

ENVIRONMENTAL PRODUCT DECLARATION

FLAT SHEET IN FIBER CEMENT



Based on
PCR 2012:01 Construction
products and construction
services v.2.3, 2018-11-15 e
EN 15804:2013, UN CPC 375

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1. SIL GROUP

Società Italiana Lastre S.p.A. (SIL) was founded in 1961 and established itself in the market thanks to the production of corrugated flat sheet production in fiber cement and thanks to the wide variety of products..

From **1973** SIL began to produce **flat sheets**, products subject of the present EPD.

SIL plant is located in **Verolanuova (BS)**.



SIL GROUP IS ONE OF THE FIRST COMPANY IN EUROPE FOR PRODUCT QUALITY AND WORKERS' SKILLS.



SIL GROUP IS CERTIFIED BOTH ISO 14001 AND 9001

UNI EN ISO 14001:2015

UNI EN ISO 9001:2015

2. THE PRODUCT

FLAT SHEET IN FIBER CEMENT

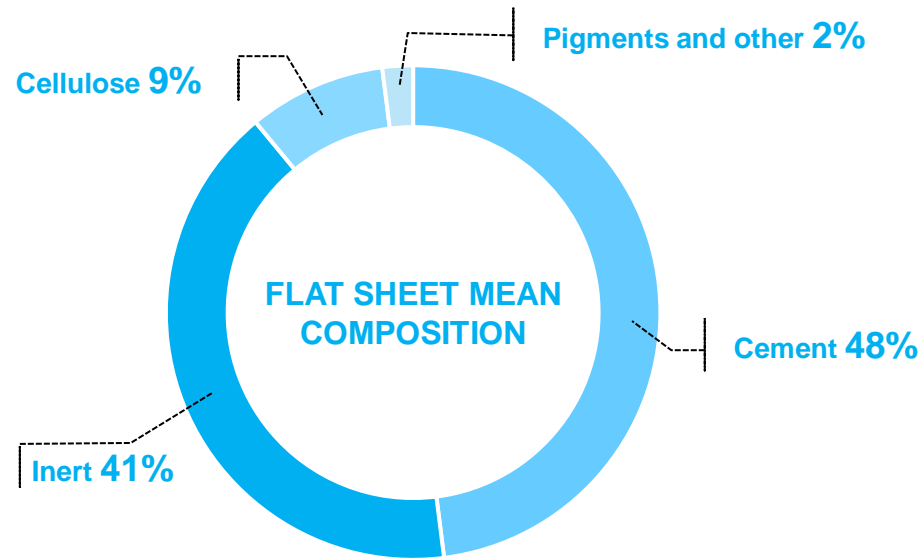
Flat sheets represent the new generation of sheet, composed by cement and inert materials, reinforced with cellulose and autoclaved.

They are fire-resistant, non putrescible and difficult to be attacked by rodents, scums and fungi.

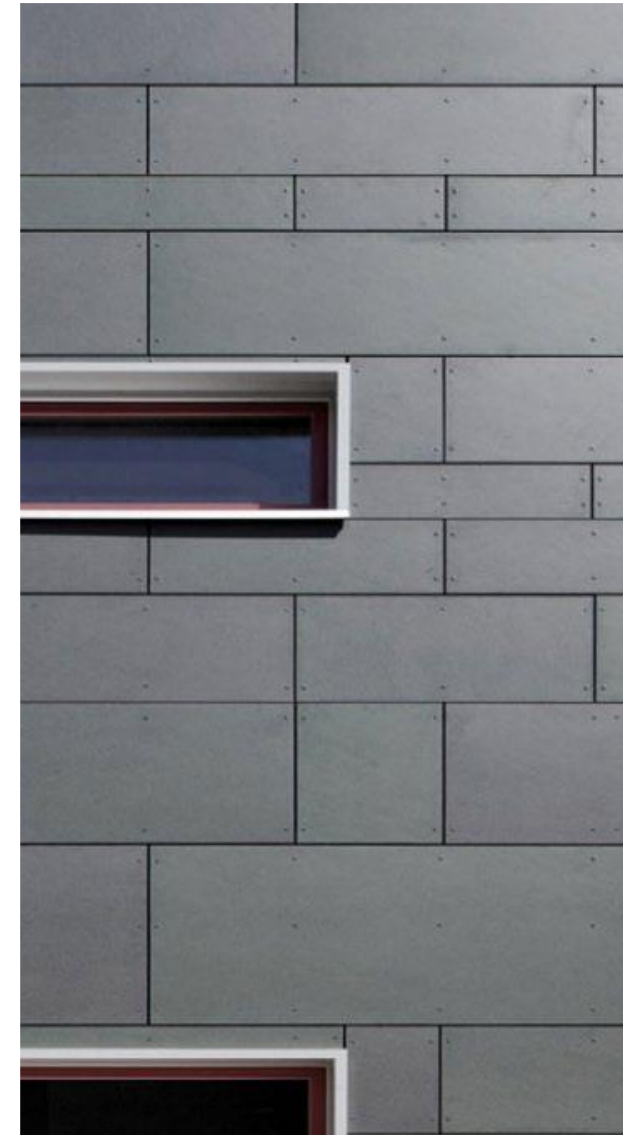
Sheets are produced in different thicknesses ranging from 4 mm to 32 mm, they could be colored in mass.

About 37% of the flat sheets are painted.

The sheets can be used for external applications (facades).



Raw materials used for flat sheets do not include substances listed in the document "Candidate List of SVHC" released by European Chemicals Agency (<http://echa.europa.eu/candidate-list-table>).



3. METHODOLOGY

Environmental impacts have been evaluated considering all the phases of the product life cycle according to the rules listed in the PCR 2012:01.

Data collected are referred to the whole 2021 production, occurred in Verolanuova plant.

Ecoinvent database (v3.5) and Simapro v.9 are used for the elaboration.

DECLARED UNIT

Data and results are referred to **1 m²** of surface in different thicknesses.

In the present EPD, sheets with thickness 4, 5, 6, 8, 10 and 12 mm are considered because they represent over 99% of 2021 production.

Since environmental impacts differ from more than 10% both among different thicknesses and among painted and not painted sheets, results are reported separately both for not painted flat sheets with 4, 5, 6, 8 and 10 mm of thickness and for painted sheet with 5, 6, 8, 10 and 12 mm thickness.



