



ENVIRONMENTAL DECLARATION
IN ACCORDANCE WITH
THE SAINT-GOBAIN PCR 2009

Aquaroc

April 2013

WARNING

Any use, all or part of this information sheet should at least be constantly accompanied by the complete reference of the original statement: "full title, edition date, sender address" that can deliver a true copy.

Contact :

**PLACOPLATRE
34, Avenue Franklin Roosevelt
92282 SURESNES CEDEX**

Email : michael.medard@saint-gobain.com

Tel : 01.40.99.24.04

CONTENTS

FOREWORD..... 4

READING GUIDE..... 5

1. PRODUCT CHARACTERISATION IN ACCORDANCE WITH SG PCR § 8.4..... 6

1.1 DEFINITION OF THE FUNCTIONAL UNIT (FU) 6

1.2 PRODUCT MASS REQUIRED FOR THE FUNCTIONAL UNIT (FU) 6

1.3 USEFUL TECHNICAL CHARACTERISTICS NOT CONTAINED IN THE DEFINITION OF THE FUNCTIONAL UNIT 6

2 INVENTORY AND OTHER DATA IN ACCORDANCE WITH SG PCR § 9 COMMENTS RELATING TO THE ENVIRONMENTAL EFFECTS OF THE PRODUCT 7

2.1 CONSUMPTION OF NATURAL RESOURCES (SG PCR § 9.3) 7

2.2 EMISSIONS IN THE ENVIRONMENT (WATER, AIR AND SOIL) (SG PCR § 9.4) 11

2.3 WASTE PRODUCTION (SG PCR § 9.4) 15

3. CONTRIBUTION OF THE PRODUCT TO ENVIRONMENTAL IMPACTS IN ACCORDANCE WITH SG PCR § 9.6..... 16

4 ANNEX I: CHARACTERISATION OF DATA FOR CALCULATING THE LIFE CYCLE INVENTORY 17

4.1 DEFINITION OF LCA SYSTEM 17

4.2 DATA SOURCES 18

4.3 TRACEABILITY 19

FOREWORD

This document constitutes a suitable framework for presenting the environmental and sanitary characteristics of building products in accordance with the requirements of the Saint-Gobain PCR 2009.

A project report of the declaration has been drawn up. It can be consulted, under agreement of confidentiality, with the head office of PLacoplatre.

In accordance with the Saint-Gobain PCR, placoplatre is responsible for the supply of information and data contained in this declaration.

Contact:

PLACOPLATRE
34, Avenue Franklin Roosevelt
92282 SURESNES CEDEX

Email : michael.medard@saint-gobain.com
Tel : 01.40.99.24.04

READING GUIDE

Example of reading: 6,9 E-06 = 6,9 x 10⁻⁶

The display rules apply:

- When the calculation result of the inventory is zero, then zero is displayed.
- All values except those that are zero, will be expressed with three significant figures.
- For each flow of inventory values to justify at least 99.9% of the value of the column "total" is displayed and the others, except those that are zero, are hidden.

Notes:

- (1) N/A : not applicable
- (2) "Metals unspecified" flows from this line should not be combined with the flux lines specific to each meta
- (3) "recovered materials": this includes waste collected on-line as they are reintroduced into the manufacturing cycle as materials.

1. Product characterisation in accordance with SG PCR § 8.4

1.1 Definition of the functional unit (FU)

Provide a function of 1 m² facing a high resistance to humidity and shock set and grouted on any type of vertical or horizontal frame form of rigid panel for receiving any type of finish.

The FU is related to an annuity for a reference service life of 50 years.

It is justified by our feedback and through the DTU and technical advice that indicates that the performance of these works is maintained over time.

The reference service life of 50 years corresponds to an average life of existing housing (dwellings, houses in France).

1.2 Product mass required for the functional unit (FU)

The product studied is the AQUAROC cement board; Board consists of a core of lightweight cement with EPS beads. The cuffs are made of a grid of glass. The boards are coated on one side of a limiting porosity.

