

Annex

For Duripanel B1 wood cement boards

to the

ENVIRONMENTAL PRODUCT DECLARATION

as per /ISO 14025/ and /EN 15804/

Owner of the Declaration	Etex Building Performance International
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EPD ANNEX

Duripanel B1 wood cement boards

To provide results for product scenarios as an amendment to the EPD for Duripanel B1 wood cement boards (18 mm), this EPD Annex contains results for additional thicknesses of the declared product.

Thickness (mm)	8	10	12	14	16	20	22	24	28	32	36	40
Weight [kg/m ²]	10.1	12.6	15.2	17.7	20.2	25.3	27.8	30.3	35.4	40.4	45.5	50.5

1. LCA: Results: 1 m² Duripanel B1 (8 mm)

The following table shows the environmental impacts of 1m² Duripanel B1 (8 mm). All declared modules are marked with an “x”.

DESCRIPTION OF THE SYSTEM BOUNDARY (X = INCLUDED IN LCA; ND = MODULE OR INDICATOR NOT DECLARED; MNR = MODULE NOT RELEVANT)

PRODUCT STAGE		CONSTRUCTION PROCESS STAGE			USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARIES	
Raw material supply	Transport	Manufacturing	Transport from the gate to the site	Assembly	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	X	X	X	MNR	MNR	MNR	X	X	X	X	X	X	X	

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT according to EN 15804+A2: 1 m²8mm Duripanel B1

Core Indicator	Unit	A1-A3	A4	A5	B1	B2	B6	B7	C1	C2	C3/1	C3/2	C4/1	C4/2	D/1	D/2
GWP-total	[kg CO ₂ -Eq.]	3,99E+00	2,37E-01	1,57E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,03E+02	3,87E+02	5,68E+01	0,00E+00	0,00E+00	3,95E+00	2,94E+00	-5,62E-01
GWP-fossil	[kg CO ₂ -Eq.]	8,13E+00	2,35E-01	1,26E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,02E+02	3,85E+02	5,65E+01	0,00E+00	0,00E+00	5,13E+01	2,93E+00	-5,61E-01
GWP-biogenic	[kg CO ₂ -Eq.]	4,15E+00	-3,95E-04	-3,06E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,01E+04	-6,46E-05	1,88E+03	0,00E+00	0,00E+00	3,44E+00	-2,94E-03	-8,17E-04
GWP-luluc	[kg CO ₂ -Eq.]	2,81E-03	1,90E-03	6,45E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,38E+05	3,11E+04	8,19E+04	0,00E+00	0,00E+00	4,67E+04	-3,76E+04	-2,97E-04
ODP	[kg CFC11-Eq.]	2,21E-14	4,32E-17	5,34E-15	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,64E-16	7,06E-18	1,24E-14	0,00E+00	0,00E+00	8,11E-16	-1,54E-15	-3,56E-15
AP	[mol H ⁺ -Eq.]	9,51E-03	2,72E-04	2,12E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,66E-05	4,44E-05	1,25E-03	0,00E+00	0,00E+00	1,71E-03	-2,68E-03	-1,03E-03
EP-freshwater	[kg P-Eq.]	1,45E-05	7,17E-07	9,67E-06	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,06E-08	1,17E-07	1,51E-06	0,00E+00	0,00E+00	7,43E-05	-6,41E-07	-5,68E-07
EP-marine	[kg N-Eq.]	3,22E-03	8,36E-05	6,52E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,48E-05	1,37E-05	2,77E-04	0,00E+00	0,00E+00	1,03E-03	-9,18E-04	-2,46E-04
EP-terrestrial	[mol N-Eq.]	3,47E-02	9,92E-04	6,54E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,56E-04	1,62E-04	2,91E-03	0,00E+00	0,00E+00	5,60E-03	-1,01E-02	-2,65E-03
POCP	[kg NMVOC-Eq.]	9,82E-03	2,25E-04	1,96E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,06E-05	3,68E-05	7,59E-04	0,00E+00	0,00E+00	2,58E-03	-2,81E-03	-7,45E-04
ADPE	[kg Sb-Eq.]	3,70E-07	1,90E-08	2,18E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,74E-09	3,11E-09	1,64E-07	0,00E+00	0,00E+00	2,23E-08	-1,65E-07	-6,42E-08
ADPF	[MJ]	4,92E+01	3,14E+00	9,37E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,31E+01	5,13E+01	9,93E+00	0,00E+00	0,00E+00	4,14E+00	4,66E+01	7,94E+00
WDP	[m ³ world-Eq deprived]	1,21E-01	2,29E-03	6,84E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,58E-03	3,75E-04	1,23E-01	0,00E+00	0,00E+00	2,33E-02	-1,65E-02	-3,93E-02

Caption: GWP = Global warming potential; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential of land and water; EP = Eutrophication potential; POCP = Formation potential of tropospheric ozone photochemical oxidants; ADPE = Abiotic depletion potential for non-fossil resources; ADPF = Abiotic depletion potential for fossil resources; WDP = Water use

RESULTS OF THE LCA - RESOURCE USE according to EN 15804+A2: 1 m²8mm Duripanel B1

Indicator	Unit	A1-A3	A4	A5	B1	B2	B6	B7	C1	C2	C3/1	C3/2	C4/1	C4/2	D/1	D/2
PERE	[MJ]	3,89E+01	0,00E+00	3,25E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,57E+01	0,00E+00	0,00E+00	3,60E+01	0,00E+00	1,39E+00
PERM	[MJ]	5,38E+01	1,82E+01	6,32E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,35E+01	2,97E+02	4,40E+00	0,00E+00	0,00E+00	3,57E+01	-6,84E+01	0,00E+00
PERT	[MJ]	4,90E+01	3,15E+00	9,59E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,31E+01	5,15E+01	9,93E+00	0,00E+00	0,00E+00	3,70E+01	4,66E+01	1,39E+00
PENRE	[MJ]	1,96E+01	0,00E+00	-1,96E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,14E+00	0,00E+00	7,95E+00
PENRM	[MJ]	4,92E+01	3,15E+00	9,39E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,31E+01	5,15E+01	9,93E+00	0,00E+00	0,00E+00	0,00E+00	4,66E+01	0,00E+00
PENRT	[MJ]	6,64E+01	0,00E+00	6,64E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,14E+00	0,00E+00	7,95E+00
SM	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	5,99E+03	2,12E+04	2,65E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,72E+04	3,46E+05	5,09E+03	0,00E+00	0,00E+00	0,00E+00	-1,01E+03	0,00E+00
FW	[m ³]	3,89E+01	0,00E+00	3,25E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,57E+01	0,00E+00	0,00E+00	7,16E+04	0,00E+00	-1,87E+03

Caption 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; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding 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 – OUTPUT FLOWS AND WASTE CATEGORIES according to EN 15804+A2: 1 m²8mm Duripanel B1

Indicator	Unit	A1-A3	A4	A5	B1	B2	B6	B7	C1	C2	C3/1	C3/2	C4/1	C4/2	D/1	D/2
HWD	[kg]	1,44E-07	1,46E-07	2,04E-08	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,20E-10	2,38E-08	4,11E-09	0,00E+00	0,00E+00	3,18E-08	-2,76E-08	-4,24E-09
NHWD	[kg]	1,46E+00	5,00E+04	1,10E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,77E+04	8,17E+05	7,05E+03	0,00E+00	0,00E+00	9,42E+00	-1,33E+02	-5,50E+03
RWD	[kg]	7,00E-04	5,81E-06	2,67E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,06E-05	9,50E-07	1,51E-03	0,00E+00	0,00E+00	4,86E+05	-2,10E+04	-4,97E+04
CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	3,91E+01	0,00E+00	4,14E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,25E+02	9,98E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MER	[kg]	1,62E+01	0,00E+00	1,62E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,96E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	9,79E+04	0,00E+00	6,82E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,05E+00	0,00E+00	0,00E+00
EET	[MJ]	2,25E+03	0,00E+00	1,05E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Caption 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; EEE = Exported thermal energy

2. LCA: Results: 1 m² Duripanel B1 (10mm)

The following table shows the environmental impacts of 1m² Duripanel B1 (10 mm). All declared modules are marked with an “x”.

DECLARED; MNR = MODULE NOT RELEVANT)

PRODUCT STAGE					CONSTRUCTION PROCESS STAGE	USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARIES	
Raw material supply	Transport	Manufacturing	Transport from the gate to the site	Assembly	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	X	X	X	MNR	MNR	MNR	X	X	X	X	X	X	X		

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT according to EN 15804+A2: 1 m²10mm Duripanel B1

Core Indicator	Unit	A1-A3	A4	A5	B1	B2	B6	B7	C1	C2	C3/1	C3/2	C4/1	C4/2	D/1	D/2
GWP-total	[kg CO ₂ -Eq.]	4,98E+00	2,96E+01	1,87E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,03E+02	4,84E+02	7,10E+01	0,00E+00	0,00E+00	4,94E+00	3,63E+00	-6,63E+01
GWP-fossil	[kg CO ₂ -Eq.]	1,02E+01	2,94E+01	1,48E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,02E+02	4,81E+02	7,06E+01	0,00E+00	0,00E+00	6,41E+01	3,63E+00	-6,62E+01
GWP-biogenic	[kg CO ₂ -Eq.]	5,19E+00	-4,94E+04	-3,83E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,01E+04	-8,07E+05	-2,35E+03	0,00E+00	0,00E+00	4,30E+00	-3,70E+03	-1,05E+03
GWP-luluc	[kg CO ₂ -Eq.]	3,51E+03	2,38E+03	7,28E+04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,38E+05	3,89E+04	1,02E+03	0,00E+00	0,00E+00	5,84E+04	-4,70E+04	-3,71E+04
ODP	[kg CFC11-Eq.]	2,76E-14	5,40E-17	5,92E-15	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,64E-16	8,83E-18	1,55E-14	0,00E+00	0,00E+00	1,01E-15	-2,10E-15	-4,63E-15
AP	[mol H ⁺ -Eq.]	1,19E-02	3,40E-04	2,41E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,66E-05	5,56E-05	1,56E-03	0,00E+00	0,00E+00	2,14E-03	-3,24E-03	-1,17E-03
EP-freshwater	[kg P-Eq.]	1,81E-05	8,96E-07	1,19E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,06E-08	1,46E-07	1,89E-06	0,00E+00	0,00E+00	9,28E-05	-7,95E-07	-7,04E-07
EP-marine	[kg N-Eq.]	4,02E-03	1,04E-04	7,62E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,48E-05	1,71E-05	3,46E-04	0,00E+00	0,00E+00	1,29E-03	-1,13E-03	-2,84E-04
EP-terrestrial	[mol N-Eq.]	4,34E-02	1,24E-03	7,60E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,56E-04	2,03E-04	3,64E-03	0,00E+00	0,00E+00	7,00E-03	-1,24E-02	-3,06E-03
POCP	[kg NMVOC-Eq.]	1,23E-02	2,82E-04	2,28E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,06E-05	4,60E-05	9,49E-04	0,00E+00	0,00E+00	3,23E-04	-3,44E-03	-8,55E-04
ADPE	[kg Sb-Eq.]	4,63E-07	2,38E-08	2,18E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,74E-09	3,89E-09	2,04E-07	0,00E+00	0,00E+00	2,79E-08	-2,08E-07	-8,11E-08
ADPF	[MJ]	6,15E+01	3,92E+01	1,07E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,31E+01	6,42E+01	1,24E+01	0,00E+00	0,00E+00	5,17E+01	5,80E+01	9,63E+01
WDP	[m ³ world-Eq deprived]	1,51E+01	2,87E+03	8,22E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,58E+03	4,69E+04	1,54E+01	0,00E+00	0,00E+00	2,91E+02	-2,14E+02	-4,99E+02

