ENVIRONMENTAL PRODUCT DECLARATION

as per ISO 14025 and EN 15804+A1

Programme holder Institut Bauen und Umwelt e.V. (IBU)

Publisher Institut Bauen und Umwelt e.V. (IBU)

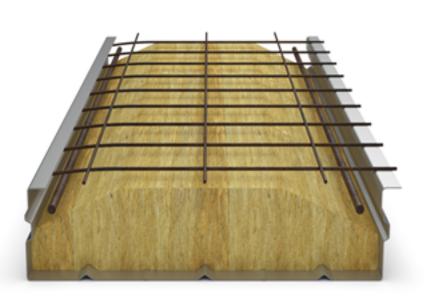
Declaration number EPD-AMC-20210131-CBB1-EN

Issue date 19/01/2022 Valid to 18/01/2027

COFRADAL® 200 ArcelorMittal Construction



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General Information

ArcelorMittal Construction

Programme holder

IBU – Institut Bauen und Umwelt e.V. Panoramastr. 1 10178 Berlin Germany

Declaration number

EPD-AMC-20210131-CBB1-EN

This declaration is based on the product category rules:

System floors, 12.2018 (PCR checked and approved by the SVR)

Issue date

19/01/2022

Valid to

18/01/2027

Dipl. Ing. Hans Peters (chairman of Institut Bauen und Umwelt e.V.)

Dr. Alexander Röder

Cofradal® 200

Owner of the declaration

ArcelorMittal Construction Morinval 55800 Contrisson France

Declared product / declared unit

The declaration applies to 1m² of Cofradal® 200.

Scope:

The Life Cycle Assessment is based on data collected from the ArcelorMittal Construction plant in Contrisson and Montataire in France producing Cofradal 200, representing 100 % of the annual production from 2018.

The owner of the declaration shall be liable for the underlying information and evidence; the IBU shall not be liable with respect to manufacturer information, life cycle assessment data and evidences.

The EPD was created according to the specifications of *EN 15804+A1*. In the following, the standard will be simplified as *EN 15804*.

Verification

The standard *EN 15804* serves as the core PCR Independent verification of the declaration and data according to *ISO 14025:2010*

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internally

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externally

Mr Carl-Otto Neven

Product

Product description/Product definition

(Managing Director Institut Bauen und Umwelt e.V.))

This Environmental Product Declaration refers to Cofradal® 200 produced on ArcelorMittal Construction plants in Contrisson and Montataire.

Man liken

Cofradal® 200 is a prefabricated composite floor system. It includes a specific steel profile, an acoustic and thermal insulation material, as well as a welded mesh and a concrete slab.

For the placing on the market of the product in the European Union/European Free Trade Association (EU/EFTA) (with the exception of Switzerland) Regulation (EU) No. 305/2011 (*CPR*) applies.

The product needs a declaration of performance taking into consideration *EN 1090-1*, Execution of steel and aluminium structures – Part 1: Procedures for attestation of conformity for load-bearing components, and the CE-marking.

For the application and use the respective national provisions apply.

Application

Cofradal® 200 is an integrated composite floor system for all types of construction. Its lightness and structural performance allow it to cross large spans (up to 7 m).

Despite its low self-weight, Cofradal® floor meets the requirements of acoustic regulations without the added ceiling. The 125mm of rock wool Cofradal® allows a fire resistance of REI (min) 120. With an additional insulation, the needed thermal insulation is reached with a U value down to 0.20 W/(m²K).

Technical Data

The technical performance of the product are essentially covered by *EN 1090-1*. The steel sheet is a S 350 GD grade with metallic coating according to *EN 10346*.

Technical data

Name	Value	Unit
Grammage / system weight	236.6	kg/m²
Sound absorption coefficient (EN ISO 354, EN ISO 11654)	85	%
Airborne sound reduction (EN 20140-9, ISO 140-3)	58	dB



Compressive strength	30	N/mm²		
Thermal Transmittance (U-Value)	0.78	W/(m².K)		

Performance data of the product in accordance with the declaration of performance with respect to its essential characteristics according to *EN 1090-1:2009 Execution of steel and aluminium structures – Part 1: Procedures for attestation of conformity for loadbearing components.*

Voluntary data: Avis Technique N°3-1/11-687_V2, Cofradal.

Base materials/Ancillary materials

The product covered by this Environmental Product Declaration is a Cofradal® 200 ready-to-pour. It is mainly composed of a galvanized steel sheet, rock wool insulation, steel reinforcements and finally concrete poured in place. Its finished mass per unit area is 23.00 kg/m² without concrete and packaging, and 236.6 kg/m² with poured concrete (after installation).

The concrete considered is a C30/37 made out of CEM I cement, water and aggregates and, when necessary, additives such as condensers, retarding agents or airentraining agents.

Steel is mainly iron and carbon, with small amounts of alloying elements. These elements modify the chemical and physical properties of steel such as strength, durability and corrosion resistance. High strength low alloyed (HSLA) carbon steel has a carbon content lower than 0.2 %.

This product contains substances listed in the *candidate list* (date: 26.2.2020) exceeding 0.1 percentage by mass: no

Reference service life

As a structural part of the building, the Cofradal® 200 is expected and specified to reach the same service life as that of the building. Considering the main materials, steel and concrete, the reference service life can be up to 100 years.

LCA: Calculation rules

Declared Unit

This Environmental Product Declaration represents Cofradal® 200, a prefabricated composite floor system.

The declared unit is 1 m², and the EPD refers to a manufacturer declaration of type 1b) declaration of one specific product calculated as the mean of products produced in several plants of one manufacturer.