Average thickness per m² of product: 12.5 mm

Total weight of product used: 13.75 kg / m²

The products used for packaging are:

Polyethylene cover: 0033 kg / m²

Wooden pallet: 0.0222 units / m²

Additional product: Complementary products (type and quantity) to 1m² for implementation are:

Coating (jointing compound): Polyurethane glue: 0.0474 kg/m²

Screws: 12 screws each 1.25g

Given the variability of the assembly, the metal framing (frames: rails and amounts) were not accounted for in modeling.

The rate of scrap during the implementation of the board and additional products is estimated to be: 5%

Maintenance (including partial replacement if necessary): No maintenance, or replacement.

1.3 Useful technical characteristics not contained in the definition of the functional unit

The AQUAROC board has performance and features defined in the Technical Agreement No. 9/07-850

The fire classification is A2-s1, d0 (PV CSTB No. RA07-0485).

2 Inventory and other data in accordance with SG PCR § 9 Comments relating to the environmental effects of the product

The life cycle inventory data set out below have been calculated for the functional unit defined in 1.1 and 1.2

A reading guide is available in page 5.

2.1 Consumption of natural resources (SG PCR § 9.3)

2.1.1 Consumption of natural energy resources and energy indicators

Flow	Units	Production	Transport	Process	Use	End of life	Total life cycle	
							Per year	Reference service life
Consumption of natural energy resources								
Wood	kg	0.0195			0		0.0195	0.977
Coal	kg	0.00941			0		0.00985	0.492
Lignite	kg	0.000510			0		0.000554	0.0277
Natural gas	kg	0.0153	0.000125		0		0.0164	0.819
Oil	kg	0.0266	0.00539		0		0.0328	1.64
Uranium	kg	2.58 E-06			0		2.63 E-06	0.000132
Energy indicators								
Total Primary Energy	MJ	3.26	0.235		0		3.60	180
Renewable Energy	MJ	0.228			0		0.229	11.5
Non-renewable Energy	MJ	3.03	0.235		0		3.37	169
Fuel Energy	MJ	2.73	0.235		0		3.04	152
Feedstock Energy	MJ	0.535			0		0.566	28.3
Electricity	kWh	0.122			0		0.124	6.22

Comments relating to consumption of energy resources

The total primary energy, gas and oil are mainly used during the production with raw materials such as cement, EPS.

Energy indicators should be used with caution as they add up energies of different origins that have different environmental impacts.

2.1.2 Consumption of non-energy natural resources

A reading guide is available in page 5.

Flow	Units	Production	Transport	Process	Use	End of life	Total life cycle	
							Per year	Reference service life
Antimony (Sb)	kg	0	0	0	0	0	0	0
Silver (Ag)	kg	3.02 E-11	7.98 E-13		0		3.10 E-11	1.55 E-09
Clay	kg	0.0422			0		0.0422	2.11
Arsenic (As)	kg	0	0	0	0	0	0	0
Bauxite (Al ₂ O ₃)	kg	7.33 E-06	1.57 E-07		0		7.50 E-06	0.000375
Bentonite	kg	1.15 E-06	1.56 E-08		0		1.22 E-06	6.08 E-05
Bismuth (Bi)	kg	0	0	0	0	0	0	0
Boron (B)	kg	0	0	0	0	0	0	0
Cadmium (Cd)	kg	0	0	0	0	0	0	0
Limestone	kg	0.169			0		0.169	8.44
Sodium Carbonate (Na ₂ CO ₃)	kg	0	0	0	0	0	0	0
Potassium Chloride (KCl)	kg	5.14 E-07			0		2.88 E-06	0.000144
Sodium Chloride (NaCl)	kg	0.000185			0		0.000702	0.0351
Chromium (Cr)	kg	4.74 E-09	3.16 E-11		0		4.77 E-09	2.39 E-07
Cobalt (Co)	kg	0	0	0	0	0	0	0
Copper (Cu)	kg	6.66 E-07			0		6.67 E-07	3.34 E-05
Dolomite	kg				0		2.88 E-06	0.000144
Tin (Sn)	kg	0	0	0	0	0	0	0
Feldspar	kg		0	4.98 E-11	0	0	4.98 E-11	2.49 E-09
Iron (Fe)	kg	6.07 E-05			0		0.000203	0.0102
Fluorite (CaF ₂)	kg	1.00 E-07	0	2.92 E-09	0	0	1.03 E-07	5.15 E-06
Gravel	kg	2.57 E-05	3.92 E-06		0		2.98 E-05	0.00149
Gypsum (CaSO ₄)	kg	0.0288	0		0		0.0288	1.44
Lithium (Li)	kg	0	0	0	0	0	0	0
Kaolin (Al ₂ O ₃ , 2SiO ₂ , 2H ₂ O)	kg	0	0	0	0	0	0	0
Magnesium (Mg)	kg	1.61 E-18	0	2.88 E-19	0	0	1.90 E-18	9.51 E-17
Manganese (Mn)	kg	6.96 E-10	1.84 E-11		0		7.15 E-10	3.58 E-08
Mercury (Hg)	kg	1.21 E-10	0	2.00 E-09	0	0	2.12 E-09	1.06 E-07
Molybdenum (Mo)	kg	0	0	0	0	0	0	0
Nickel (Ni)	kg	9.46 E-08			0		9.46 E-08	4.73 E-06
Gold (Au)	kg	0	0	0	0	0	0	0
Palladium (Pd)	kg	0	0	0	0	0	0	0
Platinum (Pt)	kg	0	0	0	0	0	0	0
Lead (Pb)	kg	1.44 E-08			0		1.62 E-08	8.11 E-07
Rhodium (Rh)	kg	0	0	0	0	0	0	0
Rutile (TiO ₂)	kg	4.58 E-35	0	8.16 E-36	0	0	5.40 E-35	2.70 E-33