Caption: GWP = Global warming potential; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential of land and water; EP = Eutrophication potential; POCP = Formation potential of tropospheric ozone photochemical oxidants; ADPE = Abiotic depletion potential for non-fossil resources; ADPF = Abiotic depletion potential for fossil resources; WDP = Water use

RESULTS OF THE LCA - RESOURCE USE according to EN 15804+A2: 1 m²10mm Duripanel B1

Indicator	Unit	A1-A3	A4	A5	B1	B2	B6	B7	C1	C2	C3/1	C3/2	C4/1	C4/2	D/1	D/2
PERE	[MJ]	1,87E+01	2,27E-01	1,17E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,35E-01	3,71E-02	5,01E+01	0,00E+00	0,00E+00	4,50E+01	-8,88E-01	1,77E+00
PERM	[MJ]	4,86E+01	0,00E+00	4,06E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,46E+01	0,00E+00	0,00E+00	4,46E+01	0,00E+00	0,00E+00
PERT	[MJ]	6,73E+01	2,27E-01	7,68E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,35E-01	3,71E-02	5,50E+00	0,00E+00	0,00E+00	4,62E-01	-8,88E-01	1,77E+00
PENRE	[MJ]	6,13E+01	3,94E+00	1,09E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,31E-01	6,44E-01	1,24E+01	0,00E+00	0,00E+00	5,17E+00	5,80E+01	9,65E+00
PENRM	[MJ]	2,45E-01	0,00E+00	-2,45E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	6,15E+01	3,94E+00	1,07E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,31E-01	6,44E-01	1,24E+01	0,00E+00	0,00E+00	5,17E+00	5,80E+01	9,65E+00
SM	[kg]	8,30E-01	0,00E+00	8,30E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m ³]	7,49E-03	2,64E-04	3,06E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,72E-04	4,32E-05	6,36E-03	0,00E+00	0,00E+00	8,96E-04	-1,24E-03	-2,31E-03

Caption 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; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding 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 – OUTPUT FLOWS AND WASTE CATEGORIES according to EN 15804+A2: 1 m²10mm Duripanel B1

Indicator	Unit	A1-A3	A4	A5	B1	B2	B6	B7	C1	C2	C3/1	C3/2	C4/1	C4/2	D/1	D/2
HWD	[kg]	1,80E-07	1,82E-07	2,48E-08	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,20E-10	2,98E-08	5,14E-09	0,00E+00	0,00E+00	0,00E+00	-3,42E-08	0,00E+00
NHWD	[kg]	1,83E+00	6,25E-04	1,37E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,77E-04	1,02E-04	8,81E-03	0,00E+00	0,00E+00	3,98E-08	-1,61E-02	-5,05E-09
RWD	[kg]	8,75E-04	7,26E-06	2,87E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,06E-05	1,19E-06	1,88E-03	0,00E+00	0,00E+00	1,18E-01	-2,68E-04	-6,32E-03
CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,08E-05	0,00E+00	-6,26E-04
MFR	[kg]	4,89E-01	0,00E+00	5,17E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,03E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MER	[kg]	2,03E-01	0,00E+00	2,03E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,70E+00	9,98E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	1,22E-03	0,00E+00	8,53E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EET	[MJ]	2,82E-03	0,00E+00	1,31E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,31E+00	0,00E+00	0,00E+00

Caption 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; EEE = Exported thermal energy

3. LCA: Results: 1 m² Duripanel B1 (12mm)

The following table shows the environmental impacts of 1m² Duripanel B1 (12 mm). All declared modules are marked with an “x”.

DECLARED; MNR = MODULE NOT RELEVANT)

PRODUCT STAGE			CONSTRUCTION PROCESS STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARIES	
Raw material supply	Transport	Manufacturing	Transport from the gate to the site	Assembly	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	X	X	X	MNR	MNR	MNR	X	X	X	X	X	X	X	

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT according to EN 15804+A2: 1 m²12mm Duripanel B1

Core Indicator	Unit	A1-A3	A4	A5	B1	B2	B6	B7	C1	C2	C3/1	C3/2	C4/1	C4/2	D/1	D/2
GWP-total	[kg CO ₂ -Eq.]	5,98E+00	3,55E-01	2,16E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,03E-02	5,81E-02	8,51E-01	0,00E+00	0,00E+00	5,93E+00	4,33E+00	-7,64E-01
GWP-fossil	[kg CO ₂ -Eq.]	1,22E+01	3,53E-01	1,70E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,02E-02	5,77E-02	8,47E-01	0,00E+00	0,00E+00	7,69E+01	4,32E+00	-7,63E-01
GWP-biogenic	[kg CO ₂ -Eq.]	6,23E-00	-5,93E-04	-4,59E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,01E-04	-9,69E-05	-2,82E-03	0,00E+00	0,00E+00	5,16E+00	-4,46E-03	-1,28E-03
GWP-luluc	[kg CO ₂ -Eq.]	4,22E-03	2,86E-03	8,11E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,38E-05	4,67E-04	1,23E-03	0,00E+00	0,00E+00	7,01E-04	-5,64E-04	-4,46E-04
ODP	[kg CFC11-Eq.]	3,31E-14	6,48E-17	6,51E-15	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,64E-16	1,06E-17	1,86E-14	0,00E+00	0,00E+00	1,22E-15	-2,67E-15	-5,70E-15
AP	[mol H ⁺ -Eq.]	1,43E-02	4,08E-04	2,70E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,66E-05	6,67E-05	1,87E-03	0,00E+00	0,00E+00	2,57E-03	-3,80E-03	-1,32E-03
EP-freshwater	[kg P-Eq.]	2,17E-05	1,08E-06	1,41E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,06E-08	1,76E-07	2,26E-06	0,00E+00	0,00E+00	1,11E-04	-9,50E-07	-8,40E-07
EP-marine	[kg N-Eq.]	4,82E-03	1,25E-04	8,71E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,48E-05	2,05E-05	4,16E-04	0,00E+00	0,00E+00	1,54E-03	-1,33E-03	-3,23E-04
EP-terrestrial	[mol N-Eq.]	5,21E-02	1,49E-03	8,67E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,56E-04	2,43E-04	4,37E-03	0,00E+00	0,00E+00	8,39E-03	-1,47E-02	-3,47E-03
POCP	[kg NMVOC-Eq.]	1,47E-02	3,38E-04	2,60E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,06E-05	5,53E-05	1,14E-03	0,00E+00	0,00E+00	3,87E-03	-4,07E-03	-9,64E-04
ADPE	[kg Sb-Eq.]	5,56E-07	2,85E-08	2,18E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,74E-09	4,67E-09	2,45E-07	0,00E+00	0,00E+00	3,35E-08	-2,50E-07	-9,81E-08
ADPF	[MJ]	7,38E+01	4,71E+00	1,20E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,31E-01	7,70E-01	1,49E+01	0,00E+00	0,00E+00	6,21E+00	6,93E+01	1,13E+01
WDP	[m ³ world-Eq deprived]	1,81E-01	3,44E-03	9,60E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,58E-03	5,63E-04	1,85E-01	0,00E+00	0,00E+00	3,50E-02	-2,63E-02	-6,05E-02

Caption: GWP = Global warming potential; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential of land and water; EP = Eutrophication potential; POCP = Formation potential of tropospheric ozone photochemical oxidants; ADPE = Abiotic depletion potential for non-fossil resources; ADPF = Abiotic depletion potential for fossil resources; WDP = Water use

RESULTS OF THE LCA - RESOURCE USE according to EN 15804+A2: 1 m²12mm Duripanel B1

Indicator	Unit	A1-A3	A4	A5	B1	B2	B6	B7	C1	C2	C3/1	C3/2	C4/1	C4/2	D/1	D/2
PERE	[MJ]	2,24E+01	2,72E-01	1,39E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,35E-01	4,45E-02	6,01E+01	0,00E+00	0,00E+00	5,40E+01	-	-
PERM	[MJ]	5,84E+01	0,00E+00	4,87E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,35E+01	0,00E+00	0,00E+00	5,35E+01	0,00E+00	0,00E+00
PERT	[MJ]	8,07E+01	2,72E-01	9,04E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,35E-01	4,45E-02	6,60E+00	0,00E+00	0,00E+00	5,54E+01	1,09E+00	2,15E+00
PENRE	[MJ]	7,35E+01	4,73E+00	1,23E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,31E-01	7,73E-01	1,49E+01	0,00E+00	0,00E+00	6,21E+00	6,93E+01	1,13E+01
PENRM	[MJ]	2,93E-01	0,00E+00	-2,93E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	7,38E+01	4,73E+00	1,20E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,31E-01	7,73E-01	1,49E+01	0,00E+00	0,00E+00	6,21E+00	6,93E+01	1,13E+01
SM	[kg]	9,96E-01	0,00E+00	9,96E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m ³]	8,99E-03	3,17E-04	3,46E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,72E-04	5,19E-05	7,63E-03	0,00E+00	0,00E+00	1,07E-03	-1,47E-03	-2,75E-03

Caption 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; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding 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 – OUTPUT FLOWS AND WASTE CATEGORIES according to EN 15804+A2: 1 m²12mm Duripanel B1

Indicator	Unit	A1-A3	A4	A5	B1	B2	B6	B7	C1	C2	C3/1	C3/2	C4/1	C4/2	D/1	D/2
HWD	[kg]	2,16E-07	2,19E-07	2,92E-08	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,20E-10	3,57E-08	6,17E-09	0,00E+00	0,00E+00	4,78E-08	-4,08E-08	-5,86E-09
NHWD	[kg]	2,19E+00	7,49E-04	1,64E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,77E-04	1,23E-04	1,06E-02	0,00E+00	0,00E+00	1,41E+01	-1,88E-02	-7,14E-03
RWD	[kg]	1,05E-03	8,71E-06	3,07E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,06E-05	1,42E-06	2,26E-03	0,00E+00	0,00E+00	7,29E-05	-3,25E-04	-7,56E-04
CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	5,87E-01	0,00E+00	6,21E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,08E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MER	[kg]	2,43E-01	0,00E+00	2,43E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,44E+00	9,98E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	1,47E-03	0,00E+00	1,02E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,58E+00	0,00E+00	0,00E+00
EET	[MJ]	3,38E-03	0,00E+00	1,58E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Caption 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; EEE = Exported thermal energy

4. LCA: Results: 1 m² Duripanel B1 (14mm)

The following table shows the environmental impacts of 1m² Duripanel B1 (14 mm). All declared modules are marked with an “x”.