4. SYSTEM BOUNDARIES

UPSTREAM

CORE

DOWNSTREAM



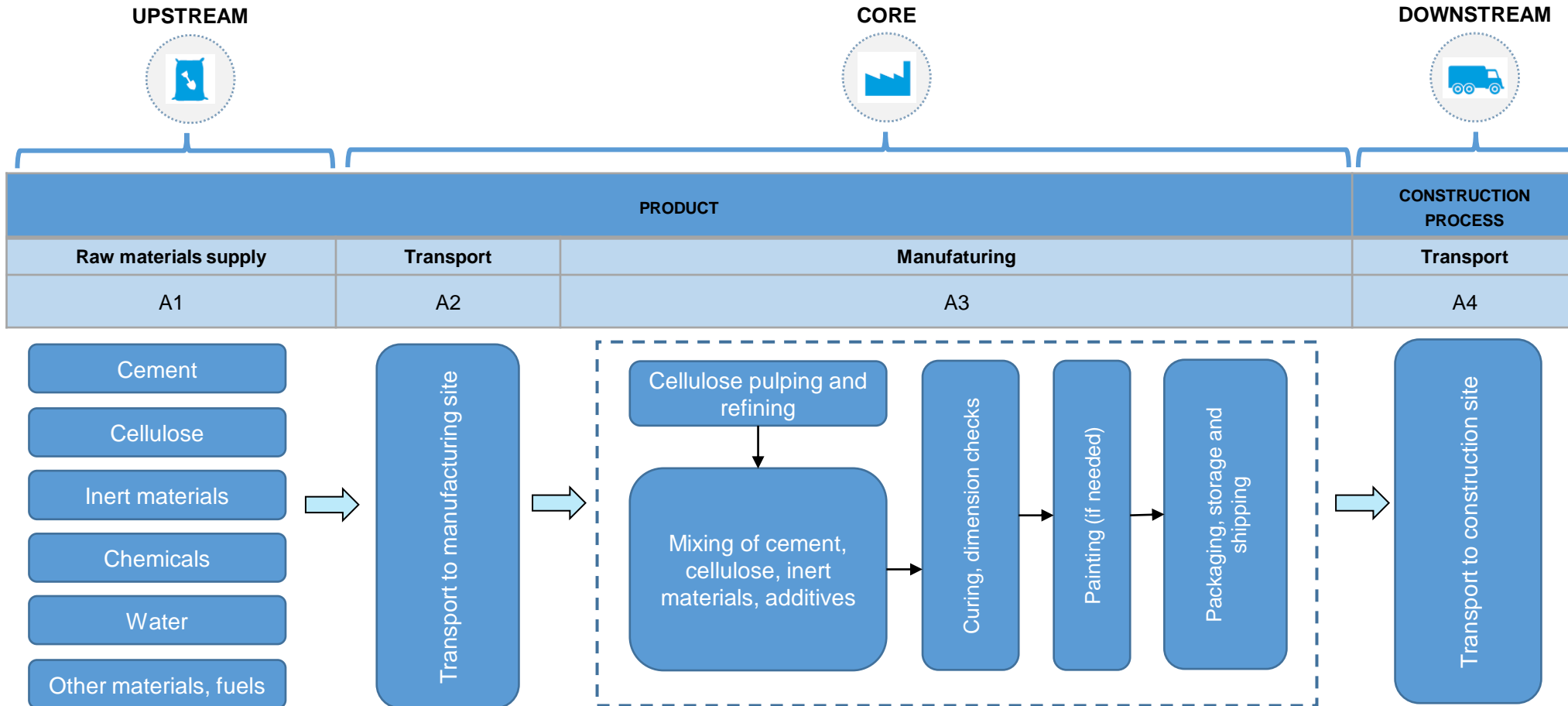
PRODUCT			CONSTRUCTION PROCESS		USE							END OF LIFE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARIES
Raw materials supply	Transport	Manufacturing	Transport	Construction-installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction, demolition	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	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND

X = Included in the system, MND = Module Not Declared

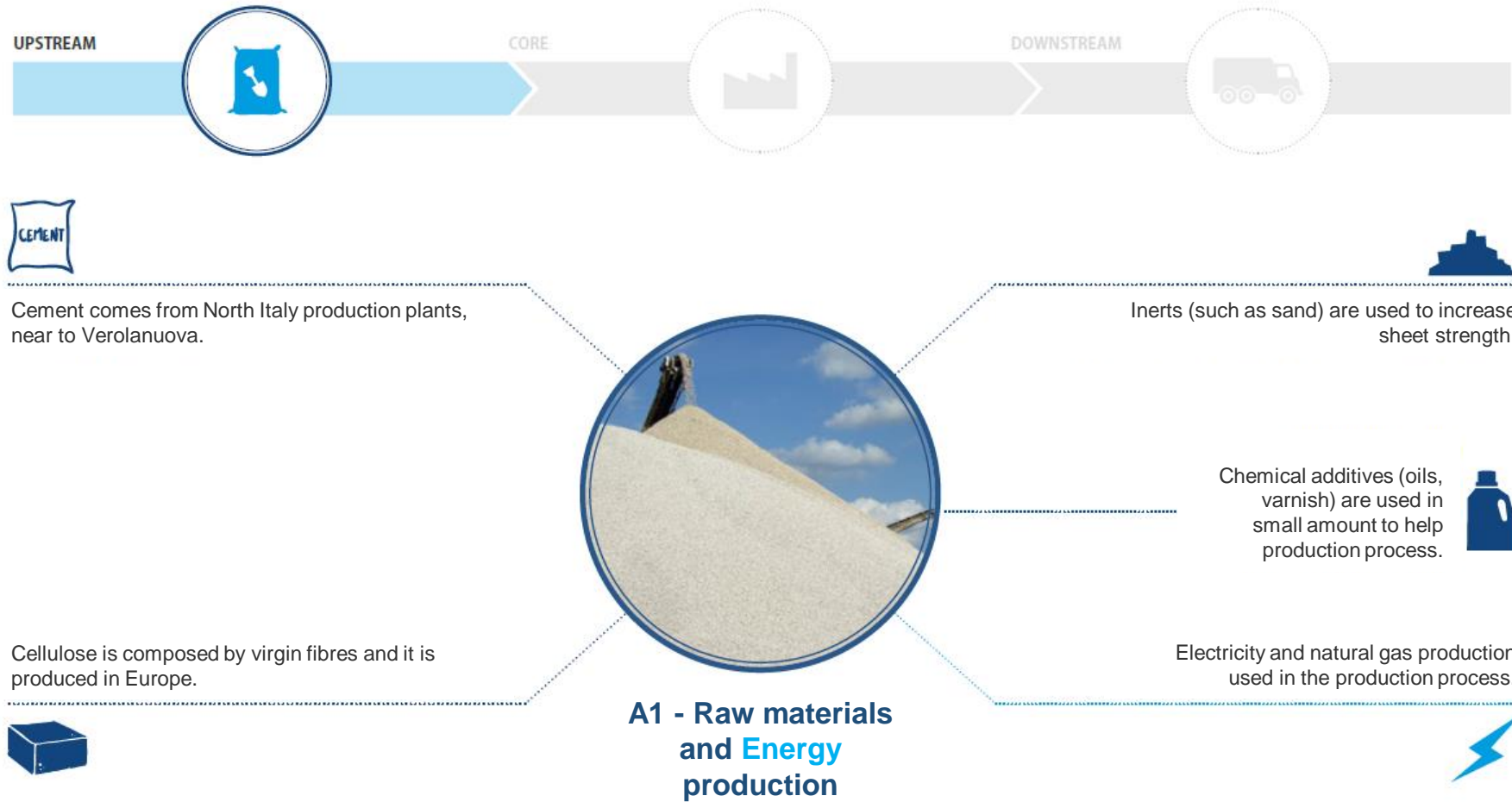
The system analysed includes all life cycle phases from raw material production to final customer distribution, as required by the option "cradle to gate with options" of the reference PCR.

The option includes the evaluation of upstream process (module A1), core process (modules A2 and A3) and downstream process (module A4).