Flow	Units	Production	Transport	Process	Use	End of life	Total life cycle	
							Per year	Reference service life
Sand	kg	0.108			0		0.108	5.40
Silica (SiO ₂)	kg	0	0	0	0	0	0	0
Sulphur (S)	kg	0.000227			0		0.000231	0.0115
Barium Sulphate (BaSO ₄)	kg	6.62 E-06	1.65 E-07		0		7.14 E-06	0.000357
Titanium (Ti)	kg	1.49 E-17	0	0	0	0	1.49 E-17	7.46 E-16
Tungsten (W)	kg	0	0	0	0	0	0	0
Vanadium (V)	kg	0	0	0	0	0	0	0
Zinc (Zn)	kg				0		1.24 E-05	0.000618
Zirconium (Zr)	kg	0	0	0	0	0	0	0
Vegetal raw materials not specified above	kg	0.000113	0	1.41 E-05	0	0	0.000127	0.00637
Animal raw materials not specified above	kg	0	0	0	0	0	0	0
Intermediate products not integrated upstream (total)	kg	0.000187	4.06 E-06		0		0.000191	0.00955

Comments relating to consumption of non-energy resources

Non-energy natural resources are mainly used during the production phase for the production of raw materials such as cement.

2.1.3 Consumption of water

A reading guide is available in page 5.

Flow	Units	Production	Transport	Process	Use	End of life	Total life cycle	
							Per year	Reference service life
Water : Lake	litre	0	0	0	0	0	0	0
Water : Sea	litre	0.00323			0		0.00352	0.176
Water : Water table	litre	0.0451			0		0.0451	2.26
Water : Unspecified source	litre	0.433	0.0224		0		0.465	23.2
Water: River	litre	0.00561			0		0.00983	0.492
Drinking Water (network)	litre	0.150			0		0.227	11.3
Consumed Water (total)	litre	0.636	0.0224		0		0.750	37.5

Comments relating to the consumption of water

The total water consumption is equal to 37.5 liters. It is used primarily for the production phase (for raw materials such as cement (10%) and directly through the site (13%) for the mixing of raw materials).

2.1.4 Consumption of recovered energy, recovered material

A reading guide is available in page 5.