DECLARED; MNR = MODULE NOT RELEVANT)

PRODUCT STAGE					CONSTRUCTION PROCESS STAGE	USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARIES	
Raw material supply	Transport	Manufacturing	Transport from the gate to the site	Assembly	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	X	X	X	MNR	MNR	MNR	X	X	X	X	X	X	X		

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT according to EN 15804+A2: 1 m²14mm Duripanel B1

Core Indicator	Unit	A1-A3	A4	A5	B1	B2	B6	B7	C1	C2	C3/1	C3/2	C4/1	C4/2	D/1	D/2
GWP-total	[kg CO ₂ -Eq.]	6,97E+00	4,15E+01	2,45E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,03E+02	6,78E+02	9,93E+01	0,00E+00	0,00E+00	6,92E+00	5,02E+00	-8,65E+01
GWP-fossil	[kg CO ₂ -Eq.]	1,42E+01	4,12E+01	1,92E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,02E+02	6,73E+02	9,89E+01	0,00E+00	0,00E+00	8,97E+01	5,02E+00	-8,63E+01
GWP-biogenic	[kg CO ₂ -Eq.]	7,26E+00	-6,91E+04	-5,35E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,01E+04	-1,13E+04	-3,30E+03	0,00E+00	0,00E+00	6,02E+00	-5,23E+03	-1,51E+03
GWP-luluc	[kg CO ₂ -Eq.]	4,92E+03	-3,33E+03	-8,93E+04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,38E+05	5,45E+04	1,43E+03	0,00E+00	0,00E+00	8,18E+04	-6,58E+04	-5,20E+04
ODP	[kg CFC11-Eq.]	3,86E-14	7,56E-17	7,09E-15	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,64E-16	1,24E-17	2,17E-14	0,00E+00	0,00E+00	1,42E-15	-3,23E-15	-6,77E-15
AP	[mol H ⁺ -Eq.]	1,67E-02	4,76E-04	3,00E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,66E-05	7,78E-05	2,18E-03	0,00E+00	0,00E+00	3,00E-03	-4,36E-03	-1,47E-03
EP-freshwater	[kg P-Eq.]	2,53E-05	1,25E-06	1,63E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,06E-08	2,05E-07	2,64E-06	0,00E+00	0,00E+00	1,30E-04	-1,10E-06	-9,76E-07
EP-marine	[kg N-Eq.]	5,63E-03	1,46E-04	9,81E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,48E-05	2,39E-05	4,85E-04	0,00E+00	0,00E+00	1,80E-03	-1,54E-03	-3,61E-04
EP-terrestrial	[mol N-Eq.]	6,08E-02	1,74E-03	9,73E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,56E-04	2,84E-04	5,09E-03	0,00E+00	0,00E+00	9,79E-03	-1,70E-02	-3,88E-03
POCP	[kg NMVOC-Eq.]	1,72E-02	3,94E-04	2,92E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,06E-05	6,45E-05	1,33E-03	0,00E+00	0,00E+00	4,52E-03	-4,70E-03	-1,07E-03
ADPE	[kg Sb-Eq.]	6,48E-07	3,33E-08	2,18E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,74E-09	5,44E-09	2,86E-07	0,00E+00	0,00E+00	3,90E-08	-2,92E-07	-1,15E-07
ADPF	[MJ]	8,61E+01	5,49E+01	1,33E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,31E+01	8,98E+01	1,74E+01	0,00E+00	0,00E+00	7,24E+00	8,07E+01	1,30E+01
WDP	[m ³ world-Eq deprived]	2,12E-01	4,02E-03	1,10E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,58E-03	6,56E-04	2,15E-01	0,00E+00	0,00E+00	4,08E-02	-3,12E-02	-7,11E-02

Caption GWP = Global warming potential; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential of land and water; EP = Eutrophication potential; POCP = Formation potential of tropospheric ozone photochemical oxidants; ADPE = Abiotic depletion potential for non-fossil resources; ADPF = Abiotic depletion potential for fossil resources; WDP = Water use

RESULTS OF THE LCA - RESOURCE USE according to EN 15804+A2: 1 m²14mm Duripanel B1

Indicator	Unit	A1-A3	A4	A5	B1	B2	B6	B7	C1	C2	C3/1	C3/2	C4/1	C4/2	D/1	D/2
PERE	[MJ]	2,61E+01	3,18E-01	1,61E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,35E-01	5,19E-02	7,01E+01	0,00E+00	0,00E+00	6,30E+01	1,30E+00	2,53E+00
PERM	[MJ]	6,81E+01	0,00E+00	5,68E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,24E+01	0,00E+00	0,00E+00	6,24E+01	0,00E+00	0,00E+00
PERT	[MJ]	9,42E+01	3,18E-01	1,04E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,35E-01	5,19E-02	7,70E+00	0,00E+00	0,00E+00	6,47E-01	1,30E+00	2,53E+00
PENRE	[MJ]	8,58E+01	5,52E+00	1,36E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,31E-01	9,02E-01	1,74E+01	0,00E+00	0,00E+00	7,24E+00	8,07E+01	1,30E+01
PENRM	[MJ]	3,42E-01	0,00E+00	-3,42E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	8,61E+01	5,52E+00	1,33E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,31E-01	9,02E-01	1,74E+01	0,00E+00	0,00E+00	7,24E+00	8,07E+01	1,30E+01
SM	[kg]	1,16E+00	0,00E+00	1,16E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m ³]	1,05E-02	3,70E-04	3,87E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,72E-04	6,05E-05	8,91E-03	0,00E+00	0,00E+00	1,25E-03	-1,69E-03	-3,19E-03

Caption 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; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding 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 – OUTPUT FLOWS AND WASTE CATEGORIES according to EN 15804+A2: 1 m²14mm Duripanel B1

Indicator	Unit	A1-A3	A4	A5	B1	B2	B6	B7	C1	C2	C3/1	C3/2	C4/1	C4/2	D/1	D/2
HWD	[kg]	2,52E-07	2,55E-07	3,36E-08	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,20E-10	4,17E-08	7,19E-09	0,00E+00	0,00E+00	5,57E-08	-4,75E-08	-6,67E-09
NHWD	[kg]	2,56E+00	8,74E-04	1,91E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,77E-04	1,43E-04	1,23E-02	0,00E+00	0,00E+00	1,65E+01	-2,16E-02	-7,95E-03
RWD	[kg]	1,23E-03	1,02E-05	3,27E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,06E-05	1,66E-06	2,64E-03	0,00E+00	0,00E+00	8,51E-05	-3,83E-04	-8,85E-04
CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	6,85E-01	0,00E+00	7,24E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,26E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MER	[kg]	2,84E-01	0,00E+00	2,84E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,18E+00	9,98E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	1,71E-03	0,00E+00	1,19E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,84E+00	0,00E+00	0,00E+00
EET	[MJ]	3,94E-03	0,00E+00	1,84E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Caption 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; EEE = Exported thermal energy

5. LCA: Results: 1 m² Duripanel B1 (16mm)

The following table shows the environmental impacts of 1m² Duripanel B1 (16 mm). All declared modules are marked with an “x”.

DECLARED; MNR = MODULE NOT RELEVANT)

PRODUCT STAGE			CONSTRUCTION PROCESS STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARIES	
Raw material supply	Transport	Manufacturing	Transport from the gate to the site	Assembly	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	X	X	X	MNR	MNR	MNR	X	X	X	X	X	X	X	

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT according to EN 15804+A2: 1 m²16mm Duripanel B1

Core Indicator	Unit	A1-A3	A4	A5	B1	B2	B6	B7	C1	C2	C3/1	C3/2	C4/1	C4/2	D/1	D/2
GWP-total	[kg CO ₂ -Eq.]	7,97E+00	4,74E+01	2,75E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,03E+02	7,74E+02	1,14E+00	0,00E+00	0,00E+00	7,91E+00	5,72E+00	-9,66E+01
GWP-fossil	[kg CO ₂ -Eq.]	1,63E+01	4,71E+01	2,14E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,02E+02	7,69E+02	1,13E+00	0,00E+00	0,00E+00	1,03E+00	5,71E+00	-9,64E+01
GWP-biogenic	[kg CO ₂ -Eq.]	8,30E+00	-7,90E+04	-6,12E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,01E+04	-1,29E+04	-3,77E+03	0,00E+00	0,00E+00	6,88E+00	-5,99E+03	-1,74E+03
GWP-luluc	[kg CO ₂ -Eq.]	5,62E+03	3,81E+03	9,76E+04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,38E+05	6,23E+04	1,64E+03	0,00E+00	0,00E+00	9,35E+04	-7,52E+04	-5,94E+04
ODP	[kg CFC11-Eq.]	4,41E+14	8,64E+17	7,67E+15	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,64E+16	1,41E+17	2,49E+14	0,00E+00	0,00E+00	1,62E+15	-3,79E+15	-7,84E+15
AP	[mol H ⁺ -Eq.]	1,90E+02	5,44E+04	3,29E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,66E+05	8,89E+05	2,49E+03	0,00E+00	0,00E+00	3,43E+03	-4,92E+03	-1,62E+03
EP-freshwater	[kg P-Eq.]	2,89E+05	1,43E+06	1,85E+05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,06E+08	2,34E+07	3,02E+06	0,00E+00	0,00E+00	1,49E+04	-1,26E+06	-1,11E+06
EP-marine	[kg N-Eq.]	6,43E+03	1,67E+04	1,09E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,48E+05	2,73E+05	5,54E+04	0,00E+00	0,00E+00	2,06E+03	-1,75E+03	-4,00E+04
EP-terrestrial	[mol N-Eq.]	6,94E+02	1,98E+03	1,08E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,56E+04	3,24E+04	5,82E+03	0,00E+00	0,00E+00	1,12E+02	-1,93E+02	-4,30E+03
POCP	[kg NMVOC-Eq.]	1,96E+02	4,51E+04	3,24E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,06E+05	7,37E+05	1,52E+03	0,00E+00	0,00E+00	5,17E+03	-5,32E+03	-1,18E+03
ADPE	[kg Sb-Eq.]	7,41E+07	3,81E+08	2,19E+05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,74E+09	6,22E+09	3,27E+07	0,00E+00	0,00E+00	4,46E+08	-3,34E+07	-1,32E+07
ADPF	[MJ]	9,84E+01	6,28E+01	1,46E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,31E+01	1,03E+01	1,99E+01	0,00E+00	0,00E+00	8,28E+00	9,20E+01	1,47E+01
WDP	[m ³ world-Eq deprived]	2,42E+01	4,59E+03	1,24E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,58E+03	7,50E+04	2,46E+01	0,00E+00	0,00E+00	4,66E+02	-3,61E+01	-8,17E+02