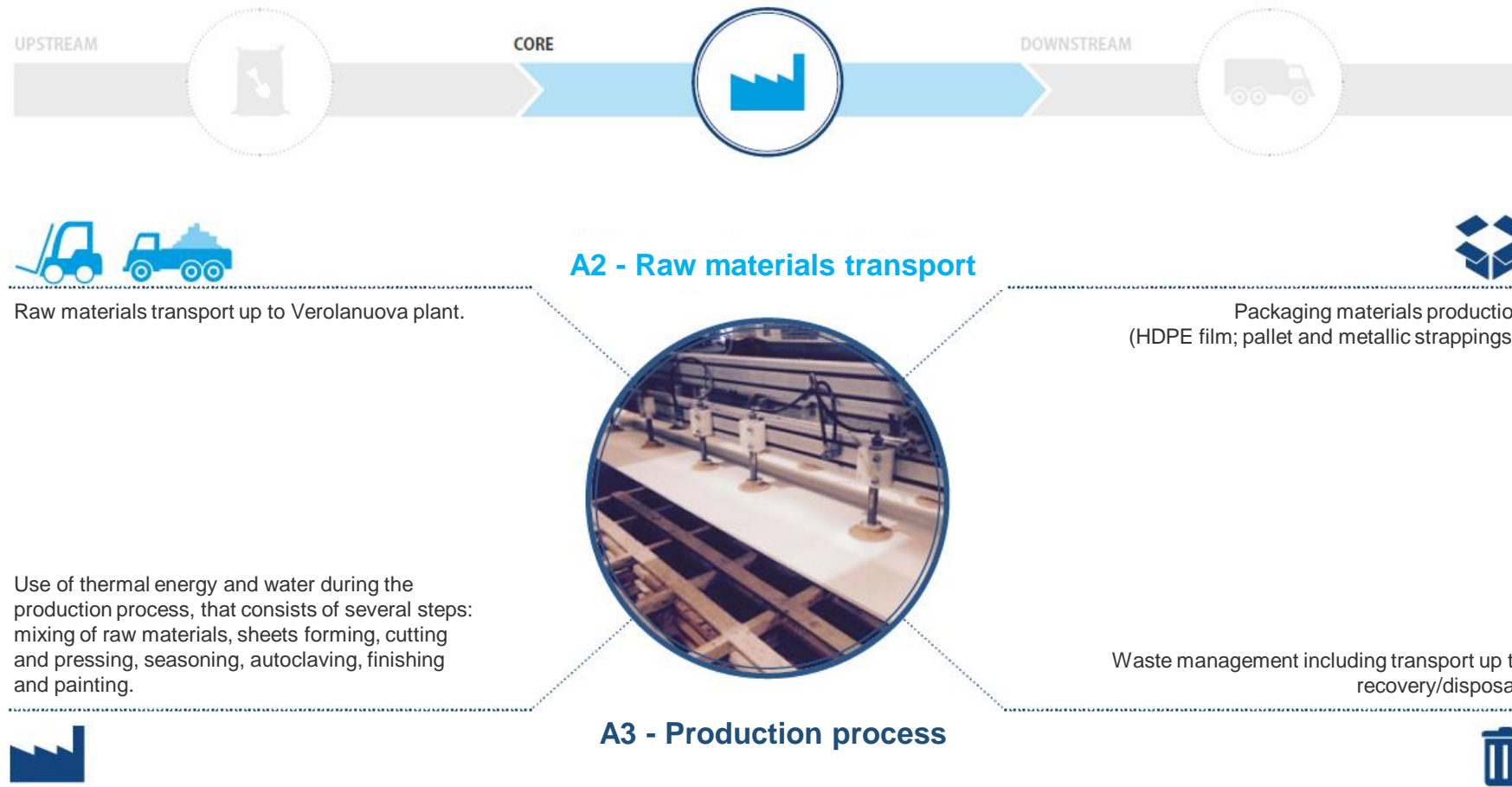
4. SYSTEM BOUNDARIES



5. UPSTREAM PROCESSES



6. CORE PROCESSES



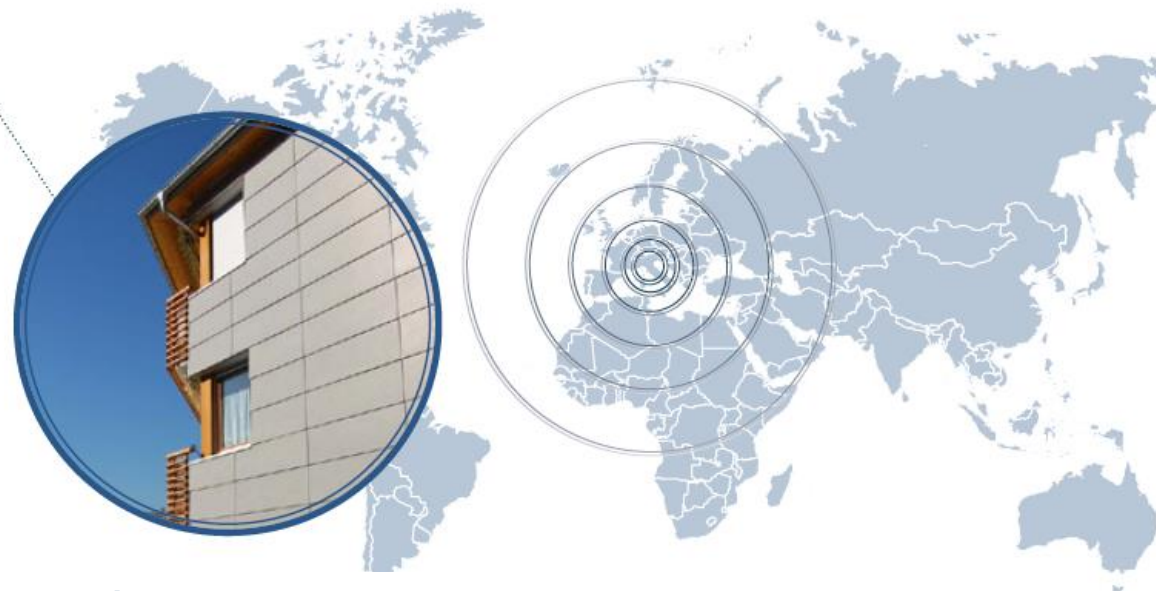
7. DOWNSTREAM PROCESSES



Impacts related to transport have been evaluated considering all shipments during year 2021.

Reference distance has been calculated by averaging the distances of each shipment with the weight represented by the quantity transported.






Environmental impacts have been calculated considering the information coming from Ecoinvent database version 3.5 (Lorry 16-32t, EURO5 and Transoceanic freight ship).








A4 - Final product transport

8. ENVIRONMENTAL PERFORMANCE (natural or mass color sheet - thickness 4 mm)






Results in terms of resource consumption or generated impacts are divided in three phases (upstream, core and downstream) and sub-phases (A1, A2, A3, A4) as requested by the reference PCR.






 RENEWABLE RESOURCES	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Use of RENEWABLE primary energy resources used as raw materials [MJ, net calorific value]	1,20E+01	0,00E+00	3,15E+00	0,00E+00	1,51E+01
Use of RENEWABLE primary energy excluding renewable primary energy resources used as raw materials [MJ, net calorific value]	1,81E+01	8,13E-02	1,16E+00	2,46E-01	1,96E+01
Total use of RENEWABLE primary energy resources (primary energy and primary energy resources used as raw materials) [MJ, net calorific value]	3,01E+01	8,13E-02	4,31E+00	2,46E-01	3,47E+01

NATURAL OR MASS COLOR SHEET - THICKNESS 4 mm






 NON RENEWABLE RESOURCES	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Use of NON RENEWABLE primary energy resources used as raw materials [MJ, net calorific value]	0,00E+00	0,00E+00	7,40E-01	0,00E+00	7,40E-01
Use of NON RENEWABLE primary energy excluding renewable primary energy resources used as raw materials [MJ, net calorific value]	7,78E+01	6,90E+00	5,46E+00	1,70E+01	1,07E+02
Total use of NON RENEWABLE primary energy resources (primary energy and primary energy resources used as raw materials) [MJ, net calorific value]	7,78E+01	6,90E+00	6,20E+00	1,70E+01	1,08E+02






NATURAL OR MASS COLOR SHEET - THICKNESS 4 mm

 USE OF SECONDARY RESOURCES	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Use of secondary material [kg]	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
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

 NET USE OF FRESH WATER	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Net use of fresh water [m ³]	5,47E-02	1,27E-03	1,08E-02	3,39E-03	7,01E-02






NATURAL OR MASS COLOR SHEET - THICKNESS 4 mm

 WASTE PRODUCTION AND TREATMENT	UPSTREAM	CORE			DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution		
Hazardous waste disposed [kg]	7,27E-02	4,42E-03	5,08E-03	1,20E-02	9,42E-02	
Non hazardous waste disposed [kg]	1,71E-01	2,89E-01	1,27E-01	7,52E-01	1,34E+00	
Radioactive waste disposed [kg]	1,54E-04	4,65E-05	2,49E-05	1,14E-04	3,39E-04	
Material for recycling [kg]	0,00E+00	0,00E+00	4,91E+00	0,00E+00	4,91E+00	






 ENVIRONMENTAL IMPACT PARAMETERS	UPSTREAM	CORE			DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution		
Global Warming Potential, GWP [kg CO ₂ eq]	5,18E+00	4,50E-01	2,56E+00	1,10E+00	9,29E+00	
Ozone Depletion Potential, ODP [kg CFC-11 eq]	8,40E-07	8,21E-08	4,34E-08	2,00E-07	1,17E-06	
Photochemical Ozone Creation, POCP [kg C ₂ H ₄ eq]	8,03E-04	9,82E-05	1,18E-04	1,91E-04	1,21E-03	
Acidification Potential, AP [kg SO ₂ eq]	1,64E-02	2,31E-03	1,64E-03	3,96E-03	2,43E-02	
Eutrophication Potential, EP [kg PO ₄ ³⁻ eq]	2,28E-03	3,03E-04	3,08E-04	6,44E-04	3,54E-03	
Depletion of abiotic resources-elements, ADP-elements [kg Sb eq]	8,76E-06	1,22E-06	6,89E-07	3,21E-06	1,39E-05	
Depletion of abiotic resources-fossil, ADP-fossil fuels [MJ]	7,96E+01	6,81E+00	6,02E+00	1,67E+01	1,09E+02	






8. ENVIRONMENTAL PERFORMANCE (natural or mass color sheet - thickness 5 mm)






Results in terms of resource consumption or generated impacts are divided in three phases (upstream, core and downstream) and sub-phases (A1, A2, A3, A4) as requested by the reference PCR.

