

**Environmental  
Product  
Declaration**

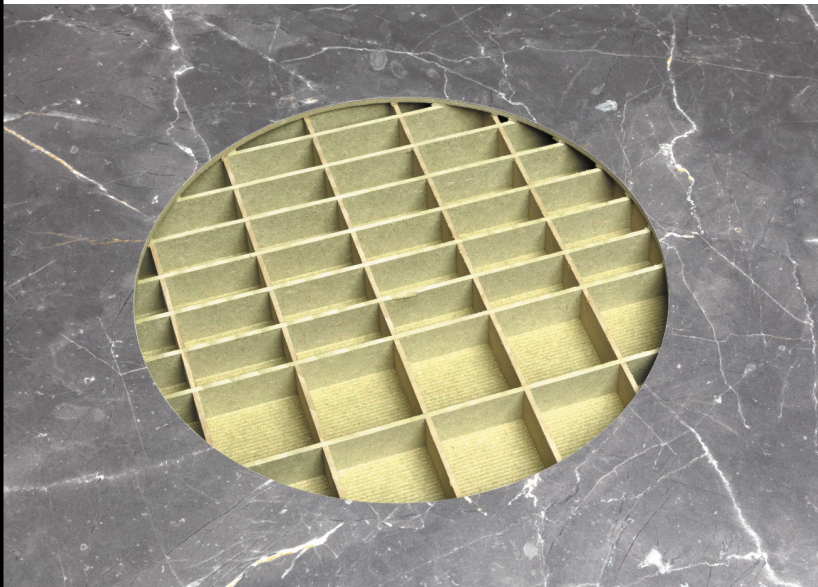
*according to ISO 14025 and EN 15804*



This declaration is for:  
**Greengridz**

Provided by:  
**Dekker Zevenhuizen**

**DEKKER**  
— SINCE 1930 —



program operator  
**Stichting MRPI®**  
publisher  
**Stichting MRPI®**  
[www.mrpi.nl](http://www.mrpi.nl)

MRPI® registration  
**1.1.00324.2022**  
date of first issue  
**11-07-2022**  
date of this issue  
**11-07-2022**  
expiry date  
**11-07-2027**





### COMPANY INFORMATION

# DEKKER

— SINCE 1930 —

Dekker Zevenhuizen  
Nijverheidscentrum 2  
2761 JP  
Zevenhuizen  
088 233 5519  
info@dznet.nl  
dekkerzevenhuizen.nl

### PRODUCT

Greengridz

### DECLARED UNIT/FUNCTIONAL UNIT

1 meter (38 mm thick and 600 mm wide, including laminate), with a reference service life of 15 years.

### DESCRIPTION OF PRODUCT

Greengridz is used, among others, as a base material for kitchen counters and consist of a grid from 3 mm thick HDF sheets, enclosed with 4 mm HDF sheets on the top and bottom.

### VISUAL PRODUCT



### MRPI® REGISTRATION

1.1.00324.2022

### DATE OF ISSUE

11-07-2022

### EXPIRY DATE

11-07-2027

### SCOPE OF DECLARATION

This MRPI®-EPD certificate is verified by **Pieter Stadhouders, EcoReview**.

The LCA study has been done by **Martijn van Hovell, SGS Search**.

The certificate is based on an LCA-dossier according to ISO14025 and EN15804+A1. It is verified according to the 'MRPI®-EPD verification protocol November 2020.v4.0'. EPDs of construction products may not be comparable if they do not comply with EN15804+A1. Declaration of SVHC that are listed on the 'Candidate List of Substances of Very High Concern for authorisation' when content exceeds the limits for registration with ECHA.

### MORE INFORMATION

[dekkerzevenhuizen.nl/keuken/keukenbladen/](http://dekkerzevenhuizen.nl/keuken/keukenbladen/)

### PROGRAM OPERATOR

Stichting MRPI®  
Kingsfordweg 151  
1043GR  
Amsterdam



ir. J-P den Hollander, Managing director MRPI®

### DEMONSTRATION OF VERIFICATION

CEN standard EN15804 serves as the core PCR[a]

Independent verification of the declaration and data,

according to EN ISO 14025:2010:

internal: external: X

Third party verifier:



Pieter Stadhouders, EcoReview

[a] PCR = Product Category Rules

### DETAILED PRODUCT DESCRIPTION

Greengridz is used as a base material for, among others, kitchen counters. The panels can have a variety of laminates as finishing layer. In this declaration a standard 0,6 mm laminate is assumed in combination with a PU adhesive.