Caption: GWP = Global warming potential; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential of land and water; EP = Eutrophication potential; POCP = Formation potential of tropospheric ozone photochemical oxidants; ADPE = Abiotic depletion potential for non-fossil resources; ADPF = Abiotic depletion potential for fossil resources; WDP = Water use

RESULTS OF THE LCA - RESOURCE USE according to EN 15804+A2: 1 m²16mm Duripanel B1

Indicator	Unit	A1-A3	A4	A5	B1	B2	B6	B7	C1	C2	C3/1	C3/2	C4/1	C4/2	D/1	D/2
PERE	[MJ]	2,99E+01	3,63E-01	1,83E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,35E-01	5,94E-02	8,01E+01	0,00E+00	0,00E+00	7,20E+01	1,50E+00	2,91E+00
PERM	[MJ]	7,78E+01	0,00E+00	6,49E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,13E+01	0,00E+00	0,00E+00	7,13E+01	0,00E+00	0,00E+00
PERT	[MJ]	1,08E+02	3,63E-01	1,18E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,35E-01	5,94E-02	8,80E+00	0,00E+00	0,00E+00	7,39E+01	1,50E+00	2,91E+00
PENRE	[MJ]	9,80E+01	6,30E+00	1,50E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,31E-01	1,03E+00	1,99E+01	0,00E+00	0,00E+00	8,28E+00	9,21E+01	1,47E+01
PENRM	[MJ]	3,91E-01	0,00E+00	-3,91E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	9,84E+01	6,30E+00	1,46E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,31E-01	1,03E+00	1,99E+01	0,00E+00	0,00E+00	8,28E+00	9,21E+01	1,47E+01
SM	[kg]	1,33E+00	0,00E+00	1,33E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m ³]	1,20E-02	4,23E-04	4,28E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,72E-04	6,92E-05	1,02E-02	0,00E+00	0,00E+00	1,43E-03	-1,92E-03	-3,63E-03

Caption 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; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding 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 – OUTPUT FLOWS AND WASTE CATEGORIES according to EN 15804+A2: 1 m²16mm Duripanel B1

Indicator	Unit	A1-A3	A4	A5	B1	B2	B6	B7	C1	C2	C3/1	C3/2	C4/1	C4/2	D/1	D/2
HWD	[kg]	2,88E-07	2,92E-07	3,80E-08	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,20E-10	4,77E-08	8,22E-09	0,00E+00	0,00E+00	6,37E-08	-5,41E-08	-7,48E-09
NHWD	[kg]	2,92E+00	9,99E-04	2,19E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,77E-04	1,63E-04	1,41E-02	0,00E+00	0,00E+00	1,88E+01	-2,44E-02	-8,77E-03
RWD	[kg]	1,40E-03	1,16E-05	3,47E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,06E-05	1,90E-06	3,01E-03	0,00E+00	0,00E+00	9,73E-05	-4,41E-04	-1,01E-03
CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	7,83E-01	0,00E+00	8,27E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,44E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MER	[kg]	3,24E-01	0,00E+00	3,24E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,92E+00	9,98E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	1,96E-03	0,00E+00	1,36E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,10E+00	0,00E+00	0,00E+00
EET	[MJ]	4,51E-03	0,00E+00	2,10E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Caption 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; EEE = Exported thermal energy

6. LCA: Results: 1 m² Duripanel B1 (20mm)

The following table shows the environmental impacts of 1m² Duripanel B1 (20mm). All declared modules are marked with an “x”.

DECLARED; MNR = MODULE NOT RELEVANT)

PRODUCT STAGE					CONSTRUCTION PROCESS STAGE	USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARIES	
Raw material supply	Transport	Manufacturing	Transport from the gate to the site	Assembly	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	X	X	X	MNR	MNR	MNR	X	X	X	X	X	X	X		

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT according to EN 15804+A2: 1 m²20mm Duripanel B1

Core Indicator	Unit	A1-A3	A4	A5	B1	B2	B6	B7	C1	C2	C3/1	C3/2	C4/1	C4/2	D/1	D/2
GWP-total	[kg CO ₂ -Eq.]	9,96E+00	5,92E-01	3,34E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,03E-02	9,68E-02	1,42E+00	0,00E+00	0,00E+00	9,88E+00	7,11E+00	1,17E+00
GWP-fossil	[kg CO ₂ -Eq.]	2,03E+01	5,88E-01	2,57E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,02E-02	9,62E-02	1,41E+00	0,00E+00	0,00E+00	1,28E+00	7,10E+00	1,17E+00
GWP-biogenic	[kg CO ₂ -Eq.]	1,04E-04	-9,88E-04	-7,64E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,01E-04	-1,61E-04	-4,71E-03	0,00E+00	0,00E+00	8,60E+00	-7,51E-03	-2,21E-03
GWP-luluc	[kg CO ₂ -Eq.]	7,03E-03	-4,76E-03	-1,14E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,38E-05	-7,78E-04	2,05E-03	0,00E+00	0,00E+00	1,17E-03	-9,40E-04	-7,42E-04
ODP	[kg CFC11-Eq.]	5,51E-14	-1,08E-16	-8,84E-15	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,64E-16	-1,77E-17	3,11E-14	0,00E+00	0,00E+00	2,03E-15	-4,92E-15	-9,98E-15
AP	[mol H ⁺ -Eq.]	2,38E-02	-6,80E-04	-3,87E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,66E-05	1,11E-04	3,12E-03	0,00E+00	0,00E+00	4,28E-03	-6,04E-03	-1,91E-03
EP-freshwater	[kg P-Eq.]	3,61E-05	-1,79E-06	-2,30E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,06E-08	-2,93E-07	3,77E-06	0,00E+00	0,00E+00	1,86E-04	-1,57E-06	-1,38E-06
EP-marine	[kg N-Eq.]	8,04E-03	-2,09E-04	-1,31E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,48E-05	-3,42E-05	6,93E-04	0,00E+00	0,00E+00	2,57E-03	-2,16E-03	-4,77E-04
EP-terrestrial	[mol N-Eq.]	8,68E-02	-2,48E-03	-1,29E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,56E-04	-4,05E-04	7,28E-03	0,00E+00	0,00E+00	1,40E-02	-2,38E-02	-5,12E-03
POCP	[kg NMVOC-Eq.]	2,45E-02	-5,63E-04	-3,88E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,06E-05	-9,21E-05	1,90E-03	0,00E+00	0,00E+00	6,46E-03	-6,58E-03	-1,40E-03
ADPE	[kg Sb-Eq.]	9,26E-07	-4,76E-08	-2,19E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,74E-09	-7,78E-09	4,09E-07	0,00E+00	0,00E+00	5,58E-08	-4,19E-07	-1,66E-07
ADPF	[MJ]	1,23E+02	7,85E+01	1,72E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,31E-01	-1,28E+01	2,48E+01	0,00E+00	0,00E+00	1,03E+01	1,15E+02	1,81E+01
WDP	[m ³ world-Eq deprived]	3,02E-01	-5,74E-03	-1,51E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,58E-03	-9,38E-04	3,08E-01	0,00E+00	0,00E+00	5,83E-02	-4,59E-02	-1,03E-01

Caption: GWP = Global warming potential; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential of land and water; EP = Eutrophication potential; POCP = Formation potential of tropospheric ozone photochemical oxidants; ADPE = Abiotic depletion potential for non-fossil resources; ADPF = Abiotic depletion potential for fossil resources; WDP = Water use

RESULTS OF THE LCA - RESOURCE USE according to EN 15804+A2: 1 m²20mm Duripanel B1

Indicator	Unit	A1-A3	A4	A5	B1	B2	B6	B7	C1	C2	C3/1	C3/2	C4/1	C4/2	D/1	D/2
PERE	[MJ]	3,73E+01	4,54E+01	2,26E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,35E-01	7,42E-02	1,00E+02	0,00E+00	0,00E+00	9,01E+01	1,91E+00	3,67E+00
PERM	[MJ]	9,73E+01	0,00E+00	8,12E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,91E+01	0,00E+00	0,00E+00	8,91E+01	0,00E+00	0,00E+00
PERT	[MJ]	1,35E+02	4,54E+01	1,45E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,35E-01	7,42E-02	1,10E+01	0,00E+00	0,00E+00	9,24E+01	1,91E+00	3,67E+00
PENRE	[MJ]	1,23E+02	7,88E+00	1,77E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,31E-01	1,29E+00	2,48E+01	0,00E+00	0,00E+00	1,03E+01	1,15E+02	1,81E+01
PENRM	[MJ]	4,89E-01	0,00E+00	-4,89E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	1,23E+02	7,88E+00	1,72E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,31E-01	1,29E+00	2,48E+01	0,00E+00	0,00E+00	1,03E+01	1,15E+02	1,81E+01
SM	[kg]	1,66E+00	0,00E+00	1,66E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m ³]	1,50E-02	5,29E-04	5,09E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,72E-04	8,65E-05	1,27E-02	0,00E+00	0,00E+00	1,79E-03	-2,38E-03	-4,51E-03

Caption 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; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding 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 – OUTPUT FLOWS AND WASTE CATEGORIES according to EN 15804+A2: 1 m²20mm Duripanel B1

Indicator	Unit	A1-A3	A4	A5	B1	B2	B6	B7	C1	C2	C3/1	C3/2	C4/1	C4/2	D/1	D/2
HWD	[kg]	3,60E-07	3,64E-07	4,68E-08	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,20E-10	5,96E-08	1,03E-08	0,00E+00	0,00E+00	7,96E-08	-6,74E-08	-9,11E-09
NHWD	[kg]	3,66E+00	1,25E+03	2,73E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,77E-04	2,04E-04	1,76E-02	0,00E+00	0,00E+00	2,36E+01	-2,99E-02	-1,04E-02
RWD	[kg]	1,75E-03	1,45E-05	3,86E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,06E-05	2,37E-06	3,77E-03	0,00E+00	0,00E+00	1,22E-04	-5,56E-04	-1,27E-03
CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	9,79E-01	0,00E+00	1,03E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,80E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MER	[kg]	4,05E-01	0,00E+00	4,05E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,39E+00	9,98E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	2,45E-03	0,00E+00	1,71E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,63E+00	0,00E+00	0,00E+00
EET	[MJ]	5,64E-03	0,00E+00	2,63E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Caption 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; EEE = Exported thermal energy

7. LCA: Results: 1 m² Duripanel B1 (22mm)

The following table shows the environmental impacts of 1m² Duripanel B1 (22 mm). All declared modules are marked with an “x”.