Declared unit

Name	Value	Unit
Declared unit	1	m ²
conversion factor [Mass/Declared Unit] to 1 Kg	236.6	ı

This conversion is valid for the final product with its concrete installed.

System boundary

Type of the EPD: cradle-to-gate - with options. Module A, B, C and D were considered.

The following processes were considered in detail for the production stages A1-A3:

- Production of raw materials, production materials (Module A1) and auxiliary materials (Module A3)
- Transport of raw materials, semi-finished products and auxiliary materials to the production site (Module A2)
- Production of steel onsite, including the production of auxiliary materials on-site, disposal of production residues and packaging of raw materials, also taking into account on-site emissions (Module A3)
- Scrap occurring during the production on-site is looped back to satisfy some of the demand for scrap input to the process.

Module A4 addresses the transportation of Cofradal® 200 to the construction site. Module A5 describes the installation of Cofradal® 200 into the building including the addition of the welded mesh and concrete.

As an integrated system for structural floors, the Cofradal® 200 is located in the building internal part that protects it from bad climatic conditions. It could potentially be also covered by finishing components. Its use (Module B) within a building does not involve any specific maintenance.

Within this EPD the modules C1-C4 are included. These modules consider the dismantling of the considered product (C1), the transportation of the dismantled components (steel, concrete, mineral wool) to their final EoL destination, the waste processing for reuse, recovery or recycling (C3) as well as the disposal (C4)

Comparability

Basically, a comparison or an evaluation of EPD data is only possible if all the data sets to be compared were created according to *EN 15804* and the building context, respectively the product-specific characteristics of performance, are taken into account.



LCA: Scenarios and additional technical information

Transport from the gate to the site (A4)

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Name	Value	Unit							
Transport distance	498	km							
Capacity utilisation (including empty runs)	30	%							

Assembly (A5)

, 100011121y (710)		
Name	Value	Unit
Auxiliary	44	kg
Electricity consumption	10	kWh
Other energy carriers (diesel)	36	MJ
Material loss (steel)	0.3	%
Material loss (concrete)	1	%

End of life (C1-C4)

Name	Value	Unit
Recycling Steel	85	%
Recycling Concrete	67	%
Energy recovery Mineral Wool	47	%
Landfilling Steel	15	%
Landfilling Concrete	33	%
Landfilling Mineral Wool	53	%

Reuse, recovery and/or recycling potentials (D), relevant scenario information

Name	Value	Unit
Recycling Steel	85	%
Recycling Concrete	67	%
Energy Recovery Mineral Wool	47	%