Greengridz consist of a grid made from 3 mm thick HDF sheets. The top and bottom of the grids are covered with 4 mm HDF sheets. PVAc D3 adhesive is used to bind the different components.

The basis composition of the Greengridz is presented in the table below.

COMPONENT >1% of tc	[kg / %]
HDF	0.87
Laminate	0.11
PVAc D3	0.01
PU-adhesive	0.01

(\*) > 1% of total mass

### SCOPE AND TYPE

Dekker Zevenhuizen, has commissioned SGS Search to perform a life cycle assessment (LCA) of their Greengridz. The objective of this study is to publish third party verified data about the environmental performance of Greengridz in an ECO-platform EPD. It concerns a cradle-to-grave study. The following standards are followed: NEN EN 15804 [1], ISO14040 [2], ISO 14044 [3] and ISO 14025 [4].

The geographical location is the Netherlands and the product is manufactured in Zevenhuizen, the Netherlands. The product has various potential applications as counter for e.g. kitchens.

Background database used for the calculations is Ecoinvent version 3.6 in combination with the SimaPro 9.1 LCA software.

PRODUCT STAGE	CONSTRUCTION					USE STAGE							END OF LIFE			BENEFITS AND	
	PROCESS												STAGE			LOADS BEYOND THE	
	STAGE															SYSTEM BOUNDARIES	
Raw material supply	Transport	Manufacturing	Transport gate to 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	X	X	X	ND	ND	X	X	X	X	X	