DECLARED; MNR = MODULE NOT RELEVANT)

PRODUCT STAGE			CONSTRUCTION PROCESS STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARIES	
Raw material supply	Transport	Manufacturing	Transport from the gate to the site	Assembly	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	X	X	X	MNR	MNR	MNR	X	X	X	X	X	X	X	

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT according to EN 15804+A2: 1 m²22mm Duripanel B1

Core Indicator	Unit	A1-A3	A4	A5	B1	B2	B6	B7	C1	C2	C3/1	C3/2	C4/1	C4/2	D/1	D/2
GWP-total	[kg CO ₂ -Eq.]	1,10E+01	6,51E+01	3,63E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,03E+02	1,06E+01	1,56E+00	0,00E+00	0,00E+00	1,09E+01	7,80E+00	1,27E+00
GWP-fossil	[kg CO ₂ -Eq.]	2,24E+01	6,47E+01	2,79E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,02E+02	1,06E+01	1,55E+00	0,00E+00	0,00E+00	1,41E+01	7,79E+00	1,27E+00
GWP-biogenic	[kg CO ₂ -Eq.]	1,14E+01	-1,09E+03	8,41E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,01E+04	-1,78E+04	5,18E+03	0,00E+00	0,00E+00	9,46E+00	-8,28E+03	-2,44E+03
GWP-luluc	[kg CO ₂ -Eq.]	7,73E+03	5,24E+03	1,22E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,38E+05	8,56E+04	2,25E+03	0,00E+00	0,00E+00	1,29E+03	-1,03E+03	-8,16E+04
ODP	[kg CFC11-Eq.]	6,07E-14	1,19E-16	9,42E-15	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,64E-16	1,94E-17	3,42E-14	0,00E+00	0,00E+00	2,23E-15	-5,49E-15	-1,11E-14
AP	[mol H ⁺ -Eq.]	2,62E-02	7,48E-04	4,16E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,66E-05	1,22E-04	3,43E-03	0,00E+00	0,00E+00	4,71E-03	-6,60E-03	-2,06E-03
EP-freshwater	[kg P-Eq.]	3,98E-05	1,97E-06	2,52E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,06E-08	3,22E-07	4,15E-06	0,00E+00	0,00E+00	2,04E-04	-1,72E-06	-1,52E-06
EP-marine	[kg N-Eq.]	8,85E-03	2,30E-04	1,42E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,48E-05	3,76E-05	7,62E-04	0,00E+00	0,00E+00	2,83E-03	-2,37E-03	-5,15E-04
EP-terrestrial	[mol N-Eq.]	9,55E-02	2,73E-03	1,40E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,56E-04	4,46E-04	8,00E-03	0,00E+00	0,00E+00	1,54E-02	-2,61E-02	-5,53E-03
POCP	[kg NMVOC-Eq.]	2,70E-02	6,20E-04	4,20E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,06E-05	1,01E-04	2,09E-03	0,00E+00	0,00E+00	7,10E-03	-7,21E-03	-1,51E-03
ADPE	[kg Sb-Eq.]	1,02E-06	5,23E-08	2,19E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,74E-09	8,55E-09	4,50E-07	0,00E+00	0,00E+00	6,13E-08	-4,61E-07	-1,83E-07
ADPF	[MJ]	1,35E+02	8,63E+01	1,85E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,31E+01	1,41E+01	2,73E+01	0,00E+00	0,00E+00	1,14E+01	1,26E+02	1,98E+01
WDP	[m ³ world-Eq deprived]	3,32E-01	6,31E-03	1,65E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,58E-03	1,03E-03	3,39E-01	0,00E+00	0,00E+00	6,41E-02	-5,08E-02	-1,13E-01

Caption: GWP = Global warming potential; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential of land and water; EP = Eutrophication potential; POCP = Formation potential of tropospheric ozone photochemical oxidants; ADPE = Abiotic depletion potential for non-fossil resources; ADPF = Abiotic depletion potential for fossil resources; WDP = Water use

RESULTS OF THE LCA - RESOURCE USE according to EN 15804+A2: 1 m²22mm Duripanel B1

Indicator	Unit	A1-A3	A4	A5	B1	B2	B6	B7	C1	C2	C3/1	C3/2	C4/1	C4/2	D/1	D/2
PERE	[MJ]	4,10E+01	4,99E-01	2,48E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,35E-01	8,16E-02	1,10E+02	0,00E+00	0,00E+00	9,91E+01	2,12E+00	4,05E+00
PERM	[MJ]	1,07E+02	0,00E+00	8,93E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,80E+01	0,00E+00	0,00E+00	9,80E+01	0,00E+00	0,00E+00
PERT	[MJ]	1,48E+02	4,99E-01	1,58E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,35E-01	8,16E-02	1,21E+01	0,00E+00	0,00E+00	1,02E+00	2,12E+00	4,05E+00
PENRE	[MJ]	1,35E+02	8,67E+00	1,90E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,31E-01	1,42E+00	2,73E+01	0,00E+00	0,00E+00	1,14E+01	1,26E+02	1,98E+01
PENRM	[MJ]	5,38E-01	0,00E+00	-5,38E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	1,35E+02	8,67E+00	1,85E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,31E-01	1,42E+00	2,73E+01	0,00E+00	0,00E+00	1,14E+01	1,26E+02	1,98E+01
SM	[kg]	1,83E+00	0,00E+00	1,83E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m ³]	1,65E-02	5,82E-04	5,50E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,72E-04	9,51E-05	1,40E-02	0,00E+00	0,00E+00	1,97E-03	-2,60E-03	-4,95E-03

Caption 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; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding 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 – OUTPUT FLOWS AND WASTE CATEGORIES according to EN 15804+A2: 1 m²22mm Duripanel B1

Indicator	Unit	A1-A3	A4	A5	B1	B2	B6	B7	C1	C2	C3/1	C3/2	C4/1	C4/2	D/1	D/2
HWD	[kg]	3,96E-07	4,01E-07	5,12E-08	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,20E-10	6,55E-08	1,13E-08	0,00E+00	0,00E+00	8,76E-08	-7,40E-08	-9,92E-09
NHWD	[kg]	4,02E+00	1,37E-03	3,01E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,77E-04	2,25E-04	1,94E-02	0,00E+00	0,00E+00	2,59E+01	-3,27E-02	-1,12E-02
RWD	[kg]	1,93E-03	1,60E-05	4,06E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,06E-05	2,61E-06	4,14E-03	0,00E+00	0,00E+00	1,34E-04	-6,14E-04	-1,40E-03
CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	1,08E+00	0,00E+00	1,14E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,98E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MER	[kg]	4,46E-01	0,00E+00	4,46E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,13E+00	9,98E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	2,69E-03	0,00E+00	1,88E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,89E+00	0,00E+00	0,00E+00
EET	[MJ]	6,20E-03	0,00E+00	2,89E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Caption 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; EEE = Exported thermal energy

8. LCA: Results: 1 m² Duripanel B1 (24mm)

The following table shows the environmental impacts of 1m² Duripanel B1 (24 mm). All declared modules are marked with an “x”.

DECLARED; MNR = MODULE NOT RELEVANT)

PRODUCT STAGE			CONSTRUCTION PROCESS STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARIES	
Raw material supply	Transport	Manufacturing	Transport from the gate to the site	Assembly	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	X	X	X	MNR	MNR	MNR	X	X	X	X	X	X	X	

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT according to EN 15804+A2: 1 m²24mm Duripanel B1

Core Indicator	Unit	A1-A3	A4	A5	B1	B2	B6	B7	C1	C2	C3/1	C3/2	C4/1	C4/2	D/1	D/2
GWP-total	[kg CO ₂ -Eq.]	1,20E+01	7,11E+01	3,93E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,03E+02	1,16E+01	1,70E+00	0,00E+00	0,00E+00	1,19E+01	8,50E+00	1,37E+00
GWP-fossil	[kg CO ₂ -Eq.]	2,44E+01	7,06E+01	3,01E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,02E+02	1,15E+01	1,69E+00	0,00E+00	0,00E+00	1,54E+01	8,49E+00	1,37E+00
GWP-biogenic	[kg CO ₂ -Eq.]	1,25E+01	-1,19E+03	-9,17E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,01E+04	-1,94E+04	-5,65E+03	0,00E+00	0,00E+00	1,03E+01	-9,04E+03	-2,67E+03
GWP-luluc	[kg CO ₂ -Eq.]	8,43E+03	-5,71E+03	-1,31E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,38E+05	-9,34E+04	-2,46E+03	0,00E+00	0,00E+00	1,40E+03	-1,13E+03	-8,91E+04
ODP	[kg CFC11-Eq.]	6,62E-14	-1,30E-16	-1,00E-14	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,64E-16	-2,12E-17	-3,73E-14	0,00E+00	0,00E+00	2,43E-15	-6,05E-15	-1,21E-14
AP	[mol H ⁺ -Eq.]	2,85E-02	-8,16E-04	-4,46E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,66E-05	-1,33E-04	-3,74E-03	0,00E+00	0,00E+00	5,14E-03	-7,16E-03	-2,20E-03
EP-freshwater	[kg P-Eq.]	4,34E-05	-2,15E-06	-2,74E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,06E-08	-3,52E-07	-4,53E-06	0,00E+00	0,00E+00	2,23E-04	-1,87E-06	-1,66E-06
EP-marine	[kg N-Eq.]	9,65E-03	-2,51E-04	-1,53E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,48E-05	-4,10E-05	-8,31E-04	0,00E+00	0,00E+00	3,08E-03	-2,57E-03	-5,54E-04
EP-terrestrial	[mol N-Eq.]	1,04E+01	-2,97E+03	-1,51E+02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,56E+04	-4,86E+04	-8,73E+03	0,00E+00	0,00E+00	1,68E+02	-2,84E+02	-5,95E+03
POCP	[kg NMVOC-Eq.]	2,94E-02	-6,76E-04	-4,51E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,06E-05	-1,11E-04	-2,28E-03	0,00E+00	0,00E+00	7,75E-03	-7,83E-03	-1,62E-03
ADPE	[kg Sb-Eq.]	1,11E-06	-5,71E-08	-2,19E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,74E-09	-9,33E-09	-4,91E-07	0,00E+00	0,00E+00	6,69E-08	-5,03E-07	-2,00E-07
ADPF	[MJ]	1,48E+02	9,42E+01	1,98E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,31E+01	-1,54E+01	-2,98E+01	0,00E+00	0,00E+00	1,24E+01	1,37E+02	2,15E+01
WDP	[m ³ world-Eq deprived]	3,63E-01	-6,88E-03	-1,79E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,58E-03	-1,13E-03	-3,69E-01	0,00E+00	0,00E+00	7,00E-02	-5,57E-02	-1,24E-01