LCA: Results

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Parameter	A1	A2	A3	A4	A5	B1	B2	В3	B4	B5	В6	B7	C1	C2	C	:3	C4)
GWP Reg CO ₂ Eq. 4.51E+ 5.34E+ 1.10E+ 0.00E+	X	Χ	Х	X	Χ	Х	X	Х	X	X	X	X	X	X	>	×	Х	X	(
GWP Rig CO ₂ -Eq. 451E 6.34E-1 1 0.00E 0.00E+ 0.00E+ 0.00E+ 0.00E+ 0.00E+ 0.00E+ 0.00E+ 1.5E+ 0.00E+ 0	RESULTS OF THE LCA - ENVIRONMENTAL IMPACT according to EN 15804+A1: 1 m ² Cofadral® 200																		
Corporation	Para	meter		Unit	A1-A3	A4	A 5	B1	B2	В3	В4	B5	В6	В7	C1	C2	СЗ	C4	D
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POOP	A	NP	+					0	0	0	0	0	0	0 1					2 405
ADPE			+			1 61		0	0	0	0	0	0	0 1.3					3 -200F-
ADPF			+			5	-2.25E-	0.00E+	0.00E+	0.00E+			00E+ 0	.00E+ 3	-		3.33E-		3
GWP = Global warming potential; POCP = Depletion potential of the stratospheric ozone photochemical oxidants; ADPE = Abiotic depletion potential for non-fosal resources; ADPE = Abiotic depletion potential for fosal resources RESULTS OF THE LCA - INDICATORS TO DESCRIBE RESOURCE USE according to EN 15804+A1: 1 m² Cofadral® 200 Parameter Unit			1				5							0				1 /8F+	-
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Parameter Unit	· ·		•			fo	ssil resou	ırces; Al	OPF = Al	biotic de	pletion po	otential for	fossil r	esources	;				
PERE				Δ1-Δ3	Δ4	Δ5	B1	B2	R3	R4	B5	B6	B7	C1		2	C3	C4	D
PERM																			
PENRE	PERM	M [MJ] 0.															1.94E+0	
PENRM MJ 0.00E+0 0		-									0 0.00E+	0.00E+0					.00E+0	0.00E+0	-3.78E+0 0.00E+0
PENRT MJ							0.00E+0	0.00E+0	0.00E+0	0.00E+	0 0.00E+0	0.00E+0	0.00E+	0 4.70E	+1 1.57	E+0 6	.13E-3	0.00E+0 1.94E+0	-3.78E+0 0.00E+0 -3.78E+0
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PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERM = Use of non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water RESULTS OF THE LCA - WASTE CATEGORIES AND OUTPUT FLOWS according to EN 15804+A1: 1 m² Cofadral® 200 Parameter Unit A1-A3 A4 A5 B1 B2 B3 B4 B5 B6 B7 C1 C2 C3 C4 D HWD [kg] 6.60E-6 8.42E-7 3.62E-6 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 1.21E-5 1.87E-6 1.39E-10 2.62E-7 2.45E-7 NHWD [kg] 1.24E+0 9.63E-4 7.37E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 1.21E-5 1.87E-6 1.39E-10 2.62E-7 2.45E-7 NHWD [kg] 1.24E+0 9.63E-4 7.37E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 1.00E+0 1.00E+0 1.00E+0 1.00E+0 0.00E+0 0.	PENR SM RSF	T [MJ] 0. MJ] 1. [kg] 5. MJ] 0.	.48E+3 8. .00E+0 0. .48E+3 8. .54E+0 0. .00E+0 0.	58E+0 1 00E+0 0 58E+0 1 00E+0 0	.57E+2 (.00E+0 (.57E+2 (.00E+0 (.00E+0 (0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0	0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0	0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0	0.00E+ 0.00E+ 0.00E+ 0.00E+ 0.00E+	0 0.00E+0 0 0.00E+0 0 0.00E+0 0 0.00E+0 0 0.00E+0 0 0.00E+0	0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0	0.00E+ 0.00E+ 0.00E+ 0.00E+ 0.00E+	0 4.70E 0 3.63E 0 0.00E 0 3.63E 0 0.00E	+1 1.57 +2 1.91 +0 0.00 +2 1.91 +0 0.00 +0 0.00	E+0 6. E+1 3. E+0 0. E+1 3. E+0 0. E+0 0.	00E+0 .13E-3 .59E-2 .00E+0 .59E-2 .00E+0 .00E+0	0.00E+0 1.94E+0- 1.53E+1- 0.00E+0 1.53E+1- 0.00E+0 0.00E+0	-3.78E+0 0.00E+0 -3.78E+0 -9.70E+1 0.00E+0 -9.70E+1 0.00E+0 0.00E+0
renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water RESULTS OF THE LCA = WASTE CATEGORIES AND OUTPUT FLOWS according to EN 15804+A1:	PENR SM RSF NRSI	RT [MJ] 0. MJ] 1. [kg] 5. MJ] 0. MJ] 0.	.48E+3 8. .00E+0 0. .48E+3 8. .54E+0 0. .00E+0 0. .00E+0 0.	58E+0 1 00E+0 0 58E+0 1 00E+0 0 00E+0 0	.57E+2 (0.00E+0 (0.00E+0)(0.00E+0 (0.00E+0 (0.00E+0)(0.00E+0 (0.00E+0 (0.00E+0 (0.00E+0)(0.00E+0 (0.00E+0 (0.00	0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0	0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0	0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0	0.00E+ 0.00E+ 0.00E+ 0.00E+ 0.00E+ 0.00E+	0 0.00E++ 0 0.00E++ 0 0.00E++ 0 0.00E++ 0 0.00E++ 0 0.00E++ 0 0.00E++	0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0	0.00E+ 0.00E+ 0.00E+ 0.00E+ 0.00E+ 0.00E+	0 4.70E 0 3.63E 0 0.00E 0 3.63E 0 0.00E 0 0.00E	+1 1.57 +2 1.91 +0 0.00 +2 1.91 +0 0.00 +0 0.00 +0 0.00	E+0 6. E+1 3. E+0 0. E+1 3. E+0 0. E+0 0. E+0 0.	00E+0 .13E-3 .59E-2 .00E+0 .59E-2 .00E+0 .00E+0 .00E+0	0.00E+0 1.94E+0- 1.53E+1- 0.00E+0 1.53E+1- 0.00E+0 0.00E+0 0.00E+0	-3.78E+0 0.00E+0 -3.78E+0 -9.70E+1 0.00E+0 -9.70E+1 0.00E+0 0.00E+0 0.00E+0