 RENEWABLE RESOURCES	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Use of RENEWABLE primary energy resources used as raw materials [MJ, net calorific value]	1,50E+01	0,00E+00	3,94E+00	0,00E+00	1,89E+01
Use of RENEWABLE primary energy excluding renewable primary energy resources used as raw materials [MJ, net calorific value]	2,26E+01	1,02E-01	1,45E+00	3,07E-01	2,45E+01
Total use of RENEWABLE primary energy resources (primary energy and primary energy resources used as raw materials) [MJ, net calorific value]	3,76E+01	1,02E-01	5,39E+00	3,07E-01	4,34E+01






NATURAL OR MASS COLOR SHEET - THICKNESS 5 mm






 NON RENEWABLE RESOURCES	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Use of NON RENEWABLE primary energy resources used as raw materials [MJ, net calorific value]	0,00E+00	0,00E+00	9,25E-01	0,00E+00	9,25E-01
Use of NON RENEWABLE primary energy excluding renewable primary energy resources used as raw materials [MJ, net calorific value]	9,72E+01	8,62E+00	6,83E+00	2,12E+01	1,34E+02
Total use of NON RENEWABLE primary energy resources (primary energy and primary energy resources used as raw materials) [MJ, net calorific value]	9,72E+01	8,62E+00	7,75E+00	2,12E+01	1,35E+02

 USE OF SECONDARY RESOURCES	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Use of secondary material [kg]	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
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

 NET USE OF FRESH WATER	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Net use of fresh water [m ³]	6,84E-02	1,59E-03	1,35E-02	4,23E-03	8,77E-02






NATURAL OR MASS COLOR SHEET - THICKNESS 5 mm

 WASTE PRODUCTION AND TREATMENT	UPSTREAM	CORE			DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution		
Hazardous waste disposed [kg]	9,09E-02	5,53E-03	6,34E-03	1,50E-02	1,18E-01	
Non hazardous waste disposed [kg]	2,14E-01	3,62E-01	1,59E-01	9,40E-01	1,67E+00	
Radioactive waste disposed [kg]	1,92E-04	5,81E-05	3,12E-05	1,43E-04	4,24E-04	
Material for recycling [kg]	0,00E+00	0,00E+00	6,14E+00	0,00E+00	6,14E+00	






 ENVIRONMENTAL IMPACT PARAMETERS	UPSTREAM	CORE			DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution		
Global Warming Potential, GWP [kg CO ₂ eq]	6,48E+00	5,63E-01	3,20E+00	1,38E+00	1,16E+01	
Ozone Depletion Potential, ODP [kg CFC-11 eq]	1,05E-06	1,03E-07	5,42E-08	2,50E-07	1,46E-06	
Photochemical Ozone Creation, POCP [kg C ₂ H ₄ eq]	1,00E-03	1,23E-04	1,48E-04	2,38E-04	1,51E-03	
Acidification Potential, AP [kg SO ₂ eq]	2,04E-02	2,88E-03	2,05E-03	4,95E-03	3,03E-02	
Eutrophication Potential, EP [kg PO ₄ ³⁻ eq]	2,85E-03	3,79E-04	3,85E-04	8,05E-04	4,42E-03	
Depletion of abiotic resources-elements, ADP-elements [kg Sb eq]	1,10E-05	1,53E-06	8,62E-07	4,02E-06	1,74E-05	
Depletion of abiotic resources-fossil, ADP-fossil fuels [MJ]	9,95E+01	8,52E+00	7,52E+00	2,08E+01	1,36E+02	

8. ENVIRONMENTAL PERFORMANCE (natural or mass color sheet - thickness 6 mm)






Results in terms of resource consumption or generated impacts are divided in three phases (upstream, core and downstream) and sub-phases (A1, A2, A3, A4) as requested by the reference PCR.






 RENEWABLE RESOURCES	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Use of RENEWABLE primary energy resources used as raw materials [MJ, net calorific value]	1,80E+01	0,00E+00	4,72E+00	0,00E+00	2,27E+01
Use of RENEWABLE primary energy excluding renewable primary energy resources used as raw materials [MJ, net calorific value]	2,72E+01	1,22E-01	1,74E+00	3,68E-01	2,94E+01
Total use of RENEWABLE primary energy resources (primary energy and primary energy resources used as raw materials) [MJ, net calorific value]	4,52E+01	1,22E-01	6,46E+00	3,68E-01	5,21E+01

NATURAL OR MASS COLOR SHEET - THICKNESS 6 mm






 NON RENEWABLE RESOURCES	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Use of NON RENEWABLE primary energy resources used as raw materials [MJ, net calorific value]	0,00E+00	0,00E+00	1,11E+00	0,00E+00	1,11E+00
Use of NON RENEWABLE primary energy excluding renewable primary energy resources used as raw materials [MJ, net calorific value]	1,17E+02	1,03E+01	8,19E+00	2,55E+01	1,61E+02
Total use of NON RENEWABLE primary energy resources (primary energy and primary energy resources used as raw materials) [MJ, net calorific value]	1,17E+02	1,03E+01	9,30E+00	2,55E+01	1,62E+02






NATURAL OR MASS COLOR SHEET - THICKNESS 6 mm

 USE OF SECONDARY RESOURCES	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Use of secondary material [kg]	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
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

 NET USE OF FRESH WATER	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Net use of fresh water [m ³]	8,21E-02	1,91E-03	1,62E-02	5,08E-03	1,05E-01






NATURAL OR MASS COLOR SHEET - THICKNESS 6 mm

 WASTE PRODUCTION AND TREATMENT	UPSTREAM	CORE			DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution		
Hazardous waste disposed [kg]	1,09E-01	6,63E-03	7,61E-03	1,80E-02	1,41E-01	
Non hazardous waste disposed [kg]	2,56E-01	4,34E-01	1,91E-01	1,13E+00	2,01E+00	
Radioactive waste disposed [kg]	2,30E-04	6,97E-05	3,74E-05	1,72E-04	5,09E-04	
Material for recycling [kg]	0,00E+00	0,00E+00	7,36E+00	0,00E+00	7,36E+00	






 ENVIRONMENTAL IMPACT PARAMETERS	UPSTREAM	CORE			DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution		
Global Warming Potential, GWP [kg CO ₂ eq]	7,78E+00	6,76E-01	3,83E+00	1,65E+00	1,39E+01	
Ozone Depletion Potential, ODP [kg CFC-11 eq]	1,26E-06	1,23E-07	6,50E-08	3,01E-07	1,75E-06	
Photochemical Ozone Creation, POCP [kg C ₂ H ₄ eq]	1,21E-03	1,47E-04	1,77E-04	2,86E-04	1,82E-03	
Acidification Potential, AP [kg SO ₂ eq]	2,45E-02	3,46E-03	2,46E-03	5,94E-03	3,64E-02	
Eutrophication Potential, EP [kg PO ₄ ³⁻ eq]	3,42E-03	4,54E-04	4,63E-04	9,66E-04	5,31E-03	
Depletion of abiotic resources-elements, ADP-elements [kg Sb eq]	1,31E-05	1,83E-06	1,03E-06	4,82E-06	2,08E-05	
Depletion of abiotic resources-fossil, ADP-fossil fuels [MJ]	1,19E+02	1,02E+01	9,03E+00	2,50E+01	1,64E+02	






8. ENVIRONMENTAL PERFORMANCE (natural or mass color sheet - thickness 8 mm)






Results in terms of resource consumption or generated impacts are divided in three phases (upstream, core and downstream) and sub-phases (A1, A2, A3, A4) as requested by the reference PCR.