Caption: GWP = Global warming potential; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential of land and water; EP = Eutrophication potential; POCP = Formation potential of tropospheric ozone photochemical oxidants; ADPE = Abiotic depletion potential for non-fossil resources; ADPF = Abiotic depletion potential for fossil resources; WDP = Water use

RESULTS OF THE LCA - RESOURCE USE according to EN 15804+A2: 1 m²24mm Duripanel B1

Indicator	Unit	A1-A3	A4	A5	B1	B2	B6	B7	C1	C2	C3/1	C3/2	C4/1	C4/2	D/1	D/2
PERE	[MJ]	4,48E+01	5,45E+01	2,69E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,35E-01	8,90E-02	1,20E+02	0,00E+00	0,00E+00	1,08E+02	2,32E+00	4,43E+00
PERM	[MJ]	1,17E+02	0,00E+00	9,74E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,07E+02	0,00E+00	0,00E+00	1,07E+02	0,00E+00	0,00E+00
PERT	[MJ]	1,61E+02	5,45E+01	1,72E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,35E-01	8,90E-02	1,32E+01	0,00E+00	0,00E+00	1,11E+00	2,32E+00	4,43E+00
PENRE	[MJ]	1,47E+02	9,46E+00	2,04E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,31E-01	1,55E+00	2,98E+01	0,00E+00	0,00E+00	1,24E+01	1,37E+02	2,15E+01
PENRM	[MJ]	5,87E-01	0,00E+00	-5,87E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	1,48E+02	9,46E+00	1,98E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,31E-01	1,55E+00	2,98E+01	0,00E+00	0,00E+00	1,24E+01	1,37E+02	2,15E+01
SM	[kg]	1,99E+00	0,00E+00	1,99E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m ³]	1,80E-02	6,35E-04	5,91E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,72E-04	1,04E-04	1,53E-02	0,00E+00	0,00E+00	2,15E-03	-2,83E-03	-5,39E-03

Caption 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; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding 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 – OUTPUT FLOWS AND WASTE CATEGORIES according to EN 15804+A2: 1 m²24mm Duripanel B1

Indicator	Unit	A1-A3	A4	A5	B1	B2	B6	B7	C1	C2	C3/1	C3/2	C4/1	C4/2	D/1	D/2
HWD	[kg]	4,32E-07	4,37E-07	5,56E-08	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,20E-10	7,15E-08	1,23E-08	0,00E+00	0,00E+00	9,55E-08	-8,07E-08	-1,07E-08
NHWD	[kg]	4,39E+00	1,50E+03	3,28E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,77E-04	2,45E-04	2,11E-02	0,00E+00	0,00E+00	2,83E+01	-3,54E-02	-1,20E-02
RWD	[kg]	2,10E-03	1,74E-05	4,26E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,06E-05	2,85E-06	4,52E-03	0,00E+00	0,00E+00	1,46E-04	-6,72E-04	-1,53E-03
CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	1,17E+00	0,00E+00	1,24E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,15E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MER	[kg]	4,86E-01	0,00E+00	4,86E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,87E+00	9,98E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	2,94E-03	0,00E+00	2,05E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,15E+00	0,00E+00	0,00E+00
EET	[MJ]	6,76E-03	0,00E+00	3,15E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Caption 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; EEE = Exported thermal energy

9. LCA: Results: 1 m² Duripanel B1 (28mm)

The following table shows the environmental impacts of 1m² Duripanel B1 (28 mm). All declared modules are marked with an “x”.

DECLARED; MNR = MODULE NOT RELEVANT)

PRODUCT STAGE					CONSTRUCTION PROCESS STAGE	USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARIES	
Raw material supply	Transport	Manufacturing	Transport from the gate to the site	Assembly	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	X	X	X	MNR	MNR	MNR	X	X	X	X	X	X	X		

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT according to EN 15804+A2: 1 m²28mm Duripanel B1

Core Indicator	Unit	A1-A3	A4	A5	B1	B2	B6	B7	C1	C2	C3/1	C3/2	C4/1	C4/2	D/1	D/2
GWP-total	[kg CO ₂ -Eq.]	1,39E+01	8,29E+01	4,52E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,03E+02	1,36E+01	1,99E+00	0,00E+00	0,00E+00	1,38E+01	9,89E+00	1,57E+00
GWP-fossil	[kg CO ₂ -Eq.]	2,85E+01	8,24E+01	3,45E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,02E+02	1,35E+01	1,98E+00	0,00E+00	0,00E+00	1,79E+00	9,88E+00	1,57E+00
GWP-biogenic	[kg CO ₂ -Eq.]	1,45E+01	-1,38E+03	-1,07E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,01E+04	-2,26E+04	6,59E+03	0,00E+00	0,00E+00	1,20E+01	-1,06E+02	-3,14E+03
GWP-luluc	[kg CO ₂ -Eq.]	9,84E+03	6,67E+03	-1,47E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,38E+05	1,09E+03	2,87E+03	0,00E+00	0,00E+00	1,64E+03	-1,32E+03	-1,04E+03
ODP	[kg CFC11-Eq.]	7,72E-14	1,51E-16	1,12E-14	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,64E-16	2,47E-17	4,35E-14	0,00E+00	0,00E+00	2,84E-15	-7,18E-15	-1,43E-14
AP	[mol H ⁺ -Eq.]	3,33E-02	9,52E-04	5,04E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,66E-05	1,56E-04	4,36E-03	0,00E+00	0,00E+00	6,00E-03	-8,28E-03	-2,50E-03
EP-freshwater	[kg P-Eq.]	5,06E-05	2,51E-06	3,19E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,06E-08	4,10E-07	5,28E-06	0,00E+00	0,00E+00	2,60E-04	-2,18E-06	-1,93E-06
EP-marine	[kg N-Eq.]	1,13E-02	2,92E-04	1,75E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,48E-05	4,78E-05	9,70E-04	0,00E+00	0,00E+00	3,60E-03	-2,99E-03	-6,31E-04
EP-terrestrial	[mol N-Eq.]	1,22E-01	3,47E-03	1,72E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,56E-04	5,67E-04	1,02E-02	0,00E+00	0,00E+00	1,96E-02	-3,30E-02	-6,77E-03
POCP	[kg NMVOC-Eq.]	3,44E-02	7,89E-04	5,15E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,06E-05	1,29E-04	2,66E-03	0,00E+00	0,00E+00	9,04E-03	-9,09E-03	-1,84E-03
ADPE	[kg Sb-Eq.]	1,30E-06	6,66E-08	2,19E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,74E-09	1,09E-08	5,72E-07	0,00E+00	0,00E+00	7,81E-08	-5,88E-07	-2,34E-07
ADPF	[MJ]	1,72E+02	1,10E+01	2,24E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,31E+01	1,80E+00	3,48E+01	0,00E+00	0,00E+00	1,45E+01	1,60E+02	2,49E+01
WDP	[m ³ world-Eq deprived]	4,23E-01	8,03E-03	2,06E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,58E-03	1,31E-03	4,31E-01	0,00E+00	0,00E+00	8,16E-02	-6,55E-02	-1,45E-01

Caption: GWP = Global warming potential; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential of land and water; EP = Eutrophication potential; POCP = Formation potential of tropospheric ozone photochemical oxidants; ADPE = Abiotic depletion potential for non-fossil resources; ADPF = Abiotic depletion potential for fossil resources; WDP = Water use

RESULTS OF THE LCA - RESOURCE USE according to EN 15804+A2: 1 m²28mm Duripanel B1

Indicator	Unit	A1-A3	A4	A5	B1	B2	B6	B7	C1	C2	C3/1	C3/2	C4/1	C4/2	D/1	D/2
PERE	[MJ]	5,22E+01	6,35E-01	3,13E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,35E-01	1,04E-01	1,40E+02	0,00E+00	0,00E+00	1,26E+02	2,73E+00	5,19E+00
PERM	[MJ]	1,36E+02	0,00E+00	1,14E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,25E+02	0,00E+00	0,00E+00	1,25E+02	0,00E+00	0,00E+00
PERT	[MJ]	1,88E+02	6,35E-01	1,99E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,35E-01	1,04E-01	1,54E+01	0,00E+00	0,00E+00	1,29E+00	2,73E+00	5,19E+00
PENRE	[MJ]	1,72E+02	1,10E+01	2,31E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,31E-01	1,80E+00	3,48E+01	0,00E+00	0,00E+00	1,45E+01	1,60E+02	2,49E+01
PENRM	[MJ]	6,85E-01	0,00E+00	-6,85E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	1,72E+02	1,10E+01	2,24E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,31E-01	1,80E+00	3,48E+01	0,00E+00	0,00E+00	1,45E+01	1,60E+02	2,49E+01
SM	[kg]	2,32E+00	0,00E+00	2,32E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m ³]	2,10E-02	7,40E-04	6,72E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,72E-04	1,21E-04	1,78E-02	0,00E+00	0,00E+00	2,51E-03	-3,28E-03	-6,27E-03

Caption 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; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding 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 – OUTPUT FLOWS AND WASTE CATEGORIES according to EN 15804+A2: 1 m²28mm Duripanel B1

Indicator	Unit	A1-A3	A4	A5	B1	B2	B6	B7	C1	C2	C3/1	C3/2	C4/1	C4/2	D/1	D/2
HWD	[kg]	5,04E-07	5,10E-07	6,43E-08	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,20E-10	8,34E-08	1,44E-08	0,00E+00	0,00E+00	1,11E-07	-9,39E-08	-1,23E-08
NHWD	[kg]	5,12E+00	1,75E+03	3,82E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,77E-04	2,86E-04	2,47E-02	0,00E+00	0,00E+00	3,30E+01	-4,10E-02	-1,37E-02
RWD	[kg]	2,45E-03	2,03E-05	4,66E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,06E-05	3,32E-06	5,28E-03	0,00E+00	0,00E+00	1,70E-04	-7,88E-04	-1,79E-03
CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	1,37E+00	0,00E+00	1,45E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,51E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MER	[kg]	5,67E-01	0,00E+00	5,67E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,04E+01	9,98E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	3,43E-03	0,00E+00	2,39E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,68E+00	0,00E+00	0,00E+00
EET	[MJ]	7,89E-03	0,00E+00	3,68E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Caption 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; EEE = Exported thermal energy

10. LCA: Results: 1 m² Duripanel B1 (32mm)

The following table shows the environmental impacts of 1m² Duripanel B1 (32 mm). All declared modules are marked with an “x”.