non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; RRSF = Use of non-renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; RRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water RESULTS OF THE LCA = WASTE CATEGORIES AND OUTPUT FLOWS according to EN 15804+A1: 1 m² Cofadral® 200 Parameter	PENR SM RSF NRSI	RT [MJ] 0. MJ] 1. [kg] 5. MJ] 0. MJ] 0.	.48E+3 8. .00E+0 0. .48E+3 8. .54E+0 0. .00E+0 0. .00E+0 0.	58E+0 1 00E+0 0 58E+0 1 00E+0 0 00E+0 0	.57E+2 (0.00E+0 (0.00E+0)(0.00E+0 (0.00E+0 (0.00E+0)(0.00E+0 (0.00E+0 (0.00E+0 (0.00E+0)(0.00E+0 (0.00E+0 (0.00	0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0	0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0	0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0	0.00E+ 0.00E+ 0.00E+ 0.00E+ 0.00E+ 0.00E+	0 0.00E++ 0 0.00E++ 0 0.00E++ 0 0.00E++ 0 0.00E++ 0 0.00E++ 0 0.00E++	0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0	0.00E+ 0.00E+ 0.00E+ 0.00E+ 0.00E+ 0.00E+	0 4.70E 0 3.63E 0 0.00E 0 3.63E 0 0.00E 0 0.00E	+1 1.57 +2 1.91 +0 0.00 +2 1.91 +0 0.00 +0 0.00 +0 0.00	E+0 6. E+1 3. E+0 0. E+1 3. E+0 0. E+0 0. E+0 0.	00E+0 .13E-3 .59E-2 .00E+0 .59E-2 .00E+0 .00E+0 .00E+0	0.00E+0 1.94E+0- 1.53E+1- 0.00E+0 1.53E+1- 0.00E+0 0.00E+0 0.00E+0	-3.78E+0 0.00E+0 -3.78E+0 -9.70E+1 0.00E+0 -9.70E+1 0.00E+0 0.00E+0 0.00E+0
renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water RESULTS OF THE LCA - WASTE CATEGORIES AND OUTPUT FLOWS according to EN 15804+A1: 1 m² Cofadral® 200 Parameter Unit A1-A3 A4 A5 B1 B2 B3 B4 B5 B6 B7 C1 C2 C3 C4 D HWD [kg] 6.60E-6 8.42E-7 3.62E-6 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 1.21E-5 1.87E-6 1.39E-10 2.62E-7 2.45E-7 NHWD [kg] 1.24E+0 9.63E-4 7.37E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 1.21E-5 1.87E-6 1.39E-10 2.62E-7 1.3E+1 -1.66E-1 RWD [kg] 8.69E-2 4.65E-5 2.74E-3 0.00E+0 0.00E	PENR SM RSF NRSI	RT [MJ] 0. MJ] 1. [kg] 5. MJ] 0. MJ] 0. [m³] 1	48E+3 8. 00E+0 0. 48E+3 8. 54E+0 0. 00E+0 0. 00E+0 0. 26E-1 9. Use of re	58E+0 1 00E+0 0 58E+0 1 00E+0 0 00E+0 0 00E+0 0 96E-4 3 newable	.57E+2 (.00E+0 (.57E+2 (.00E+0 (.00E+0 (.00E+0 (.14E-2 (0.00E+0 (0.00E+0 (0.00E+0)(0.00E+0 (0.00E+0 (0.00E+0 (0.00E+0 (0.00E+0 (0.00E+0 (0.00E+0)(0.00E+0 (0.00E+0 (0.00E+0 (0.00E+0)(0.00E+0 (0.00E+0)(0.00E+0 (0.00E+0)(0.00E+0)(0.00E+0 (0.00E+0)(0.00E+0)(0.00E+0)(0.00E+0)(0.00E+0)(0.00E+0)(0.00E+0)(0.00E+0)(0.00E+0)(0.00E+0)(0.00E+0)(0.0	0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0	0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 ing rene	0.00E++ 0.00E++ 0.00E++ 0.00E++ 0.00E++ 0.00E++ 0.00E++ wable p	0 0.00E++ corimary e	0 0.00E+0 0 0.00E+0 0 0.00E+0 0 0.00E+0 0 0.00E+0 0 0.00E+0 0 0.00E+0 0 0.00E+0 0 0.00E+0 nergy res	0.00E+ 0.00E+ 0.00E+ 0.00E+ 0.00E+ 0.00E+ 0.00E+	0 4.70E 0 3.63E 0 0.00E 0 3.63E 0 0.00E 0 0.00E 0 0.00E 0 1.09E used a	+1 1.57 +2 1.91 +0 0.00 +2 1.91 +0 0.00 +0 0.00 +0 0.00 -1 2.22	E+0 6. E+1 3. E+0 0. E+1 3. E+0 0. E+0 0. E+0 0. E+0 0. E+0 0. E+0 0.	00E+0 (.13E-3 ; .59E-2 ; 00E+0 (.59E-2 ; 00E+0 (00E+0 (.00E+0 (.14E-5 ;	0.00E+0 1.94E+0 1.53E+1 0.00E+0 1.53E+1 0.00E+0 0.00E+0 0.00E+0 3.87E-3	-3.78E+0 0.00E+0 -3.78E+0 -9.70E+1 0.00E+0 -9.70E+1 0.00E+0 0.00E+0 0.00E+0 -2.10E-2 se of