 RENEWABLE RESOURCES	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Use of RENEWABLE primary energy resources used as raw materials [MJ, net calorific value]	2,40E+01	0,00E+00	6,30E+00	0,00E+00	3,03E+01
Use of RENEWABLE primary energy excluding renewable primary energy resources used as raw materials [MJ, net calorific value]	3,62E+01	1,63E-01	2,32E+00	4,91E-01	3,92E+01
Total use of RENEWABLE primary energy resources (primary energy and primary energy resources used as raw materials) [MJ, net calorific value]	6,02E+01	1,63E-01	8,62E+00	4,91E-01	6,95E+01






NATURAL OR MASS COLOR SHEET - THICKNESS 8 mm






 NON RENEWABLE RESOURCES	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Use of NON RENEWABLE primary energy resources used as raw materials [MJ, net calorific value]	0,00E+00	0,00E+00	1,48E+00	0,00E+00	1,48E+00
Use of NON RENEWABLE primary energy excluding renewable primary energy resources used as raw materials [MJ, net calorific value]	1,56E+02	1,38E+01	1,09E+01	3,40E+01	2,14E+02
Total use of NON RENEWABLE primary energy resources (primary energy and primary energy resources used as raw materials) [MJ, net calorific value]	1,56E+02	1,38E+01	1,24E+01	3,40E+01	2,16E+02

 USE OF SECONDARY RESOURCES	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Use of secondary material [kg]	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
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

 NET USE OF FRESH WATER	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Net use of fresh water [m ³]	1,09E-01	2,54E-03	2,15E-02	6,77E-03	1,40E-01






NATURAL OR MASS COLOR SHEET - THICKNESS 8 mm

 WASTE PRODUCTION AND TREATMENT	UPSTREAM	CORE			DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution		
Hazardous waste disposed [kg]	1,45E-01	8,84E-03	1,02E-02	2,40E-02	1,88E-01	
Non hazardous waste disposed [kg]	3,42E-01	5,79E-01	2,54E-01	1,50E+00	2,68E+00	
Radioactive waste disposed [kg]	3,07E-04	9,30E-05	4,99E-05	2,29E-04	6,79E-04	
Material for recycling [kg]	0,00E+00	0,00E+00	9,82E+00	0,00E+00	9,82E+00	






 ENVIRONMENTAL IMPACT PARAMETERS	UPSTREAM	CORE			DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution		
Global Warming Potential, GWP [kg CO ₂ eq]	1,04E+01	9,01E-01	5,11E+00	2,20E+00	1,86E+01	
Ozone Depletion Potential, ODP [kg CFC-11 eq]	1,68E-06	1,64E-07	8,67E-08	4,01E-07	2,33E-06	
Photochemical Ozone Creation, POCP [kg C ₂ H ₄ eq]	1,61E-03	1,96E-04	2,36E-04	3,82E-04	2,42E-03	
Acidification Potential, AP [kg SO ₂ eq]	3,27E-02	4,61E-03	3,28E-03	7,91E-03	4,85E-02	
Eutrophication Potential, EP [kg PO ₄ ³⁻ eq]	4,56E-03	6,06E-04	6,17E-04	1,29E-03	7,07E-03	
Depletion of abiotic resources-elements, ADP-elements [kg Sb eq]	1,75E-05	2,44E-06	1,38E-06	6,43E-06	2,78E-05	
Depletion of abiotic resources-fossil, ADP-fossil fuels [MJ]	1,59E+02	1,36E+01	1,20E+01	3,33E+01	2,18E+02	






8. ENVIRONMENTAL PERFORMANCE (natural or mass color sheet - thickness 10 mm)






Results in terms of resource consumption or generated impacts are divided in three phases (upstream, core and downstream) and sub-phases (A1, A2, A3, A4) as requested by the reference PCR.

 RENEWABLE RESOURCES	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Use of RENEWABLE primary energy resources used as raw materials [MJ, net calorific value]	3,00E+01	0,00E+00	7,87E+00	0,00E+00	3,78E+01
Use of RENEWABLE primary energy excluding renewable primary energy resources used as raw materials [MJ, net calorific value]	4,53E+01	2,03E-01	2,90E+00	6,14E-01	4,90E+01
Total use of RENEWABLE primary energy resources (primary energy and primary energy resources used as raw materials) [MJ, net calorific value]	7,53E+01	2,03E-01	1,08E+01	6,14E-01	8,68E+01






NATURAL OR MASS COLOR SHEET - THICKNESS 10 mm






 NON RENEWABLE RESOURCES	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Use of NON RENEWABLE primary energy resources used as raw materials [MJ, net calorific value]	0,00E+00	0,00E+00	1,85E+00	0,00E+00	1,85E+00
Use of NON RENEWABLE primary energy excluding renewable primary energy resources used as raw materials [MJ, net calorific value]	1,94E+02	1,72E+01	1,37E+01	4,24E+01	2,68E+02
Total use of NON RENEWABLE primary energy resources (primary energy and primary energy resources used as raw materials) [MJ, net calorific value]	1,94E+02	1,72E+01	1,55E+01	4,24E+01	2,70E+02

 USE OF SECONDARY RESOURCES	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Use of secondary material [kg]	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
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

 NET USE OF FRESH WATER	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Net use of fresh water [m ³]	1,37E-01	3,18E-03	2,69E-02	8,46E-03	1,75E-01






NATURAL OR MASS COLOR SHEET - THICKNESS 10 mm

 WASTE PRODUCTION AND TREATMENT	UPSTREAM	CORE			DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution		
Hazardous waste disposed [kg]	1,82E-01	1,11E-02	1,27E-02	3,00E-02	2,35E-01	
Non hazardous waste disposed [kg]	4,27E-01	7,23E-01	3,18E-01	1,88E+00	3,35E+00	
Radioactive waste disposed [kg]	3,84E-04	1,16E-04	6,23E-05	2,86E-04	8,49E-04	
Material for recycling [kg]	0,00E+00	0,00E+00	1,23E+01	0,00E+00	1,23E+01	






 ENVIRONMENTAL IMPACT PARAMETERS	UPSTREAM	CORE			DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution		
Global Warming Potential, GWP [kg CO ₂ eq]	1,30E+01	1,13E+00	6,39E+00	2,75E+00	2,32E+01	
Ozone Depletion Potential, ODP [kg CFC-11 eq]	2,10E-06	2,05E-07	1,08E-07	5,01E-07	2,91E-06	
Photochemical Ozone Creation, POCP [kg C ₂ H ₄ eq]	2,01E-03	2,46E-04	2,95E-04	4,77E-04	3,03E-03	
Acidification Potential, AP [kg SO ₂ eq]	4,09E-02	5,77E-03	4,10E-03	9,89E-03	6,07E-02	
Eutrophication Potential, EP [kg PO ₄ ³⁻ eq]	5,70E-03	7,57E-04	7,71E-04	1,61E-03	8,84E-03	
Depletion of abiotic resources-elements, ADP-elements [kg Sb eq]	2,19E-05	3,05E-06	1,72E-06	8,03E-06	3,47E-05	
Depletion of abiotic resources-fossil, ADP-fossil fuels [MJ]	1,99E+02	1,70E+01	1,50E+01	4,17E+01	2,73E+02	

8. ENVIRONMENTAL PERFORMANCE (natural or mass color sheet - thickness 12 mm)






Results in terms of resource consumption or generated impacts are divided in three phases (upstream, core and downstream) and sub-phases (A1, A2, A3, A4) as requested by the reference PCR.






