transport, e.g, long haul truck, Boat, etc.	Truck with a capacity of 24 tons Fuel: Diesel
Distance to the site	277 km
Capacity utilization (including empty returns)	Actual load: 26 tons with 20% empty return
Bulk density of transported products	Density greater than 600 kg / m ³
Coefficient of use of the volume capacity	Lower than 1

A5 - Installation in the building:

This module includes the materials necessary for the installation of the product in the building.

Parameters	Value
Auxiliary inputs for the installation	Machine type GPFT G4 (not taken into account in the modelling). Multiuse jackets, renewed every 10T 1.83 ^{E-04} unit/UF Or, 2.15 ^{E-04} kg/FU of steel And 2.59E-04 kg/FU of rubber
Water use	For mixing : 1,83 kg/m ² 0.35 kg/m ² inside the product, the rest has evaporated.
Use of other resources	Electricity for mixing : 0.0268 KWh/m ²
Quantitative description of the type of energy (regional mixture) and consumption during the installation process	Coating is mixing with water, then spread out the support by machine GPFT G4 (excluded for tye modelisation)
Waste produced on the construction site before the treatment of waste generated by the installation of the product (specified by type)	1.5% adhesive mortar 14.9g paper bag 0.75g cover polystyrene 9.18g pallet
Materials (specified by type) produced by waste treatment at the construction site, e.g, collection for recycling, energy recovery, disposal (specified by route)	All of the waste are destined for non-hazardous waste dump.
Direct emissions to ambient air, soil and water	Not concerned
Breakage rate on site	1.5% adhesive mortar

Use stage (exclusion of potential savings), B1-B7

The use stage is divided into seven modules:

- B1: Use or application of the installed product
- B2: Maintenance
- B3: Repair
- B4: Replacement
- B5: Refurbishment
- B6: Operational energy use
- B7: Operational water use

No efforts occur during the use phase, until the end of life. So the fire protective board has no impact during this step.

End of life stage, C1-C4

This stage is made up of the following four modules:

- C1: deconstruction. demolition
- C2: transport to waste treatment
- C3: waste treatment for reuse, recovery and / or recycling
- C4: disposal

The calculation scenario takes into account the following parameters:

Parameters	Description
Collection process specified by type	1.83 kg/m ² of wall, collected with construction waste.
Recovery system specified by type	Not concerned
Disposal specified by type	1.83 kg/m ² of wall, destined to be eliminated in non-hazardous waste dump
Assumptions for the development of scenarios (for example transport)	Transport distance between the deconstruction site and the center for recycling: 30 km

Potential for recycling / reuse / recovery, D

Potential D hasn't been calculated in this valuation.

Information for calculating the life cycle analysis

The LCA model, data aggregation and environmental impacts are calculated using Simapro 9.1 software and ecoinvent v3.6 databases.

PCR used	The NF EN 15804 + A1 standard and the national supplement NF EN15804 / CN
System boundaries	The boundaries of the system respect the limits imposed by standard EN 15804 + A1 and its national complement.
Cut-off criteria for the initial inclusion of inputs and outputs	The cut-off criteria comply with the thresholds authorized by standard NF EN 15804 + A1. The following streams were omitted from the system: <ul style="list-style-type: none"> - The production of raw material packaging (A1)

	<p>These flows represent less than 1% of the inputs and do not generate any significant emissions in the air or in the water associated with this step.</p> <p>With the exception of the flows mentioned above, no cut-off rule has been applied.</p>
Allocations	<p>Mass allocations</p> <p>A mass weighting was applied as soon as the production takes place on several sites (according to the annual quantities produced respectively on each site).</p>
Geographic representativeness and temporal representativeness of primary data	<p>The data used comes from ETEX factories for the year 2018.</p>
Variability of results	<p>Not applicable</p>
Validity framework	<p>Not applicable</p>