Flow	Units	Production	Transport	Process	Use	End of life	Total life cycle	
							Per year	Reference service life
Recovered Energy (stock)	MJ	0.165	0	0	0	0	0.165	8.25
Recovered Material (stock) : Total	kg	0.0283			0		0.0285	1.43
Recovered Material (stock) : Steel	kg	0.000276	4.46 E-06		0		0.000281	0.0140
Recovered Material (stock) : Aluminium	kg	0	0	0	0	0	0	0
Recovered Material (stock) : Metal (unspecified)	kg	0	0	0	0	0	0	0
Recovered Material (stock) : Paper-Cardboard	kg	0	0	0	0	0	0	0
Recovered Material (stock) : Plastic	kg	0	0	0	0	0	0	0
Recovered Material (stock) : gypsum	kg	0	0	0	0	0	0	0
Recovered Material (stock) : Biomass	kg	0	0	0	0	0	0	0
Recovered Material (stock): Mineral	kg	0.00537	0	0	0	0	0.00537	0.269
Recovered Material (stock) : Unspecified	kg	0.0226	0	0.000264	0	0	0.0229	1.14

Comments relating to the consumption of recovered energy and materials

N/A

2.2 Emissions in the environment (water, air and soil) (SG PCR § 9.4)

2.2.1 Emissions in the air

A reading guide is available in page 5.

Flow	Units	Production	Transport	Process	Use	End of life	Total life cycle	
							Per year	Reference service life
Hydrocarbons (unspecified)	g	0.0938			0		0.0968	4.84
Hydrocarbons (unspecified, except methane)	g	0.246	0.0611		0		0.310	15.5
PAHs (unspecified)	g	3.22 E-05			0		3.42 E-05	0.00171
Methane (CH ₄)	g	0.461	0.0239		0		0.519	26.0
Volatile organic compounds (e.g. acetone, acetate...)	g	0.00699	0	4.50 E-05	0	0	0.00704	0.352
Carbon Dioxide (CO ₂)	g	201	17.6		0		222	11 118
Carbon Monoxide (CO)	g	0.323	0.0453		0		0.379	19.0
Nitrogen oxides (NO _x in NO ₂)	g	0.467	0.208		0		0.689	34.5
Nitrous Oxide (N ₂ O)	g	0.00413	0.00226		0		0.00650	0.325
Ammonium Hydroxide (NH ₃)	g	0.00682			0		0.00687	0.343
Dust (unspecified)	g	0.0624	0.0197		0		0.0959	4.80
Sulphur oxides (SO _x in SO ₂)	g	0.599	0.00764		0		0.620	31.0
Hydrogen Sulphide (H ₂ S)	g	0.000223	1.67 E-06		0		0.000230	0.0115
Hydrocyanic Acid (HCN)	g	9.21 E-05			0		9.21 E-05	0.00461
Organic chlorine compounds (in Cl)	g	2.04 E-07			0		2.25 E-07	1.13 E-05
Hydrochloric Acid (HCl)	g	0.00576			0		0.00591	0.296
Inorganic chlorine compounds (in Cl)	g	7.45 E-06			0		0.000303	0.0151
Unspecified chlorine compounds (in Cl)	g	2.49 E-06			0		1.68 E-05	0.000841
Organic fluorine compounds (in F)	g	1.20 E-06	1.10 E-06		0		2.33 E-06	0.000116
Inorganic fluorine compounds (in F)	g	0.000350			0		0.000355	0.0178
Unspecified halogen compounds	g	2.52 E-05			0		2.90 E-05	0.00145