DECLARED; MNR = MODULE NOT RELEVANT)

PRODUCT STAGE					CONSTRUCTION PROCESS STAGE	USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARIES	
Raw material supply	Transport	Manufacturing	Transport from the gate to the site	Assembly	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	X	X	X	MNR	MNR	MNR	X	X	X	X	X	X	X		

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT according to EN 15804+A2: 1 m²32mm Duripanel B1

Core Indicator	Unit	A1-A3	A4	A5	B1	B2	B6	B7	C1	C2	C3/1	C3/2	C4/1	C4/2	D/1	D/2
GWP-total	[kg CO ₂ -Eq.]	1,59E+01	9,47E-01	5,11E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,03E-02	1,55E-01	2,27E+00	0,00E+00	0,00E+00	1,58E+01	1,13E+01	1,77E+00
GWP-fossil	[kg CO ₂ -Eq.]	3,25E+01	9,41E-01	3,88E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,02E-02	1,54E-01	2,26E+00	0,00E+00	0,00E+00	2,05E+00	1,13E+01	1,77E+00
GWP-biogenic	[kg CO ₂ -Eq.]	1,66E-01	-1,58E-03	-1,22E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,01E-04	-2,58E-04	-7,53E-03	0,00E+00	0,00E+00	1,38E+01	-1,21E-02	-3,60E-03
GWP-luluc	[kg CO ₂ -Eq.]	1,12E-02	7,62E-03	-1,64E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,38E-05	1,25E-03	3,27E-03	0,00E+00	0,00E+00	1,87E-03	-1,50E-03	-1,19E-03
ODP	[kg CFC11-Eq.]	8,82E-14	-1,73E-16	-1,23E-14	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,64E-16	2,82E-17	4,97E-14	0,00E+00	0,00E+00	3,25E-15	-8,31E-15	-1,64E-14
AP	[mol H ⁺ -Eq.]	3,81E-02	1,09E-03	5,63E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,66E-05	1,78E-04	4,99E-03	0,00E+00	0,00E+00	6,85E-03	-9,40E-03	-2,79E-03
EP-freshwater	[kg P-Eq.]	5,78E-05	2,87E-06	3,63E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,06E-08	4,69E-07	6,04E-06	0,00E+00	0,00E+00	2,97E-04	-2,49E-06	-2,20E-06
EP-marine	[kg N-Eq.]	1,29E-02	3,34E-04	-1,97E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,48E-05	5,46E-05	1,11E-03	0,00E+00	0,00E+00	4,11E-03	-3,40E-03	-7,08E-04
EP-terrestrial	[mol N-Eq.]	1,39E-01	3,97E-03	1,93E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,56E-04	6,48E-04	1,16E-02	0,00E+00	0,00E+00	2,24E-02	-3,75E-02	-7,60E-03
POCP	[kg NMVOC-Eq.]	3,93E-02	9,01E-04	5,79E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,06E-05	1,47E-04	3,04E-03	0,00E+00	0,00E+00	1,03E-02	-1,03E-02	-2,06E-03
ADPE	[kg Sb-Eq.]	1,48E-06	7,61E-08	2,19E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,74E-09	1,24E-08	6,54E-07	0,00E+00	0,00E+00	8,92E-08	-6,72E-07	-2,67E-07
ADPF	[MJ]	1,97E+02	1,26E+01	2,50E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,31E-01	2,05E+00	3,97E+01	0,00E+00	0,00E+00	1,66E+01	1,83E+02	2,83E+01
WDP	[m ³ world-Eq deprived]	4,84E-01	9,18E-03	2,34E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,58E-03	1,50E-03	4,93E-01	0,00E+00	0,00E+00	9,33E-02	-7,53E-02	-1,66E-01

Caption: GWP = Global warming potential; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential of land and water; EP = Eutrophication potential; POCP = Formation potential of tropospheric ozone photochemical oxidants; ADPE = Abiotic depletion potential for non-fossil resources; ADPF = Abiotic depletion potential for fossil resources; WDP = Water use

RESULTS OF THE LCA - RESOURCE USE according to EN 15804+A2: 1 m²32mm Duripanel B1

Indicator	Unit	A1-A3	A4	A5	B1	B2	B6	B7	C1	C2	C3/1	C3/2	C4/1	C4/2	D/1	D/2
PERE	[MJ]	5,97E+01	7,26E-01	3,56E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,35E-01	1,19E-01	1,60E+02	0,00E+00	0,00E+00	1,44E+02	3,14E+00	5,95E+00
PERM	[MJ]	1,56E+02	0,00E+00	1,30E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,43E+02	0,00E+00	0,00E+00	1,43E+02	0,00E+00	0,00E+00
PERT	[MJ]	2,15E+02	7,26E-01	2,26E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,35E-01	1,19E-01	1,76E+01	0,00E+00	0,00E+00	1,48E+00	3,14E+00	5,95E+00
PENRE	[MJ]	1,96E+02	1,26E+01	2,58E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,31E-01	2,06E+01	3,97E+01	0,00E+00	0,00E+00	1,66E+01	1,83E+02	2,83E+01
PENRM	[MJ]	7,82E-01	0,00E+00	-7,82E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	1,97E+02	1,26E+01	2,50E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,31E-01	2,06E+01	3,97E+01	0,00E+00	0,00E+00	1,66E+01	1,83E+02	2,83E+01
SM	[kg]	2,66E+00	0,00E+00	2,66E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m ³]	2,40E-02	8,46E-04	7,54E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,72E-04	1,38E-04	2,04E-02	0,00E+00	0,00E+00	2,87E-03	-3,74E-03	-7,16E-03

Caption 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; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding 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 – OUTPUT FLOWS AND WASTE CATEGORIES according to EN 15804+A2: 1 m²32mm Duripanel B1

Indicator	Unit	A1-A3	A4	A5	B1	B2	B6	B7	C1	C2	C3/1	C3/2	C4/1	C4/2	D/1	D/2
HWD	[kg]	5,76E-07	5,83E-07	7,31E-08	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,20E-10	9,53E-08	1,64E-08	0,00E+00	0,00E+00	1,27E-07	-1,07E-07	-1,40E-08
NHWD	[kg]	5,85E+00	2,00E+03	4,37E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,77E-04	3,27E-04	2,82E-02	0,00E+00	0,00E+00	3,77E+01	-4,65E-02	-1,53E-02
RWD	[kg]	2,80E-03	2,32E-05	5,06E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,06E-05	3,80E-06	6,03E-03	0,00E+00	0,00E+00	1,95E-04	-9,03E-04	-2,05E-03
CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	1,57E+00	0,00E+00	1,65E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,87E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MER	[kg]	6,48E-01	0,00E+00	6,48E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,18E+01	9,98E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	3,92E-03	0,00E+00	2,73E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,20E+00	0,00E+00	0,00E+00
EET	[MJ]	9,02E-03	0,00E+00	4,21E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Caption 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; EEE = Exported thermal energy

11. LCA: Results: 1 m² Duripanel B1 (36mm)

The following table shows the environmental impacts of 1m² Duripanel B1 (36 mm). All declared modules are marked with an “x”.

DECLARED; MNR = MODULE NOT RELEVANT)

PRODUCT STAGE					CONSTRUCTION PROCESS STAGE	USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARIES	
Raw material supply	Transport	Manufacturing	Transport from the gate to the site	Assembly	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	X	X	X	MNR	MNR	MNR	X	X	X	X	X	X	X		

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT according to EN 15804+A2: 1 m²36mm Duripanel B1

Core Indicator	Unit	A1-A3	A4	A5	B1	B2	B6	B7	C1	C2	C3/1	C3/2	C4/1	C4/2	D/1	D/2
GWP-total	[kg CO ₂ -Eq.]	1,79E+01	1,07E+00	5,69E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,03E+02	1,74E+01	2,55E+00	0,00E+00	0,00E+00	1,78E+01	1,27E+01	1,98E+00
GWP-fossil	[kg CO ₂ -Eq.]	3,66E+01	1,06E+00	4,32E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,02E+02	1,73E+01	2,54E+00	0,00E+00	0,00E+00	2,31E+00	1,27E+01	1,97E+00
GWP-biogenic	[kg CO ₂ -Eq.]	1,87E+01	-1,78E+03	-1,38E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,01E+04	-2,91E+04	-8,47E+03	0,00E+00	0,00E+00	1,55E+01	-1,36E+02	-4,06E+03
GWP-luluc	[kg CO ₂ -Eq.]	1,26E+02	-8,57E+03	-1,80E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,38E+05	-1,40E+03	-3,68E+03	0,00E+00	0,00E+00	2,10E+03	-1,69E+03	-1,34E+03
ODP	[kg CFC11-Eq.]	9,93E-14	-1,94E-16	-1,35E-14	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,64E-16	3,18E-17	5,59E-14	0,00E+00	0,00E+00	3,65E-15	-9,43E-15	-1,85E-14
AP	[mol H ⁺ -Eq.]	4,28E-02	-1,22E-03	6,21E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,66E-05	2,00E-04	5,61E-03	0,00E+00	0,00E+00	7,71E-03	-1,05E-02	-3,09E-03
EP-freshwater	[kg P-Eq.]	6,51E-05	-3,23E-06	-4,07E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,06E-08	5,27E-07	6,79E-06	0,00E+00	0,00E+00	3,34E-04	-2,80E-06	-2,47E-06
EP-marine	[kg N-Eq.]	1,45E-02	-3,76E-04	-2,19E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,48E-05	6,15E-05	1,25E-03	0,00E+00	0,00E+00	4,63E-03	-3,81E-03	-7,85E-04
EP-terrestrial	[mol N-Eq.]	1,56E-01	-4,46E-03	-2,14E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,56E-04	7,29E-04	1,31E-02	0,00E+00	0,00E+00	2,52E-02	-4,21E-02	-8,42E-03
POCP	[kg NMVOC-Eq.]	4,42E-02	-1,01E-03	-6,43E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,06E-05	1,66E-04	3,42E-03	0,00E+00	0,00E+00	1,16E-03	-1,16E-02	-2,28E-03
ADPE	[kg Sb-Eq.]	1,67E-06	-8,56E-08	-2,20E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,74E-09	1,40E-08	7,36E-07	0,00E+00	0,00E+00	1,00E-07	-7,57E-07	-3,01E-07
ADPF	[MJ]	2,21E+02	1,41E+01	2,76E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,31E+01	2,31E+00	4,47E+01	0,00E+00	0,00E+00	1,86E+01	2,06E+02	3,17E+01
WDP	[m ³ world-Eq deprived]	5,44E-01	-1,03E-02	-2,62E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,58E-03	1,69E-03	5,54E-01	0,00E+00	0,00E+00	1,05E-01	-8,51E-02	-1,88E-01