- Result of the life cycle analysis

ENVIRONMENTAL IMPACTS																			
Environmental Impacts	Product stage	Construction process stage			Use stage								End of life stage					Total life cycle	D- Benefits and loads beyond the system boundaries
	Total A1-A3 Production	A4 Transport	A5 Installation	Total A4-A5	B1 Use	B2 Maintenance	B3 Repair	B4 Replacement	B5 Refurbishment	B6 Operational energy use	B7 Operational water use	Total B1-B7	C1 Deconstruction/Demolition	C2 Transport	C3 Waste processing	C4 Disposal	Total C1-C4		
Global warming kg CO2 eq / FU	0.713	0.068	0.034	0.102	0	0	0	0	0	0	0	0	MNA	0.011	0	0.030	0.041	0.856	MNA
Depletion potential of the stratospheric ozone layer, ODP (kg CFC-11 eq.) / FU	8.88E-08	1.26E-08	4.31E-09	1.69E-08	0	0	0	0	0	0	0	0	MNA	1.98E-09	0	7.11E-09	9.10E-09	1.15E-07	MNA
Acidification Potential of land and water, AP (kg SO2 eq.) / FU	0.0029	0.0002	0.0013	0.0016	0	0	0	0	0	0	0	0	MNA	3E-05	0	0.0450	0.0450	0.0495	MNA
Eutrophication kg (PO4) 3- eq / FU	9.89E-04	5.16E-05	4.33E-05	9.49E-05	0	0	0	0	0	0	0	0	MNA	8.11E-06	0	5.09E-05	5.90E-05	1.14E-03	MNA
Photochemical ozone formation (kg C2H4 eq.) / FU	2.78E-04	2.96E-05	6.26E-05	9.22E-05	0.061	0	0	0	0	0	0	0.061	MNA	5E-06	0	1.81E-03	1.82E-03	6.29E-02	MNA
Abiotic Resource Depletion Potential for elements; ADPelements (kg Sb eq.) / FU	5.47E-05	2.09E-07	1.82E-06	2.02E-06	0	0	0	0	0	0	0	0	MNA	3.28E-08	0	4.71E-08	7.99E-08	5.68E-05	MNA
Abiotic Resource Depletion Potential of fossil fuels; ADPfossil (MJ) / FU	9.81	1.05	0.37	1.42	0	0	0	0	0	0	0	0	MNA	0.16	0	0.67	0.84	12.07	MNA
Water pollution m3 / FU	0.329	0.050	0.028	0.078	0	0	0	0	0	0	0	0	MNA	0.008	0	0.197	0.204	0.611	MNA

ENVIRONMENTAL IMPACTS

Environmental Impacts	Product stage	Construction process stage			Use stage								End of life stage				Total life cycle	D- Benefits and loads beyond the system boundaries	
	Total A1-A3 Production	A4 Transport	A5 Installation	Total A4-A5	B1 Use	B2 Maintenance	B3 Repair	B4 Replacement	B5 Refurbishment	B6 Operational energy use	B7 Operational water use	Total B1-B7	C1 Deconstruction/Demolition	C2 Transport	C3 Waste processing	C4 Disposal			Total C1-C4
Air pollution m3 / FU	65	7	8	15	1463	0	0	0	0	0	0	1463	MNA	1	0	187	188	1732	MNA

USE OF RESOURCES

Use of resources	Product stage	Construction process stage			Use stage								End of life stage				Total life cycle	D- Benefits and loads beyond the system boundaries	
	Total A1-A3 Production	A4 Transport	A5 Installation	Total A4-A5	B1 Use	B2 Maintenance	B3 Repair	B4 Substitution	B5 Rehabilitation	B6 Operational energy use	B7 Operational water use	Total B1-B7	C1 Deconstruction/Demolition	C2 Transport	C3 Waste processing	C4 Disposal			Total C1-C4
Use of renewable primary energy excluding renewable primary energy resources used as raw materials - MJ / FU	1.44	0.01	0.05	0.06	0	0	0	0	0	0	0	0	MNA	2 ^E -03	0	0.02	0.02	1.52	MNA
Use of renewable primary energy resources used as raw materials - MJ / FU	0.224	0	0.006	0.006	0	0	0	0	0	0	0	0	MNA	0	0	0	0	0.230	MNA