RESULTS OF THE LCA - WASTE CATEGORIES AND OUTPUT FLOWS according to EN 15804+A1: 1 m² Cofadral® 200	PENR SM RSF NRSI	F [MJ] 0. MJ] 1. [kg] 5. MJ] 0. MJ] 0. [m³] 1 PERE = I wable pr	48E+3 8. 00E+0 0. 48E+3 8. 54E+0 0. 00E+0 0. 00E+0 0. 26E-1 9. Use of rerimary en	58E+0 1 00E+0 0 58E+0 1 00E+0 0 00E+0 0 00E+0 0 96E-4 3 newable ergy res	57E+2 (000E+0 (000E+0)(000E+0 (000E+0 (000E+0 (000E+0 (000E+0)(000E+0 (000E+0 (000E+0)(000E+0 (000E+0)(000E+0 (000E+0)(000E+0)(000E+0 (000E+0)	0.00E+0 (0.00E+0 (0.00E+0)(0.00E+0 (0.00E+0 (0.00E+0 (0.00E+0)(0.00E+0 (0.00E+0)(0.00E+0)(0.00E+0 (0.00E+0)(0.00E+0)(0.00E+0 (0.00E+0)(0.0	0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 v exclud	0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 ing rene	0.00E++ 0.00E++ 0.00E++ 0.00E++ 0.00E++ 0.00E++ 0.00E++ Ewable pert =	0 0.00E++ crimary e Total us	0 0.00E+0 0 nergy resee of rene	0.00E+ 0.00E+ 0.00E+ 0.00E+ 0.00E+ 0.00E+ 0.00E+ sources	0 4.70E 0 3.63E 0 0.00E 0 3.63E 0 0.00E 0 0.00E 0 0.00E 0 1.09E used a	+1 1.57 +2 1.91 +0 0.00 +2 1.91 +0 0.00 +0 0.00 +0 0.00 -1 2.22 s raw nenergy	E+0 6. E+1 3. E+0 0. E+1 3. E+0 0. E+0 0. E+0 0. E+0 0. E+0 10. E+0 0. E+0 0. E+0 0. E+0 0. E+0 0.	00E+0 13E-3 .59E-2 00E+0 00E+0 00E+0 14E-5 14E-5 14E-5 17E-1 14E-5	0.00E+0 1.94E+0- 1.53E+1- 0.00E+0 1.53E+1- 0.00E+0 0.00E+0 0.00E+0 3.87E-3 RM = Us	3.78E+0 0.00E+0 3.78E+0 9.70E+1 0.00E+0 9.70E+1 0.00E+0 0.00E+0 0.00E+0 -2.10E-2 te of
Parameter Unit A1-A3 A4 A5 B1 B2 B3 B4 B5 B6 B7 C1 C2 C3 C4 D	PENR SM RSF NRSI FW	F [F F F F F F F F F F	MJ] 0. MJ] 1. [kg] 5. MJ] 0. MJ] 0. [m³] 1 PERE = I wable pron-rene wable p	.48E+3 8. .00E+0 0. .48E+3 8. .54E+0 0. .00E+0 0. .00E+0 0. .26E-1 9. Use of remany en wable primary er	58E+0 1 00E+0 0 58E+0 1 00E+0 0 00E+0 0 00E+0 0 06E+0 3 newable ergy resimary energy res	.57E+2 (.00E+0 (.57E+2 (.00E+0 (.00E+0 (.00E+0 (.14E-2 (e primar sources nergy ex	0.00E+0 (0.00E+0 (0.00E+0)(0.00E+0 (0.00E+0 (0.00E+0 (0.00E+0)(0.00E+0)(0.00E+0 (0.00E+0)(0.00E+0)(0.00E+0)(0.00E+0 (0.00E+0)(0.0	0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 v exclud raw ma non-ren	0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 ing rene iterials; lewable aterials;	0.00E+ 0.00E+ 0.00E+ 0.00E+ 0.00E+ 0.00E+ 0.00E+ vable per = primary PERT = primary	0 0.00E++ Total us	0.00E+0	0.00E+ 0.00E+ 0.00E+ 0.00E+ 0.00E+ 0.00E+ 0.00E+ sources wable s used a n-rene	0 4.70E 0 3.63E 0 0.00E 0 3.63E 0 0.00E 0 0.00E 0 0.00E 1 used a primary as raw n	+1 1.57 +2 1.91 +0 0.00 +2 1.91 +0 0.00 +0 0.00 +0 0.00 +1 2.22 s raw nenergy nateria imary	E+0 6. E+1 3. E+0 0. E+1 3. E+0 0. E+0 0. E+0 0. E+0 0. E+0 0. E+0 0. E+0 parterial	00E+0 13E-3 159E-2 00E+0 00E+0 00E+0 00E+0 14E-5 00E+0	0.00E+0 1.94E+0 1.53E+1 0.00E+0 1.53E+1 0.00E+0 0.00E+0 0.00E+0 3.87E-3 RM = Us PENRE = Use of r	3.78E+0 0.00E+0 -3.78E+0 -9.70E+1 0.00E+0 -9.70E+1 0.00E+0 0.00E+0 0.00E+0 -2.10E-2 ie of = Use of
HWD [kg 6.60E-6 8.42E-7 3.62E-6 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 1.21E-5 1.87E-6 1.39E-10 2.62E-7 2.45E-7 NHWD [kg 1.24E+0 9.63E-4 7.37E+0 0.00E+0 0.00E+	PENR SM RSF NRSI FW Caption	F Prenewon new of se	MJ 0. MJ 1. [kg] 5. MJ 0. MJ 0. MJ 0. [m³] 1 PERE = 1 wable pron-rene wable pecondary	48E+3 8. 00E+0 0. 48E+3 8. 54E+0 0. 00E+0 0. 00E+0 0. 00E+0 1. 