Caption: GWP = Global warming potential; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential of land and water; EP = Eutrophication potential; POCP = Formation potential of tropospheric ozone photochemical oxidants; ADPE = Abiotic depletion potential for non-fossil resources; ADPF = Abiotic depletion potential for fossil resources; WDP = Water use

RESULTS OF THE LCA - RESOURCE USE according to EN 15804+A2: 1 m²36mm Duripanel B1

Indicator	Unit	A1-A3	A4	A5	B1	B2	B6	B7	C1	C2	C3/1	C3/2	C4/1	C4/2	D/1	D/2
PERE	[MJ]	6,72E+01	8,17E-01	4,00E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,35E-01	1,34E-01	1,80E+02	0,00E+00	0,00E+00	1,62E+02	3,55E+00	6,71E+00
PERM	[MJ]	1,75E+02	0,00E+00	1,46E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,60E+02	0,00E+00	0,00E+00	1,60E+02	0,00E+00	0,00E+00
PERT	[MJ]	2,42E+02	8,17E-01	2,53E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,35E-01	1,34E-01	1,98E+01	0,00E+00	0,00E+00	1,66E+00	3,55E+00	6,71E+00
PENRE	[MJ]	2,21E+02	1,42E+01	2,85E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,31E-01	2,32E+00	4,47E+01	0,00E+00	0,00E+00	1,86E+01	2,06E+02	3,17E+01
PENRM	[MJ]	8,80E-01	0,00E+00	-8,80E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	2,21E+02	1,42E+01	2,76E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,31E-01	2,32E+00	4,47E+01	0,00E+00	0,00E+00	1,86E+01	2,06E+02	3,17E+01
SM	[kg]	2,99E+00	0,00E+00	2,99E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m ³]	2,70E-02	9,52E-04	8,35E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,72E-04	1,56E-04	2,29E-02	0,00E+00	0,00E+00	3,22E-03	-4,19E-03	-8,04E-03

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; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding 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 – OUTPUT FLOWS AND WASTE CATEGORIES according to EN 15804+A2: 1 m²36mm Duripanel B1

Indicator	Unit	A1-A3	A4	A5	B1	B2	B6	B7	C1	C2	C3/1	C3/2	C4/1	C4/2	D/1	D/2
HWD	[kg]	6,49E-07	6,56E-07	8,19E-08	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,20E-10	1,07E-07	1,85E-08	0,00E+00	0,00E+00	1,43E-07	-1,20E-07	-1,56E-08
NHWD	[kg]	6,58E+00	2,25E+03	4,92E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,77E-04	3,68E-04	3,17E-02	0,00E+00	0,00E+00	4,24E+01	-5,20E-02	-1,69E-02
RWD	[kg]	3,15E-03	2,61E-05	5,45E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,06E-05	4,27E-06	6,78E-03	0,00E+00	0,00E+00	2,19E-04	-1,02E-03	-2,31E-03
CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	1,76E+00	0,00E+00	1,86E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,23E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MER	[kg]	7,29E-01	0,00E+00	7,29E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,33E+01	9,98E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	4,40E-03	0,00E+00	3,07E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,73E+00	0,00E+00	0,00E+00
EET	[MJ]	1,01E-02	0,00E+00	4,73E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

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; EEE = Exported thermal energy

12. LCA: Results: 1 m² Duripanel B1 (40mm)

The following table shows the environmental impacts of 1m² Duripanel B1 (40 mm). All declared modules are marked with an “x”.

DECLARED; MNR = MODULE NOT RELEVANT)

PRODUCT STAGE					CONSTRUCTION PROCESS STAGE	USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARIES	
Raw material supply	Transport	Manufacturing	Transport from the gate to the site	Assembly	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	X	X	X	MNR	MNR	MNR	X	X	X	X	X	X	X		

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT according to EN 15804+A2: 1 m²40mm Duripanel B1

Core Indicator	Unit	A1-A3	A4	A5	B1	B2	B6	B7	C1	C2	C3/1	C3/2	C4/1	C4/2	D/1	D/2
GWP-total	[kg CO ₂ -Eq.]	1,99E+01	1,18E+00	6,28E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,03E+02	1,94E+01	2,84E+00	0,00E+00	0,00E+00	1,98E+01	1,41E+01	2,18E+00
GWP-fossil	[kg CO ₂ -Eq.]	4,07E+01	1,18E+00	4,75E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,02E+02	1,92E+01	2,82E+00	0,00E+00	0,00E+00	2,56E+00	1,40E+01	2,17E+00
GWP-biogenic	[kg CO ₂ -Eq.]	2,08E+01	-1,98E+03	-1,53E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,01E+04	-3,23E+04	-9,42E+03	0,00E+00	0,00E+00	1,72E+01	-1,51E+02	-4,53E+03
GWP-luluc	[kg CO ₂ -Eq.]	1,41E+02	-9,52E+03	-1,97E+03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,38E+05	-1,56E+03	-4,09E+03	0,00E+00	0,00E+00	2,34E+03	-1,88E+03	-1,48E+03
ODP	[kg CFC11-Eq.]	1,10E-13	2,16E-16	-1,47E-14	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,64E-16	3,53E-17	6,21E-14	0,00E+00	0,00E+00	4,06E-15	-1,06E-14	-2,07E-14
AP	[mol H ⁺ -Eq.]	4,76E-02	1,36E-03	6,80E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,66E-05	2,22E-04	6,24E-03	0,00E+00	0,00E+00	8,57E-03	-1,16E-02	-3,38E-03
EP-freshwater	[kg P-Eq.]	7,23E-05	3,58E-06	4,52E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,06E-08	5,86E-07	7,54E-06	0,00E+00	0,00E+00	3,71E-04	-3,11E-06	-2,74E-06
EP-marine	[kg N-Eq.]	1,61E-02	4,18E-04	2,41E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,48E-05	6,83E-05	1,39E-03	0,00E+00	0,00E+00	5,14E-03	-4,23E-03	-8,62E-04
EP-terrestrial	[mol N-Eq.]	1,74E-01	4,96E-03	2,36E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,56E-04	8,10E-04	1,46E-02	0,00E+00	0,00E+00	2,80E-02	-4,66E-02	-9,25E-03
POCP	[kg NMVOC-Eq.]	4,91E-02	1,13E-03	7,07E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,06E-05	1,84E-04	3,79E-03	0,00E+00	0,00E+00	1,29E-03	-1,29E-02	-2,50E-03
ADPE	[kg Sb-Eq.]	1,85E-06	9,51E-08	2,20E-05	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,74E-09	1,56E-08	8,18E-07	0,00E+00	0,00E+00	1,12E-07	-8,41E-07	-3,35E-07
ADPF	[MJ]	2,46E+02	1,57E+01	3,02E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,31E+01	2,57E+00	4,97E+01	0,00E+00	0,00E+00	2,07E+01	2,28E+02	3,50E+01
WDP	[m ³ world-Eq deprived]	6,04E-01	1,15E-02	2,89E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,58E-03	1,88E-03	6,16E-01	0,00E+00	0,00E+00	1,17E-01	-9,49E-02	-2,09E-01

Caption GWP = Global warming potential; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential of land and water; EP = Eutrophication potential; POCP = Formation potential of tropospheric ozone photochemical oxidants; ADPE = Abiotic depletion potential for non-fossil resources; ADPF = Abiotic depletion potential for fossil resources; WDP = Water use

RESULTS OF THE LCA - RESOURCE USE according to EN 15804+A2: 1 m²40mm Duripanel B1

Indicator	Unit	A1-A3	A4	A5	B1	B2	B6	B7	C1	C2	C3/1	C3/2	C4/1	C4/2	D/1	D/2
PERE	[MJ]	7,46E+01	9,08E+01	4,43E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,35E-01	1,48E-01	2,00E+02	0,00E+00	0,00E+00	1,80E+02	3,96E+00	7,47E+00
PERM	[MJ]	1,95E+02	0,00E+00	1,62E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,78E+02	0,00E+00	0,00E+00	1,78E+02	0,00E+00	0,00E+00
PERT	[MJ]	2,69E+02	9,08E+01	2,81E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,35E-01	1,48E-01	2,20E+01	0,00E+00	0,00E+00	1,85E+00	3,96E+00	7,47E+00
PENRE	[MJ]	2,45E+02	1,58E+01	3,12E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,31E-01	2,58E+00	4,97E+01	0,00E+00	0,00E+00	2,07E+01	2,28E+02	3,51E+01
PENRM	[MJ]	9,78E+01	0,00E+00	-9,78E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	2,46E+02	1,58E+01	3,02E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,31E-01	2,58E+00	4,97E+01	0,00E+00	0,00E+00	2,07E+01	2,28E+02	3,51E+01
SM	[kg]	3,32E+00	0,00E+00	3,32E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NRSF	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	[m ³]	3,00E-02	1,06E-03	9,17E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,72E-04	1,73E-04	2,54E-02	0,00E+00	0,00E+00	3,58E-03	-4,65E-03	-8,92E-03

Caption 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; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding 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 – OUTPUT FLOWS AND WASTE CATEGORIES according to EN 15804+A2: 1 m²40mm Duripanel B1

Indicator	Unit	A1-A3	A4	A5	B1	B2	B6	B7	C1	C2	C3/1	C3/2	C4/1	C4/2	D/1	D/2
HWD	[kg]	7,21E-07	7,29E-07	9,07E-08	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,20E-10	1,19E-07	2,06E-08	0,00E+00	0,00E+00	1,59E-07	-1,34E-07	-1,72E-08
NHWD	[kg]	7,31E+00	2,50E+03	5,46E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,77E-04	4,08E-04	3,52E-02	0,00E+00	0,00E+00	4,71E+01	-5,76E-02	-1,86E-02
RWD	[kg]	3,50E-03	2,90E-05	5,85E-04	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,06E-05	4,75E-06	7,54E-03	0,00E+00	0,00E+00	2,43E-04	-1,13E-03	-2,57E-03
CRU	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	1,96E+00	0,00E+00	2,07E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,58E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MER	[kg]	8,10E-01	0,00E+00	8,10E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,48E+01	9,98E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	4,89E-03	0,00E+00	3,41E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,25E+00	0,00E+00	0,00E+00
EET	[MJ]	1,13E-02	0,00E+00	5,26E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

Caption 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; EEE = Exported thermal energy