USE OF RESOURCES

Use of resources	Product stage	Construction process stage			Use stage								End of life stage				Total life cycle	D- Benefits and loads beyond the system boundaries	
	Total A1-A3 Production	A4 Transport	A5 Installation	Total A4-A5	B1 Use	B2 Maintenance	B3 Repair	B4 Substitution	B5 Rehabilitation	B6 Operational energy use	B7 Operational water use	Total B1-B7	C1 Deconstruction/Demolition	C2 Transport	C3 Waste processing	C4 Disposal			Total C1-C4
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials) - MJ / FU	1.66	0.01	0.06	0.07	0	0	0	0	0	0	0	0	MNA	2 ^E -03	0	0.02	0.02	1.75	MNA
Use of non-renewable primary energy- excluding non-renewable primary energy resources used as raw materials - MJ / FU	12.17	1.06	0.49	1.55	0	0	0	0	0	0	0	0	MNA	0.17	0	0.87	0.87	14.59	MNA
Use of non-renewable primary energy- excluding non-renewable primary energy resources used as raw materials - MJ / FU	3.40 ^E -02	0	9.34 ^E -04	9.34 ^E -04	0	0	0	0	0	0	0	0	MNA	0	0	0	0	3.49 ^E -02	MNA
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials) - MJ / FU	12.20	1.06	0.49	1.55	0	0	0	0	0	0	0	0	MNA	0.17	0	0.71	0.87	14.63	MNA
Use of secondary material - kg / FU	0	0	0	0	0	0	0	0	0	0	0	0	MNA	0	0	0	0	0	MNA
Use of renewable secondary fuels - MJ / FU	0	0	0	0	0	0	0	0	0	0	0	0	MNA	0	0	0	0	0	MNA
Use of non-renewable secondary fuels - MJ / FU	0	0	0	0	0	0	0	0	0	0	0	0	MNA	0	0	0	0	0	MNA

USE OF RESOURCES

Use of resources	Product stage	Construction process stage			Use stage								End of life stage				Total life cycle	D- Benefits and loads beyond the system boundaries	
	Total A1-A3 Production	A4 Transport	A5 Installation	Total A4-A5	B1 Use	B2 Maintenance	B3 Repair	B4 Substitution	B5 Rehabilitation	B6 Operational energy use	B7 Operational water use	Total B1-B7	C1 Deconstruction/Demolition	C2 Transport	C3 Waste processing	C4 Disposal			Total C1-C4
Use of net fresh water (m ³) / FU	3.81 ^{E-03}	1.71 ^{E-04}	2.04 ^{E-03}	2.21 ^{E-03}	0	0	0	0	0	0	0	0	MNA	2.68 ^{E-05}	0	5.85 ^{E-04}	6.12 ^{E-04}	6.63 ^{E-03}	MNA

WASTE CATEGORIES

Waste Categories	Product stage	Construction process stage			Use stage								End of life stage				T Total life cycle	D- Profits and charges beyond the boundaries of the system	
	Total A1-A3 Production	A4 Transport	A5 Installation	Total A4-A5	B1 Use	B2 Maintenance	B3 Repair	B4 Substitution	B5 Rehabilitation	B6 Operational energy use	B7 Operational water use	Total B1-B7	C1 Deconstruction/Demolition	C2 Transport	C3 Waste processing	C4 Disposal			Total C1-C4
Hazardous waste kg / FU	0.0263	0.0007	0.0015	0.0022	0	0	0	0	0	0	0	0	MNA	0.0001	0	0.0081	0.0082	0.0367	MNA
Non-hazardous waste kg / FU	0.23	0.05	0.08	0.13	0	0	0	0	0	0	0	0	MNA	9 ^{E-03}	0	2.19	2.20	2.56	MNA
Radioactive waste disposed (kg) / FU	5.62 ^{E-05}	7.12 ^{E-06}	2.69 ^{E-06}	9.81 ^{E-06}	0	0	0	0	0	0	0	0	MNA	1.12 ^{E-06}	0	4.21 ^{E-06}	5.33 ^{E-06}	7.13 ^{E-05}	MNA