26E-1 9. Use of rerimary en wable primary er materia	58E+0 1 00E+0 0 58E+0 1 00E+0 0 00E+0 0 00E+0 0 00E+0 0 00E-4 3 newable ergy resimary energy resirergy res	57E+2 (00E+0 (00E+0 (0.00E+0 (0.00E+0)(0.00E+0 (0.00E+0 (0.00E+0)(0.00E+0 (0.00E+0)(0.00E+0 (0.00E+0)(0.00E+0 (0.00E+0)(0.00E+0 (0.00E+0)(0.00E+0)(0.00E+0)(0.00E+0)(0.00E+0)(0.00E+0)(0.00E+0)(0.00E+0)(0.00E+0)(0.00E+0)(0.00E+0)(0.00E+0 (0.00E+0 (0.00E+0)(0.00E+0 (0.00E+0 (0.00E+0 (0.00E+0 (0.00E+0)(0.00E+0 (0.00E+0)(0.00E+0 (0.00E+0)(0.00E+0)(0.00E+0 (0.00E+0)(0.00E+0)(0.00E+0)(0.00E+0)(0.00E+0 (0.00E+0)(0.00E+0)(0.00E+0)(0.00E+0)(0.00E+0)(0.00E+0)(0.00E+0)(0.00E+0)(0.00E+0)(0.00E+0)(0.00E+0)(0.00E+0)(0.0	0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 v exclud raw ma non-ren a raw ma	0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 ing rene aterials; lewable aterials; indary fu	0.00E++ 0.00E++ 0.00E++ 0.00E++ 0.00E++ 0.00E++ 0.00E++ PERT = primary PENRT uels; NR	0 0.00E++	0.00E+0	0.00E+ 0.00E+ 0.00E+ 0.00E+ 0.00E+ 0.00E+ 0.00E+ surces wable s used a n-rene	0 4.70E 0 3.63E 0 0.00E 0 3.63E 0 0.00E 0 0.00E 0 0.00E used a primary as raw n wable puble second	+1 1.57 +2 1.91 +0 0.00 +2 1.91 +0 0.00 +0 0.00 +0 0.00 -1 2.22 s raw nenergy naterial imary ondary	E+0 6. E+1 3. E+0 0. E+1 3. E+0 0. E+0 0. E+0 0. E+0 0. E+0 10. E+0 0.	00E+0 .13E-3 .59E-2 .00E+0 .00E+0 .00E+0 .14E-5 .14E	0.00E+0 1.94E+0 1.53E+1 0.00E+0 1.53E+1 0.00E+0 0.00E+0 0.00E+0 3.87E-3 RM = Us PENRE = PUse of no	3.78E+0 0.00E+0 -3.78E+0 -9.70E+1 0.00E+0 -9.70E+1 0.00E+0 0.00E+0 0.00E+0 -2.10E-2 ie of = Use of non- M = Use
RWD [kg] 8.69E-2 4.65E-5 2.74E-3 0.00E+0 0.00E	PENR SM RSF NRSI FW Caption	F F F F F F F F F F F F F F F F F F F	MJ 0. MJ 1. [kg] 5. MJ 0. MJ 0. MJ 0. MJ 0. ERE = wable pron-rene wable procondary	48E+3 8. 00E+0 0. 48E+3 8. 54E+0 0. 00E+0 0. 00E+0 0. 00E+0 0. 00E+0 0. 00E+0 rimary en wable pr rimary er / materia	58E+0 1 00E+0 0 58E+0 1 00E+0 0 00E+0 0 00E+0 0 00E+0 0 96E-4 3 newable ergy resimary ernergy resimance ergy resimance erg	57E+2 (.00E+0	0.00E+0 (0.00E+0 (0.00E+0)(0.00E+0 (0.00E+0 (0.00E+0)(0.00E+0)(0.00E+0 (0.00E+0)(0.00E+0)(0.00E+0 (0.00E+0)(0.0	0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 v exclud raw ma non-ren a raw ma ple seco	0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 ing rene aterials; lewable aterials; indary fu	0.00E++ 0.00E++ 0.00E++ 0.00E++ 0.00E++ 0.00E++ 0.00E++ 0.00E++ vable perimary PENRT = primary PENRT = primary DOU	0 0.00E+1	0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 e of rene e of rene e of non-	0.00E+ 0.00E+ 0.00E+ 0.00E+ 0.00E+ 0.00E+ 0.00E+ surces wable sused an-renewa	0 4.70E 0 3.63E 0 0.00E 0 3.63E 0 0.00E 0 0.00E 0 1.09E used a primary as raw n wable puble seco	+1 1.57 +2 1.91 +0 0.00 +2 1.91 +0 0.00 +0 0.00 +0 0.00 -1 2.22 s raw nenergy nateria imary pondary	E+0 6. E+1 3. E+0 0. E+1 3. E+0 0. E+0 0. E+0 0. E+0 0. E+0 0. E+0 1. E+0 0.	00E+0 13E-3 .59E-2 00E+0 00E+0 00E+0 00E+0 14E-5 als; PEF urces; P NRM = y resour FW = 0	0.00E+0 1.94E+0 1.53E+1 0.00E+0 1.53E+1 0.00E+0 0.00E+0 0.00E+0 0.00E+0 3.87E-3 RM = Us PENRE = PUse of r	3.78E+0 0.00E+0 3.78E+0 9.70E+1 0.00E+0 9.70E+1 0.00E+0 0.00E+0 -2.10E-2 ie of = Use of non- 1 = Use et fresh
CRU [kg] 0.00E+0 0.00E	PENR SM RSF NRSI FW Caption RESU 1 m² (Parame HWE	F Prenewof see	MJ 0. MJ 1. [kg 5 MJ 0. MJ	48E+3 8. 00E+0 0. 48E+3 8. 54E+0 0. 00E+0 0. 00E+0 0. 26E-1 9. Use of rerimary en wable primary er materia 1E LCA 200 41-A3 .60E-6 8.	58E+0 1 00E+0 0 58E+0 1 00E+0 0 00E+0 0 00E+0 0 00E+0 1 96E-4 3 newable tergy resimary errergy real; RSF =	.57E+2 (.00E+0	0.00E+0 (0.00E+0 (0.00E+0)(0.00E+0 (0.00E+0 (0.00E+0)(0.00E+0)(0.00E+0 (0.00E+0)(0.0	0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 Fexclud raw manon-ren or raw manon-ren	0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 ewable aterials; andary fu	0.00E++ 0.00E++ 0.00E++ 0.00E++ 0.00E++ 0.00E++ 0.00E++ 0.00E+- D.00E+- D.00E+	0 0.00E+1 Total us energy is energy in energy is energy in energy is energy in energy	0.00E+0	0.00E+	0 4.70E 0 3.63E 0 0.00E 0 3.63E 0 0.00E 0 0.00E 0 0.00E 0 1.09E used apprimary as raw n wable proble second ording C1 0 1.21E	+1 1.57 +2 1.91 +0 0.00 +2 1.91 +0 0.00 +0 0.00 +0 0.00 -1 2.22 5 raw neenergy naterial imary ondary	E+0 6. E+1 3. E+0 0. E+1 3. E+0 0. E+	00E+0 .13E-3 .59E-2 .00E+0	0.00E+0 1.94E+0 1.53E+1 0.00E+0 1.53E+1 0.00E+0 0.00E+	3.78E+0 0.00E+0 3.78E+0 9.70E+1 0.00E+0 9.70E+1 0.00E+0 0.00E+0 0.00E+0 -2.10E-2 ie of Use of non- I = Use et fresh