 RENEWABLE RESOURCES	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Use of RENEWABLE primary energy resources used as raw materials [MJ, net calorific value]	3,60E+01	0,00E+00	9,45E+00	0,00E+00	4,54E+01
Use of RENEWABLE primary energy excluding renewable primary energy resources used as raw materials [MJ, net calorific value]	5,43E+01	2,44E-01	3,48E+00	7,37E-01	5,88E+01
Total use of RENEWABLE primary energy resources (primary energy and primary energy resources used as raw materials) [MJ, net calorific value]	9,03E+01	2,44E-01	1,29E+01	7,37E-01	1,04E+02






NATURAL OR MASS COLOR SHEET - THICKNESS 12 mm






 NON RENEWABLE RESOURCES	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Use of NON RENEWABLE primary energy resources used as raw materials [MJ, net calorific value]	0,00E+00	0,00E+00	2,22E+00	0,00E+00	2,22E+00
Use of NON RENEWABLE primary energy excluding renewable primary energy resources used as raw materials [MJ, net calorific value]	2,33E+02	2,07E+01	1,64E+01	5,09E+01	3,21E+02
Total use of NON RENEWABLE primary energy resources (primary energy and primary energy resources used as raw materials) [MJ, net calorific value]	2,33E+02	2,07E+01	1,86E+01	5,09E+01	3,24E+02

NATURAL OR MASS COLOR SHEET - THICKNESS 12 mm

 USE OF SECONDARY RESOURCES	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Use of secondary material [kg]	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
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






 NET USE OF FRESH WATER	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Net use of fresh water [m ³]	1,64E-01	3,81E-03	3,23E-02	1,02E-02	2,10E-01

 WASTE PRODUCTION AND TREATMENT	UPSTREAM	CORE			DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution		
Hazardous waste disposed [kg]	2,18E-01	1,33E-02	1,52E-02	3,60E-02	2,83E-01	
Non hazardous waste disposed [kg]	5,13E-01	8,68E-01	3,81E-01	2,26E+00	4,02E+00	
Radioactive waste disposed [kg]	4,61E-04	1,39E-04	7,48E-05	3,43E-04	1,02E-03	
Material for recycling [kg]	0,00E+00	0,00E+00	1,47E+01	0,00E+00	1,47E+01	






 ENVIRONMENTAL IMPACT PARAMETERS	UPSTREAM	CORE			DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution		
Global Warming Potential, GWP [kg CO ₂ eq]	1,56E+01	1,35E+00	7,67E+00	3,31E+00	2,79E+01	
Ozone Depletion Potential, ODP [kg CFC-11 eq]	2,52E-06	2,46E-07	1,30E-07	6,01E-07	3,50E-06	
Photochemical Ozone Creation, POCP [kg C ₂ H ₄ eq]	2,41E-03	2,95E-04	3,54E-04	5,72E-04	3,63E-03	
Acidification Potential, AP [kg SO ₂ eq]	4,91E-02	6,92E-03	4,93E-03	1,19E-02	7,28E-02	
Eutrophication Potential, EP [kg PO ₄ ³⁻ eq]	6,84E-03	9,09E-04	9,25E-04	1,93E-03	1,06E-02	
Depletion of abiotic resources-elements, ADP-elements [kg Sb eq]	2,63E-05	3,67E-06	2,07E-06	9,64E-06	4,17E-05	
Depletion of abiotic resources-fossil, ADP-fossil fuels [MJ]	2,39E+02	2,04E+01	1,81E+01	5,00E+01	3,27E+02	

8. ENVIRONMENTAL PERFORMANCE (painted sheet - thickness 5 mm)






Results in terms of resource consumption or generated impacts are divided in three phases (upstream, core and downstream) and sub-phases (A1, A2, A3, A4) as requested by the reference PCR.






 RENEWABLE RESOURCES	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Use of RENEWABLE primary energy resources used as raw materials [MJ, net calorific value]	1,50E+01	0,00E+00	3,94E+00	0,00E+00	1,89E+01
Use of RENEWABLE primary energy excluding renewable primary energy resources used as raw materials [MJ, net calorific value]	2,31E+01	1,03E-01	1,45E+00	3,07E-01	2,50E+01
Total use of RENEWABLE primary energy resources (primary energy and primary energy resources used as raw materials) [MJ, net calorific value]	3,81E+01	1,03E-01	5,39E+00	3,07E-01	4,39E+01






PAINTED SHEET - THICKNESS 5 mm






 NON RENEWABLE RESOURCES	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Use of NON RENEWABLE primary energy resources used as raw materials [MJ, net calorific value]	0,00E+00	0,00E+00	9,25E-01	0,00E+00	9,25E-01
Use of NON RENEWABLE primary energy excluding renewable primary energy resources used as raw materials [MJ, net calorific value]	1,11E+02	8,71E+00	6,83E+00	2,12E+01	1,48E+02
Total use of NON RENEWABLE primary energy resources (primary energy and primary energy resources used as raw materials) [MJ, net calorific value]	1,11E+02	8,71E+00	7,75E+00	2,12E+01	1,49E+02

PAINTED SHEET - THICKNESS 5 mm

 USE OF SECONDARY RESOURCES	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Use of secondary material [kg]	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
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






 NET USE OF FRESH WATER	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Net use of fresh water [m ³]	8,06E-02	1,60E-03	1,35E-02	4,23E-03	9,99E-02

 WASTE PRODUCTION AND TREATMENT	UPSTREAM	CORE			DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution		
Hazardous waste disposed [kg]	1,11E-01	5,58E-03	6,34E-03	1,50E-02	1,38E-01	
Non hazardous waste disposed [kg]	2,65E-01	3,66E-01	1,59E-01	9,40E-01	1,73E+00	
Radioactive waste disposed [kg]	2,18E-04	5,87E-05	3,12E-05	1,43E-04	4,51E-04	
Material for recycling [kg]	0,00E+00	0,00E+00	6,14E+00	0,00E+00	6,14E+00	

 ENVIRONMENTAL IMPACT PARAMETERS	UPSTREAM	CORE			DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution		
Global Warming Potential, GWP [kg CO ₂ eq]	6,95E+00	5,69E-01	3,51E+00	1,38E+00	1,24E+01	
Ozone Depletion Potential, ODP [kg CFC-11 eq]	1,18E-06	1,04E-07	5,42E-08	2,50E-07	1,59E-06	
Photochemical Ozone Creation, POCP [kg C ₂ H ₄ eq]	1,29E-03	1,24E-04	1,54E-04	2,38E-04	1,81E-03	
Acidification Potential, AP [kg SO ₂ eq]	2,58E-02	2,90E-03	2,10E-03	4,95E-03	3,57E-02	
Eutrophication Potential, EP [kg PO ₄ ³⁻ eq]	3,17E-03	3,82E-04	3,98E-04	8,05E-04	4,76E-03	
Depletion of abiotic resources-elements, ADP-elements [kg Sb eq]	1,43E-05	1,54E-06	8,62E-07	4,02E-06	2,07E-05	
Depletion of abiotic resources-fossil, ADP-fossil fuels [MJ]	1,14E+02	8,61E+00	7,52E+00	2,08E+01	1,51E+02	






8. ENVIRONMENTAL PERFORMANCE (painted sheet - thickness 6 mm)

Results in terms of resource consumption or generated impacts are divided in three phases (upstream, core and downstream) and sub-phases (A1, A2, A3, A4) as requested by the reference PCR.