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Flow	Units	Production	Transport	Process	Use	End of life	Total life cycle	
							Per year	Reference service life
Unspecified fluorine compounds (in F)	g	0	0	0	0	0	0	0
Metals (unspecified)	g	0.00237			0		0.00238	0.119
Antimony and its compounds (in Sb)	g	5.81 E-06			0		5.81 E-06	0.000290
Arsenic and its compounds (in As)	g	3.79 E-06	8.12 E-08		0		3.87 E-06	0.000194
Cadmium and its compounds (in Cd)	g	4.53 E-06	4.48 E-07		0		5.02 E-06	0.000251
Chrome and its compounds (in Cr)	g	2.24 E-05			0		2.36 E-05	0.00118
Cobalt and its compounds (in Co)	g	4.79 E-06	1.99 E-07		0		4.99 E-06	0.000250
Copper and its compounds (in Cu)	g	1.05 E-05	3.00 E-07		0		1.09 E-05	0.000543
Tin and its compounds (in Sn)	g	2.37 E-06			0		2.37 E-06	0.000119
Manganese and its compounds (in Mn)	g	8.70 E-06			0		8.73 E-06	0.000436
Mercury and its compounds (in Hg)	g	2.43 E-06			0		2.66 E-06	0.000133
Nickel and its compounds (in Ni)	g	8.98 E-05	3.99 E-06		0		9.58 E-05	0.00479
Lead and its compounds (in Pb)	g	2.77 E-05	1.47 E-06		0		3.05 E-05	0.00153
Selenium and its compounds (in Se)	g	4.36 E-06	8.26 E-08		0		4.45 E-06	0.000223
Tellurium and its compounds (in Te)	g	1.45 E-06	0	0	0	0	1.45 E-06	7.26 E-05
Zinc and its compounds (in Zn)	g	0.000221	0.000677		0		0.000924	0.0462
Vanadium and its compounds (in V)	g	0.000198	1.59 E-05		0		0.000215	0.0107
Silica and its compounds (in Si)	g	0.00171			0		0.00171	0.0856

Comments relating to emissions in the air :

The air emissions are mainly carbon dioxide up to 99%. They are primarily issued at the production stage (96%) and the stage of transport (2.6%).

There is no direct air emissions associated with the process. Indeed emissions of carbon dioxide (CO₂) are only related to the combustion of energy resources or decarbonation of raw materials (cement).

In general air emissions associated with transport stages and end of life are due only to the production and combustion of diesel consumed for transportation.

2.2.2 Emissions dans l'eau (NF P 01-010 § 5.2.2)

A reading guide is available in page 5.

Flow	Units	Production	Transport	Process	Use	End of life	Total life cycle	
							Per year	Reference service life
COD (Chemical Oxygen Demand)	g	0.0169			0		0.0263	1.31
5-day BOD (Biochemical Oxygen Demand)	g	0.00256			0		0.00422	0.211
Matter in Suspension (MIS)	g	0.0233			0		0.0269	1.34
Cyanide (CN-)	g	8.80 E-05	1.14 E-06	1.35 E-07	0		9.16 E-05	0.00458
AOX (Adsorbable organic halogen compounds)	g	1.32 E-06		1.34 E-06	0		2.72 E-05	0.00136
Hydrocarbons (unspecified)	g	0.0925	0.00817		0		0.113	5.65
Nitrogen compounds (in N)	g	0.0146	0.000745	0.000304	0		0.0164	0.820
Phosphorous compounds (in P)	g	0.00331			0		0.00357	0.179
Organic fluorine compounds (in F)	g	6.15 E-05			0		0.000436	0.0218
Inorganic fluorine compounds (in F)	g	0	0	0	0	0	0	0
Unspecified fluorine compounds (in F)	g	0	0	0	0	0	0	0
Organic chlorine compounds (in Cl)	g	1.71 E-05			0		0.000151	0.00757
Inorganic fluorine compounds (in Cl)	g	0.425	0.274		0		0.844	42.2
Unspecified chlorine compounds (in Cl)	g	0.000179	4.74 E-06		0		0.000184	0.00918
PAHs (unspecified)	g	7.55 E-06	6.89 E-06		0		1.46 E-05	0.000732
Metals (unspecified)	g	0.0273	0.0221		0		0.0507	2.53
Aluminium and its compounds (in Al)	g	0.000806			0		0.000811	0.0406
Arsenic and its compounds (in As)	g	1.69 E-06	2.24 E-07		0		1.92 E-06	9.60 E-05
Cadmium and its compounds (in Cd)	g	4.54 E-07	3.72 E-07		0		8.66 E-07	4.33 E-05
Chrome and its compounds (in Cr)	g	4.62 E-06			0		5.96 E-06	0.000298
Copper and its compounds (in Cu)	g	2.73 E-06	7.56 E-07		0		3.84 E-06	0.000192
Tin and its compounds (in Sn)	g	1.44 E-08			0		1.44 E-08	7.21 E-07
Iron and its compounds (in Fe)	g	0.00172	6.68 E-05		0		0.00182	0.0910
Mercury and its compounds (in Hg)	g	3.74 E-07			0		8.38 E-07	4.19 E-05
Nickel and its compounds (in Ni)	g	4.08 E-06	1.29 E-06		0		1.32 E-05	0.000659