OUTPUTS																				
Outputs		Product stage	Construction process stage			Use stage							End of life stage					Total life cycle	D- Benefits and loads beyond the system boundaries	
		Total A1-A3 Production	A4 Transport	A5 Installation	Total A4-A5	B1 Use	B2 Maintenance	B3 Repair	B4 Substitution	B5 Rehabilitation	B6 Operational energy use	B7 Operational water use	Total B1-B7	C1 Déconstruction/Démolition	C2 Transport	C3 Waste processing	C4 Disposal			Total C1-C4
Components for reuse (kg) / FU		0	0	0	0	0	0	0	0	0	0	0	0	MNA	0	0	0	0	0	MNA
Materials for recycling / FU		0.00E+00	0.00E+00	0	0	0	0	0	0	0	0	0	0	MNA	0	0	0	0	0	MNA
Materials for energy recovery - kg / FU		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	0	0	0	0	0	0	MNA	0	0	0	0	0.00E+00	MNA
Exported energy (by energy vector) / FU	Electrical energy	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	0	0	0	0	0	0	MNA	0	0	0	0	0.00E+00	MNA
	Thermal energy	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	0	0	0	0	0	0	MNA	0	0	0	0	0.00E+00	MNA
	Process gas	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0	0	0	0	0	0	0	MNA	0	0	0	0	0.00E+00	MNA

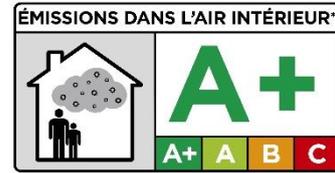
Additional information on the release of hazardous substances into indoor air, soil and water during the use stage

Indoor air

Volatile organic compounds and aldehydes

According to the decree n ° 2011-321 of March 23, 2011 relating to the labeling of construction products or wall or floor covering and paints and varnishes on their emission of volatile organic pollutants, the fire protective boards manufactured by Etex Building Performance are classified A +, the most favorable class for a building material.

A measurement report established for a product of the same family attests the health classification of the products.



Soil and water

Not applicable, as this product is not in contact with water intended for human consumption, nor with runoff, seepage water, groundwater, or surface water.

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

P300 don't have any part in hygrothermal regulation.

P300 don't have any thermically isolations property

Characteristics of the product participating in the creation of conditions of acoustic comfort in the building

P300 have secondary acoustic performance.

Épaisseur PROMASPRAY® P300	Support	Fréquence en hertz						NRC	α_w
		125	250	500	1000	2000	4000		
		Coefficient d'absorption α_p							
15 mm	Solide	0,05	0,20	0,45	0,70	0,75	0,40	0,53	0,45 (M, H)
25 mm		0,10	0,40	0,80	0,90	0,90	0,90	0,75	0,70 (H)

Product characteristics contributing to the creation of visual comfort conditions in the building

P300 isn't usually used in living room.

He can be with SIDAIRLESS, to add colors and technique reinforcement.

Product characteristics contributing to the creation of olfactory comfort conditions in the building

P300 dry doesn't spread any smell.

Other environmental information

Etex France Building Performance is always more committed to the environment. The production and recycling of boards and associated products are ISO 14001, ISO 50001 and ISO 9001 certified.

Etex France Building Performance is a player engaged in the recovery of plaster waste.

In order to preserve the natural resources of gypsum quarries, and comply with the energy transition law relating to construction waste. Etex offers a plaster-based waste recycling service through its Ecoplâtre program.