 RENEWABLE RESOURCES	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Use of RENEWABLE primary energy resources used as raw materials [MJ, net calorific value]	1,80E+01	0,00E+00	4,72E+00	0,00E+00	2,27E+01
Use of RENEWABLE primary energy excluding renewable primary energy resources used as raw materials [MJ, net calorific value]	2,78E+01	1,23E-01	1,74E+00	3,68E-01	3,00E+01
Total use of RENEWABLE primary energy resources (primary energy and primary energy resources used as raw materials) [MJ, net calorific value]	4,57E+01	1,23E-01	6,46E+00	3,68E-01	5,27E+01






PAINTED SHEET - THICKNESS 6 mm






PAINTED SHEET - THICKNESS 6 mm






 NON RENEWABLE RESOURCES	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Use of NON RENEWABLE primary energy resources used as raw materials [MJ, net calorific value]	0,00E+00	0,00E+00	1,11E+00	0,00E+00	1,11E+00
Use of NON RENEWABLE primary energy excluding renewable primary energy resources used as raw materials [MJ, net calorific value]	1,34E+02	1,05E+01	8,19E+00	2,55E+01	1,78E+02
Total use of NON RENEWABLE primary energy resources (primary energy and primary energy resources used as raw materials) [MJ, net calorific value]	1,34E+02	1,05E+01	9,30E+00	2,55E+01	1,79E+02

PAINTED SHEET - THICKNESS 6 mm

 USE OF SECONDARY RESOURCES	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Use of secondary material [kg]	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
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






 NET USE OF FRESH WATER	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Net use of fresh water [m ³]	9,67E-02	1,92E-03	1,62E-02	5,08E-03	1,20E-01

 WASTE PRODUCTION AND TREATMENT	UPSTREAM	CORE			DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution		
Hazardous waste disposed [kg]	1,33E-01	6,70E-03	7,61E-03	1,80E-02	1,65E-01	
Non hazardous waste disposed [kg]	3,18E-01	4,39E-01	1,91E-01	1,13E+00	2,08E+00	
Radioactive waste disposed [kg]	2,61E-04	7,05E-05	3,74E-05	1,72E-04	5,41E-04	
Material for recycling [kg]	0,00E+00	0,00E+00	7,36E+00	0,00E+00	7,36E+00	






 ENVIRONMENTAL IMPACT PARAMETERS	UPSTREAM	CORE			DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution		
Global Warming Potential, GWP [kg CO ₂ eq]	8,35E+00	6,83E-01	4,22E+00	1,65E+00	1,49E+01	
Ozone Depletion Potential, ODP [kg CFC-11 eq]	1,41E-06	1,24E-07	6,50E-08	3,01E-07	1,90E-06	
Photochemical Ozone Creation, POCP [kg C ₂ H ₄ eq]	1,55E-03	1,48E-04	1,85E-04	2,86E-04	2,17E-03	
Acidification Potential, AP [kg SO ₂ eq]	3,09E-02	3,48E-03	2,52E-03	5,94E-03	4,29E-02	
Eutrophication Potential, EP [kg PO ₄ ³⁻ eq]	3,81E-03	4,58E-04	4,77E-04	9,66E-04	5,71E-03	
Depletion of abiotic resources-elements, ADP-elements [kg Sb eq]	1,72E-05	1,85E-06	1,03E-06	4,82E-06	2,49E-05	
Depletion of abiotic resources-fossil, ADP-fossil fuels [MJ]	1,37E+02	1,03E+01	9,03E+00	2,50E+01	1,81E+02	

8. ENVIRONMENTAL PERFORMANCE (painted sheet - thickness 8 mm)






Results in terms of resource consumption or generated impacts are divided in three phases (upstream, core and downstream) and sub-phases (A1, A2, A3, A4) as requested by the reference PCR.






 RENEWABLE RESOURCES	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Use of RENEWABLE primary energy resources used as raw materials [MJ, net calorific value]	2,40E+01	0,00E+00	6,30E+00	0,00E+00	3,03E+01
Use of RENEWABLE primary energy excluding renewable primary energy resources used as raw materials [MJ, net calorific value]	3,70E+01	1,64E-01	2,32E+00	4,91E-01	4,00E+01
Total use of RENEWABLE primary energy resources (primary energy and primary energy resources used as raw materials) [MJ, net calorific value]	6,10E+01	1,64E-01	8,62E+00	4,91E-01	7,03E+01






PAINTED SHEET - THICKNESS 8 mm






 NON RENEWABLE RESOURCES	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Use of NON RENEWABLE primary energy resources used as raw materials [MJ, net calorific value]	0,00E+00	0,00E+00	1,48E+00	0,00E+00	1,48E+00
Use of NON RENEWABLE primary energy excluding renewable primary energy resources used as raw materials [MJ, net calorific value]	1,78E+02	1,39E+01	1,09E+01	3,40E+01	2,37E+02
Total use of NON RENEWABLE primary energy resources (primary energy and primary energy resources used as raw materials) [MJ, net calorific value]	1,78E+02	1,39E+01	1,24E+01	3,40E+01	2,38E+02

PAINTED SHEET - THICKNESS 8 mm

 USE OF SECONDARY RESOURCES	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Use of secondary material [kg]	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
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






 NET USE OF FRESH WATER	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Net use of fresh water [m ³]	1,29E-01	2,57E-03	2,15E-02	6,77E-03	1,60E-01

 WASTE PRODUCTION AND TREATMENT	UPSTREAM	CORE			DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution		
Hazardous waste disposed [kg]	1,77E-01	8,93E-03	1,02E-02	2,40E-02	2,20E-01	
Non hazardous waste disposed [kg]	4,24E-01	5,85E-01	2,54E-01	1,50E+00	2,77E+00	
Radioactive waste disposed [kg]	3,48E-04	9,40E-05	4,99E-05	2,29E-04	7,21E-04	
Material for recycling [kg]	0,00E+00	0,00E+00	9,82E+00	0,00E+00	9,82E+00	

 ENVIRONMENTAL IMPACT PARAMETERS	UPSTREAM	CORE			DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution		
Global Warming Potential, GWP [kg CO ₂ eq]	1,11E+01	9,10E-01	5,62E+00	2,20E+00	1,99E+01	
Ozone Depletion Potential, ODP [kg CFC-11 eq]	1,88E-06	1,66E-07	8,67E-08	4,01E-07	2,54E-06	
Photochemical Ozone Creation, POCP [kg C ₂ H ₄ eq]	2,07E-03	1,98E-04	2,46E-04	3,82E-04	2,89E-03	
Acidification Potential, AP [kg SO ₂ eq]	4,13E-02	4,64E-03	3,36E-03	7,91E-03	5,72E-02	
Eutrophication Potential, EP [kg PO ₄ ³⁻ eq]	5,08E-03	6,11E-04	6,36E-04	1,29E-03	7,61E-03	
Depletion of abiotic resources-elements, ADP-elements [kg Sb eq]	2,29E-05	2,47E-06	1,38E-06	6,43E-06	3,32E-05	
Depletion of abiotic resources-fossil, ADP-fossil fuels [MJ]	1,82E+02	1,38E+01	1,20E+01	3,33E+01	2,41E+02	






8. ENVIRONMENTAL PERFORMANCE (painted sheet - thickness 10 mm)

Results in terms of resource consumption or generated impacts are divided in three phases (upstream, core and downstream) and sub-phases (A1, A2, A3, A4) as requested by the reference PCR.