Flow	Units	Production	Transport	Process	Use	End of life	Total life cycle	
							Per year	Reference service life
Lead and its compounds (in Pb)	g	4.93 E-05	3.08 E-07		0		4.98 E-05	0.00249
Zinc and its compounds (in Zn)	g	9.02 E-06	2.25 E-06		0		8.68 E-05	0.00434
Rejected water	Litre	0.0266	0.000916	0.00124	0		0.0522	2.61

Comments relating to discharges in water :

The life cycle of the product does not cause emissions in water that is directly attributable to him. Discharges are accounted for indirect discharges. They come from steps upstream and downstream such as power generation, refining fuel for transport, etc.

2.2.3 Emissions in the soil

A reading guide is available in page 5.

Flow	Units	Production	Transport	Process	Use	End of life	Total life cycle	
							Per year	Reference service life
Arsenic and its compounds (in As)	g	3.16 E-08	8.40 E-10		0		3.25 E-08	1.62 E-06
Biocides a	g	0	0	0	0	0	0	0
Cadmium and its compounds (in Cd)	g	1.43 E-11	3.80 E-13		0		1.47 E-11	7.36 E-10
Chrome and its compounds (in Cr)	g	3.96 E-07	1.05 E-08		0		4.07 E-07	2.04 E-05
Copper and its compounds (in Cu)	g	7.28 E-11	1.93 E-12		0		7.48 E-11	3.74 E-09
Tin and its compounds (in Sn)	g	0	0	0	0	0	0	0
Iron and its compounds (in Fe)	g	0.000158	4.20 E-06		0		0.000163	0.00813
Lead and its compounds (in Pb)	g	3.32 E-10	8.82 E-12		0		3.41 E-10	1.71 E-08
Mercury and its compounds (in Hg)	g	2.64 E-12	7.00 E-14		0		2.71 E-12	1.36 E-10
Nickel and its compounds (in Ni)	g	1.09 E-10	2.90 E-12		0		1.12 E-10	5.61 E-09
Zinc and its compounds (in Zn)	g	1.19 E-06	3.16 E-08		0		1.22 E-06	6.12 E-05
Heavy metals (unspecified)	g	0	0	0	0	0	0	0

Comments relating to emissions in the soil :

The life cycle of the product does not cause emissions in soil that is directly attributable to him. Discharges are accounted for indirect discharges. They come from steps upstream and downstream such as power generation, refining fuel for transport, etc.

2.3 Waste production (SG PCR § 9.4)

2.3.1 Recovered matter

A reading guide is available in page 5.

Flow	Units	Production	Transport	Process	Use	End of life	Total life cycle	
							Per year	Reference service life
Recovered Energy (stock)	MJ	0.0872	0	0.00464	0	0	0.0918	4.59
Recovered Material (stock) : Total	kg	0.00325	9.59 E-08	0.00116	0		0.00441	0.221
Recovered Material (stock) : Steel	kg	2.92 E-05	2.10 E-09		0		2.92 E-05	0.00146
Recovered Material (stock) : Aluminium	kg	0	0	0	0	0	0	0
Recovered Material (stock) : Metal (unspecified)	kg	0	0	0	0	0	0	0
Recovered Material (stock) : Paper-Cardboard	kg	3.07 E-06	0	0	0	0	3.07 E-06	0.000154
Recovered Material (stock) : Plastic	kg	2.05 E-06	0	0.000695	0	0	0.000697	0.0348
Recovered Material (stock): Biomass	kg	0	0	0	0	0	0	0
Recovered Material (stock): Mineral	kg	0	0	0	0	0	0	0
Recovered Material (stock): Unspecified	kg	0.00322	9.38 E-08	0.000468	0		0.00368	0.184

Comments relating to recovered matter

Packaging waste (considered in the production phase and implementation) are recovered and recycled externally.