MFR [kg] 0.00E+0 0.00E	PENR SM RSF NRSI FW Caption RESU 1 m² (Parame HWE NHW	F F F F F F F F F F F F F F F F F F F	MJ 0. MJ 1. [kg] 5. MJ 0. m³ 1. PERE = 1 wable pron-rene wable pecondary OF THITALE 2 Unit / [kg] 6 [kg] 1.	48E+3 8. 00E+0 0. 48E+3 8. 54E+0 0. 00E+0 0. 00E+0 0. 00E+0 1. 26E-1 9. Use of rerimary enwable primary er materia 4E LCA 200 41-A3 60E-6 8. 24E+0 9.	58E+0 1 1 00E+0 0 58E+0 1 00E+0 0 00E+0 0 00E+0 0 00E+0 1 0 0 00E+0 1 0 0 00E+0 1 0 0 00E+0 1 0 00E+0 1 0 0 0 00E+0 1 0 0 0 00E+0 1 0 0 0 0 0 00E+0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	57E+2 (0.00E+0) (0.57E+2) (0.00E+0)	0.00E+0 (0.00E+0 (0.00E+0)(0.00E+0 (0.00E+0)(0.00E+0 (0.00E+0)(0.00E+0)(0.00E+0)(0.00E+0(0.00E+0)(0.00E+0)(0.00E+0)(0.00	0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 r exclud raw ma non-ren r raw ma ble seco	0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 ing rene iterials; leaterials; indary fu ES AN B3 0.00E+0 0.00E+0	0.00E++ 0.00E++ 0.00E++ 0.00E++ 0.00E++ 0.00E++ 0.00E++ 0.00E++ 0.00E+ D.00E++	0 0.00E+1 Trimary e Total us energy t TPUT	0.00E+0	0.00E+	0 4.70E 0 3.63E 0 0.00E 0 3.63E 0 0.00E 0 0.00E 0 0.00E 0 0.00E 0 used a primary as raw n wable puble second ording C1 0 1.21E 0 7.63E	+1 1.57 +2 1.91 +0 0.00 +2 1.91 +0 0.00 +0 0.00 +0 0.00 +1 2.22 s raw nenergy naterial imary ondary to E	E+0 6 E+1 3 3 E+0 0. E+1 3 E+0 0. E+1 3 E+0 0. E+1 3 E+0 0. E+1 0	00E+0 .13E-3 .59E-2 .00E+0 .00E+0 .00E+0 .00E+0 .14E-5 .1s; PEF .y resour .FW = U. 	0.00E+0 1.94E+0 1.53E+1 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+3 0.00E+0 0.00E+0 0.00E+0 0.00E+0 1.387E=3 Use of no A1:	3.78E+0 0.00E+0 -3.78E+0 -9.70E+1 0.00E+0 -9.70E+1 0.00E+0 0.00E+0 0.00E+0 -2.10E-2 ie of = Use of non- // = Use et fresh
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EEE [MJ] 0.00E+0 0.00E	PENR SM RSF NRSI FW Caption Parame HWE NHW RWE CRU	F F F F F F F F F F F F F F F F F F F	MJ	48E+3 8. 00E+0 0. 48E+3 8. 54E+0 0. 00E+0 0. 00E+0 0. 26E-1 9. Use of rerimary en wable primary er/ materia IE LCA 200 41-A3 .60E-6 8. 69E-2 9. 69E-2 9.	58E+0 1 00E+0 0 00E+0	57E+2 (00E+0 (0.00E+0	0.00E+0 (0.00E+0 (0.00E+0)(0.00E+0 (0.00E+0)(0.00E+0 (0.00E+0)(0.00E+0)(0.00E+0(0.00	0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 rexclud raw ma non-ren raw ma ble seco	0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 ewable aterials; andary fu ES AN B3 0.00E+0 0.00E+0 0.00E+0 0.00E+0	0.00E++ Wable primary PENRT = PENRT = BY Wa D OU B4 0.00E++ 0.00E++ 0.00E++ 0.00E++ 0.00E++ 0.00E++ 0.00E++	0 0.00E+1 1 0 0.00E+1 1 0 0.00E+1 1 0 0.00E+1 2 0 0.00E+1 3 SF = Us 4 TPUT B5 0 0.00E+1 0 0.00E+1 0 0.00E+1	0.00E+0	0.00E+	0 4.70E 0 3.63E 0 0.00E 0 3.63E 0 0.00E 0 0.00E 0 0.00E 0 0.00E 0 used apprint as raw newable public security C1 0 1.21E 0 7.63E 0 8.73E 0 0.00E	H1 1.57 1.5	E+0 6 6 E+1 3 8 E+0 0.0 E+0 10 10 10 10 10 10 10 10 10 10 10 10 10	00E+0 .13E-3 .59E-2 .00E+0 .00E+0 .00E+0 .00E+0 .00E+0 .14E-5 .14E-5 .14E-5 .17E-1	0.00E+0 1.94E+0 1.94E+0 1.53E+1 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+3 RM = Us PENRE = Use of r rces; SM Use of n A1: C4 2.62E-7 7.13E+1 2.06E-4 0.00E+0	3.78E+0 0.00E+0 -3.78E+0 -9.70E+1 0.00E+0 -9.70E+1 0.00E+0 0.00E+0 -2.10E-2 -2.10E-2 -2.10E-2 -2.10E-2 -1.34E-4 0.00E+0 0.00E+0 -2.45E-7 -1.34E-4 0.00E+0