 RENEWABLE RESOURCES	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Use of RENEWABLE primary energy resources used as raw materials [MJ, net calorific value]	3,00E+01	0,00E+00	7,87E+00	0,00E+00	3,78E+01
Use of RENEWABLE primary energy excluding renewable primary energy resources used as raw materials [MJ, net calorific value]	4,63E+01	2,05E-01	2,90E+00	6,14E-01	5,00E+01
Total use of RENEWABLE primary energy resources (primary energy and primary energy resources used as raw materials) [MJ, net calorific value]	7,62E+01	2,05E-01	1,08E+01	6,14E-01	8,78E+01






PAINTED SHEET - THICKNESS 10 mm

PAINTED SHEET - THICKNESS 10 mm






 NON RENEWABLE RESOURCES	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Use of NON RENEWABLE primary energy resources used as raw materials [MJ, net calorific value]	0,00E+00	0,00E+00	1,85E+00	0,00E+00	1,85E+00
Use of NON RENEWABLE primary energy excluding renewable primary energy resources used as raw materials [MJ, net calorific value]	2,23E+02	1,74E+01	1,37E+01	4,24E+01	2,96E+02
Total use of NON RENEWABLE primary energy resources (primary energy and primary energy resources used as raw materials) [MJ, net calorific value]	2,23E+02	1,74E+01	1,55E+01	4,24E+01	2,98E+02






PAINTED SHEET - THICKNESS 10 mm

 USE OF SECONDARY RESOURCES	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Use of secondary material [kg]	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
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

 NET USE OF FRESH WATER	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Net use of fresh water [m ³]	1,61E-01	3,21E-03	2,69E-02	8,46E-03	2,00E-01






PAINTED SHEET - THICKNESS 10 mm

 WASTE PRODUCTION AND TREATMENT	UPSTREAM	CORE			DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution		
Hazardous waste disposed [kg]	2,22E-01	1,12E-02	1,27E-02	3,00E-02	2,75E-01	
Non hazardous waste disposed [kg]	5,30E-01	7,32E-01	3,18E-01	1,88E+00	3,46E+00	
Radioactive waste disposed [kg]	4,35E-04	1,17E-04	6,23E-05	2,86E-04	9,01E-04	
Material for recycling [kg]	0,00E+00	0,00E+00	1,23E+01	0,00E+00	1,23E+01	

 ENVIRONMENTAL IMPACT PARAMETERS	UPSTREAM	CORE			DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution		
Global Warming Potential, GWP [kg CO ₂ eq]	1,39E+01	1,14E+00	7,03E+00	2,75E+00	2,48E+01	
Ozone Depletion Potential, ODP [kg CFC-11 eq]	2,35E-06	2,07E-07	1,08E-07	5,01E-07	3,17E-06	
Photochemical Ozone Creation, POCP [kg C ₂ H ₄ eq]	2,58E-03	2,47E-04	3,08E-04	4,77E-04	3,61E-03	
Acidification Potential, AP [kg SO ₂ eq]	5,16E-02	5,81E-03	4,20E-03	9,89E-03	7,15E-02	
Eutrophication Potential, EP [kg PO ₄ ³⁻ eq]	6,35E-03	7,63E-04	7,95E-04	1,61E-03	9,51E-03	
Depletion of abiotic resources-elements, ADP-elements [kg Sb eq]	2,86E-05	3,09E-06	1,72E-06	8,03E-06	4,15E-05	
Depletion of abiotic resources-fossil, ADP-fossil fuels [MJ]	2,28E+02	1,72E+01	1,50E+01	4,17E+01	3,02E+02	






8. ENVIRONMENTAL PERFORMANCE (painted sheet - thickness 12 mm)

Results in terms of resource consumption or generated impacts are divided in three phases (upstream, core and downstream) and sub-phases (A1, A2, A3, A4) as requested by the reference PCR.






 RENEWABLE RESOURCES	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Use of RENEWABLE primary energy resources used as raw materials [MJ, net calorific value]	3,60E+01	0,00E+00	9,45E+00	0,00E+00	4,54E+01
Use of RENEWABLE primary energy excluding renewable primary energy resources used as raw materials [MJ, net calorific value]	5,55E+01	2,46E-01	3,48E+00	7,37E-01	6,00E+01
Total use of RENEWABLE primary energy resources (primary energy and primary energy resources used as raw materials) [MJ, net calorific value]	9,15E+01	2,46E-01	1,29E+01	7,37E-01	1,05E+02






PAINTED SHEET - THICKNESS 12 mm






PAINTED SHEET - THICKNESS 12 mm






 NON RENEWABLE RESOURCES	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Use of NON RENEWABLE primary energy resources used as raw materials [MJ, net calorific value]	0,00E+00	0,00E+00	2,22E+00	0,00E+00	2,22E+00
Use of NON RENEWABLE primary energy excluding renewable primary energy resources used as raw materials [MJ, net calorific value]	2,67E+02	2,09E+01	1,64E+01	5,09E+01	3,55E+02
Total use of NON RENEWABLE primary energy resources (primary energy and primary energy resources used as raw materials) [MJ, net calorific value]	2,67E+02	2,09E+01	1,86E+01	5,09E+01	3,58E+02

PAINTED SHEET - THICKNESS 12 mm

 USE OF SECONDARY RESOURCES	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Use of secondary material [kg]	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
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

 NET USE OF FRESH WATER	UPSTREAM	CORE		DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution	
Net use of fresh water [m ³]	1,93E-01	3,85E-03	3,23E-02	1,02E-02	2,40E-01

 WASTE PRODUCTION AND TREATMENT	UPSTREAM	CORE			DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution		
Hazardous waste disposed [kg]	2,66E-01	1,34E-02	1,52E-02	3,60E-02	3,30E-01	
Non hazardous waste disposed [kg]	6,36E-01	8,78E-01	3,81E-01	2,26E+00	4,15E+00	
Radioactive waste disposed [kg]	5,22E-04	1,41E-04	7,48E-05	3,43E-04	1,08E-03	
Material for recycling [kg]	0,00E+00	0,00E+00	1,47E+01	0,00E+00	1,47E+01	

 ENVIRONMENTAL IMPACT PARAMETERS	UPSTREAM	CORE			DOWNSTREAM	TOTAL
	 A1 Raw material supply	 A2 Transport	 A3 Production Process	 A4 Product distribution		
Global Warming Potential, GWP [kg CO ₂ eq]	1,67E+01	1,37E+00	8,43E+00	3,31E+00	2,98E+01	
Ozone Depletion Potential, ODP [kg CFC-11 eq]	2,82E-06	2,49E-07	1,30E-07	6,01E-07	3,80E-06	
Photochemical Ozone Creation, POCP [kg C ₂ H ₄ eq]	3,10E-03	2,97E-04	3,69E-04	5,72E-04	4,34E-03	
Acidification Potential, AP [kg SO ₂ eq]	6,19E-02	6,97E-03	5,04E-03	1,19E-02	8,58E-02	
Eutrophication Potential, EP [kg PO ₄ ³⁻ eq]	7,61E-03	9,16E-04	9,55E-04	1,93E-03	1,14E-02	
Depletion of abiotic resources-elements, ADP-elements [kg Sb eq]	3,44E-05	3,71E-06	2,07E-06	9,64E-06	4,98E-05	
Depletion of abiotic resources-fossil, ADP-fossil fuels [MJ]	2,73E+02	2,07E+01	1,81E+01	5,00E+01	3,62E+02	

9. REFERENCES

Bibliography

- ISO 14025:2006
- EN 15804:2013
- PCR 2012:01 Construction products and Construction services v.2.3, 2018-11-15, UN CPC 375
- General Programme Instructions of the International EPD® System v.2.5, 2015-05-11
- Life Cycle Assessment of Flat Sheet production – Study report for Environmental Product Declaration – Reference year: 2021 (04/05/2022)

For data elaboration the following tools are used:

- Software: SimaPro v.9 (www.pre.nl)
- Main database: Ecoinvent 3.5
- Reference year: 2021
- Geographical scope of the EPD: Europe

EPDs within the same product category but from different programmes may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804.

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DIFFERENCES VERSUS PREVIOUS VERSIONS

2015-04-15 – First publication

2020-06-20 – EPD Renewal, reference year for the data: 2019

2022-06-21 – Update during validity. Update of data to reference year 2021. Added new thicknesses for the same product: 6, 12 mm not painted flat sheets; 5 and 6mm painted flat sheets



CEN standard EN 15804 served as the core PCR

PCR:	PCR 2012:01 Construction products and Construction services v.2.3, 2018-11-15
PCR review was conducted by:	The Technical Committee of the International EPD® System. Contact via info@environdec.com
Independent verification of the declaration and data, according to ISO 14025:	EPD verification (External)
Third party verifier:	Etienne Lees-Perasso
Approved by:	The International EPD® System