2.3.2 Déchets éliminés (NF P 01-010 § 5.3)

Flow	Units	Production	Transport	Process	Use	End of life	Total life cycle	
							Per year	Reference service life
Hazardous waste	kg	0.0136	5.81 E-06		0		0.0136	0.681
Non-hazardous waste	kg	0.0186	3.71 E-06	0.0145	0	0.275	0.308	15.4
Inert waste	kg	0.0802	1.12 E-05		0		0.0802	4.01

Comments relating to waste production and management methods

Under the European Directive on the landfill of waste, cement board waste are stock in a class II landfill.

3. Contribution of the product to environmental impacts in accordance with SG PCR § 9.6

All these impacts are entered or calculated in compliance with indications of § 9.6 of the SG PCR.

N°	Environmental Impact	Value - unit
1	Consumption of energy resources Total primary energy Renewable energy resources Process energy resources (non-renewable)	180.21 MJ 11.46 MJ 168.58 MJ
2	Depletion of natural resources (ADP)	0.06 kg eq. antimony (Sb)
3	Water Consumption	37.51 litre
4	Solid waste Recovered Disposed of Hazardous waste Non-hazardous waste Inert waste	0.22 kg 0.68 kg 15.40 kg 4.01 kg
5	Climatic change	11.76 kg eq. CO ₂
6	Atmospheric acidification	0.06 kg eq. SO ₂
7	Eutrophication	0.914 g eq PO ₄ ³⁻
8	Stratospheric ozone layer depletion	0.00 kg CFC eq. R11
9	Formation of photochemical oxidants	0.0081 kg eq. éthylène

4 Annex I: Characterisation of data for calculating the life cycle inventory

4.1 Definition of LCA system

Description of flows included in the life cycle of the product.

4.1.1 Stages included

Production

The production step takes into account

- The production (consumption of raw materials, energy, water and air emissions, waste).
- The production and transportation of raw materials (cement ...).
- The production of Electricity
- Treatment of packaging and production waste.

Transport

The transport step takes into account the production and combustion of diesel.

The characteristics of the transport of the product are:

- Average distance : 1110 km,
- Actual load : 24 tons,
- Empty return : 30 %.

There is no rate of fall in transport. The end of life of packaging used for packaging of the product is recorded in the implementation stage.

Implementation

The model takes into account the transport and landfilling of the falls. The drop rate is 5%. Additional accessories for implementation are included (screws and glue joint)

Utilisation (building stage)

N/A

End of life

The End of life step takes into account :

- transportation of waste from their place of work life to their place of dying,
- Implementation of waste disposal facility.

4.1.2 Flow excluded

The following flows are excluded from the calculations:

- Lighting, heating and cleaning of workshops
- The administrative department
- Transportation of employees
- Manufacture of production tools and transport systems (e.g. machinery, vehicles etc)

4.1.3 System boundaries

The threshold cut-off is fixed at 98% for the total mass and 99.96 % for total energy use according to SG PCR § 5.3. The LCA is created for a cradle to grave scenario.

4.2 Data sources

4.2.1 Characterisation of primary data

Fabrication

- Year : 2010/2013
- Geographical coverage : Europe,
- Technology coverage : Standard technology for production of board
- Source : Data comes from production plant (Cormeilles, 95, France).

Transport

- Year : 2010
- Geographical coverage : Europe,
- Technology coverage : Transport by road
- Source : Data comes from production plant (Cormeilles, 95, France).

Implementation

- Year : 2010
- Geographical coverage : Europe,
- Source : les données proviennent de l'industriel (Avis Technique).

End of life

- Year : 2010
- Geographical coverage : Europe,
- Source : Transport : fascicule AFNOR FD P 01 015

4.3 Traceability

The industrialist who participated in this study is:

PLACOPLATRE

34, Avenue Franklin Roosevelt
92282 SURESNES CEDEX

Contact : www.placo.fr/

Contact for primary data (head office or factory): Michael MEDARD

Tél. : 01 40 99 24 04

Fax : 01 40 99 24 47

Réalisation de la fiche :

Michael MEDARD

Christèle WOJEWODKA

The life cycle inventory was made in 2013 and the aggregations of data are coming from the calculations software TEAM version 4.0.