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HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported	PENR SM RSF NRSI FW Caption RESU 1 m² (Parame HWE NHWI RWE CRU MFR MER	F F Frenew of see F F F F F F F F F F F F F F F F F F	MJ 0. MJ 1.	48E+3 8. 00E+0 0. 48E+3 8. 54E+0 0. 00E+0 0. 00E+0 0. 00E+0 0. 26E-1 9. Use of rerimary en wable primary er materia 1E LCA 200 41-A3 60E-6 8. 24E+0 9. 69E-2 4. 00E+0 0. 00E+0 0.	58E+0 1 1 00E+0 0 0 58E+0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	.57E+2 (.00E+0 (.00E+0(0.00E+0 (0.00E+0 (0.00E+0)(0.00E+0)(0.00E+0 (0.00E+0)(0.00E+0)(0.00E+0)(0.00E+0(0.00E+0)(0.00	0.00E+0	0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 ing rene iterials; indary fr ES AN B3 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0	0.00E++	0 0.00E+1	0.00E+0 0.00E+0	0.00E+	0 4.70E 0 3.63E 0 0.00E 0 3.63E 0 0.00E 0 0.00E 0 0.00E used apprimary as raw n wable prible seco crding 0 1.21E 0 7.63E 0 8.73E 0 0.00E	1.57 1.57 1.57 1.57 1.57 1.57 1.57 1.57	E+0 6 E+1 3 E+0 0. E	00E+0 1.13E-3 1.59E-2 00E+0 0.00E+0 0.	0.00E+0 1.94E+0 1.94E+0 1.53E+1 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 1.53E+1 0.00E+0 0.00E+0 0.00E+0 1.53E+1 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0	3.78E+0 0.00E+0 -3.78E+0 -9.70E+1 0.00E+0 -9.70E+1 0.00E+0 -0.00E+0 -2.10E-2 ie of = Use of non- // = Use et fresh D -2.45E-7 -1.66E-1 -1.34E-4 0.00E+0 0.00E+0
Caption for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported	PENR SM RSF NRSI FW Caption Caption HWE HWE CRU MFR MER EEE	F Prenewon rene of see	MJ	48E+3 8. 00E+0 0. 48E+3 8. 54E+0 0. 00E+0 0. 00E+0 0. 00E+0 0. 26E-1 9. Use of rerimary en wable primary er / materia 1E LCA 200 41-A3 .60E-6 8. 24E+0 969E-2 4. 00E+0 0. 00E+0 0. 00E+0 0. 00E+0 0.	58E+0 1 00E+0 0 58E+0 1 00E+0 0 00E+0 0 00E+0 0 00E+0 1 96E-4 3 newable tergy resimary energy resimany energy energ	.57E+2 (.00E+0 (.00E+0(.00E+0 (.00E+0(0.00E+0 (0.00E+0 (0.00E+0) (0.00E+0 (0.00E+0 (0.00E+0 (0.00E+0 (0.00E+0 (0.00E+0 (0.00E+0) (0.00E+0 (0.00E+0 (0.00E+0 (0.00E+0 (0.00E+0 (0.00E+0 (0.00E+0) (0.00E+0 (0.00E+0 (0.00E+0 (0.00E+0) (0.00E+0 (0.00E+0) (0.00E+0) (0.00E+0) (0.00E+0 (0.00E+0) (0.00E+0) (0.00E+0) (0.00E+0) (0	0.00E+0	0.00E+0	0.00E++	0 0.00E+1	0.00E+0 0.00E+0	0.00E+	0 4.70E 0 3.63E 0 0.00E 0 3.63E 0 0.00E	H1 1.57 H2 1.91 H3 1.57 H3 1.5	E+0 6 E+1 3 E+0 0. E	00E+0 1.13E-3 1.59E-2 1.00E+0 1.00E+0 1.00E+0 1.00E+0 1.14E-5 1.00E+0 1.14E-5 1.00E+0	0.00E+0 1.94E+0 1.94E+0 1.153E+1 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 1.53E+1 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0	D -2.45E-7 -1.66E-1 -1.34E-4 0.00E+0
	PENR SM RSF NRSI FW Caption Caption HWE HWE CRU MFR MER EEE	F F F F F F F F F F F F F F F F F F F	MJ 0. MJ 1.	48E+3 8. 00E+0 0. 48E+3 8. 54E+0 0. 00E+0 0. 00E+0 0. 00E+0 0. 26E-1 9. Use of rerimary en wable primary en	58E+0 1 00E+0 0 58E+0 1 00E+0 0 00E+0 0 00E+0 0 00E+0 1 96E-4 3 newable tergy resimary energy ene	.57E+2 (.00E+0 (.00E+0(.	0.00E+0 (0.00E+0 (0.00E+0)(0.00E+0)(0.00E+0 (0.00E+0)(0.00E+0)(0.00E+0)(0.00E+0(0.00E+0)(0.00	0.00E+0	0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 ing rene iterials; iderials; indary fu ES AN B3 0.00E+0	0.00E++	0 0.00E+1	0.00E+0 0.00E+0	0.00E+	0 4.70E 0 3.63E 0 0.00E 0 3.63E 0 0.00E	H1 1.57 1.57 1.57 1.57 1.57 1.57 1.57 1.5	E+0 6 E+1 3 E+0 0. E	00E+0 .13E-3 .59E-2 .00E+0 .00E+0 .00E+0 .00E+0 .14E-5 .14E	0.00E+0 1.94E+0 1.94E+0 1.153E+1 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 0.00E+0 1.53E+1 0.00E+0	D -2.45E-7 -1.66E-1 -1.34E-4 0.00E+0

Note: 5,54 kg steel scrap is used in the production/manufacturing of 1 m² of Cofradal® 200. After use, 10,51 kg steel is recycled. The potential environmental impact calculated for the end-of-life stage (module D) is based on



the net amount of scrap left in the system, which is 10,51 kg - 5,54 kg = 4,97 kg. The system has a net output of 4,97 kg scrap (which carries a potential credit), thus module D shows an environmental benefit.

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