X = Modules Assessed

ND = Not Declared

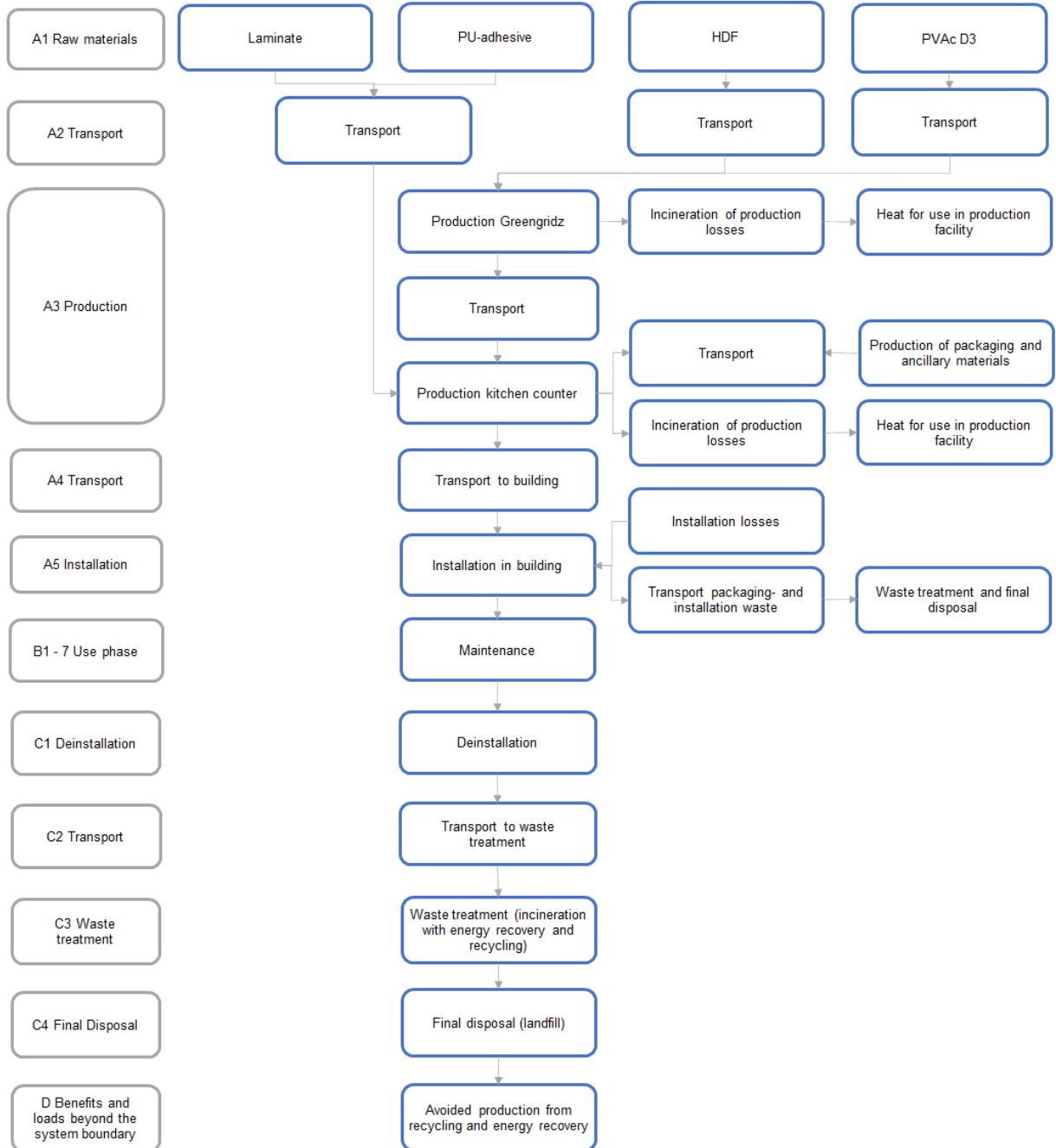


Figure: LCA process diagram according to EN 15804 (7.2.1)

## REPRESENTATIVENESS

The maximum size of Greengridz is 520 by 120 cm and thickness ranges from 20 to 80 mm. For this declaration the standard dimensions of 60 cm wide and 38 mm thick are used.

### ENVIRONMENTAL IMPACT per functional unit or declared unit (indicators A1)

	UNIT	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	C1	C2	C3	C4	D
ADPE	kg Sb eq.	1.95 E-4	2.15 E-5	2.05 E-5	2.37 E-4	3.33 E-6	3.19 E-6	0.00	0.00	0.00	0.00	0.00	0.00	1.27 E-6	1.67 E-6	7.97 E-8	-4.73 E-6
ADPF	MJ	2.55 E-5	3.07 E-6	1.77 E-6	3.03 E-5	4.50 E-7	3.83 E-7	0.00	0.00	0.00	0.00	0.00	0.00	1.73 E-7	6.49 E-7	4.37 E-8	-1.39 E-5
GWP	kg CO2 eq.	5.61 E+0	8.80 E-1	7.06 E-1	7.19 E+0	1.28 E-1	1.19 E-1	0.00	0.00	0.00	0.00	0.00	0.00	4.89 E-2	1.53 E+0	8.01 E-2	-3.25 E+0
ODP	kg CFC11 eq.	6.39 E-7	1.61 E-7	5.73 E-8	8.57 E-7	2.37 E-8	1.25 E-8	0.00	0.00	0.00	0.00	0.00	0.00	9.07 E-9	4.35 E-8	1.79 E-9	-1.53 E-7
POCP	kg ethene eq.	6.82 E-3	5.74 E-4	3.57 E-4	7.75 E-3	7.65 E-5	1.06 E-4	0.00	0.00	0.00	0.00	0.00	0.00	2.93 E-5	1.40 E-4	2.05 E-5	-1.35 E-3
AP	kg SO2 eq.	3.05 E-2	5.25 E-3	4.05 E-3	3.98 E-2	5.49 E-4	5.32 E-4	0.00	0.00	0.00	0.00	0.00	0.00	2.10 E-4	1.42 E-3	5.67 E-5	-2.06 E-2
EP	kg (PO4)3- eq.	5.64 E-3	8.91 E-4	9.81 E-4	7.52 E-3	1.10 E-4	1.08 E-4	0.00	0.00	0.00	0.00	0.00	0.00	4.20 E-5	2.83 E-4	1.87 E-4	-2.29 E-3

ADPE = Abiotic Depletion Potential for non-fossil resources  
 ADPF = Abiotic Depletion Potential for fossil resources  
 GWP = Global Warming Potential  
 ODP = Depletion potential of the stratospheric ozone layer  
 POCP = Formation potential of tropospheric ozone photochemical oxidants  
 AP = Acidification Potential of land and water  
 EP = Eutrophication Potential

### RESOURCE USE per functional unit or declared unit (A1 / A2)

	UNIT	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	C1	C2	C3	C4	D
PERE	MJ	5.22 E+1	2.08 E-1	2.06 E+1	7.31 E+1	2.83 E-2	1.49 E+0	0.00	0.00	0.00	0.00	0.00	0.00	1.09 E-2	6.61 E+1	7.32 E+0	-2.67 E+1
PERM	MJ	8.13 E+1	0.00	-2.70 E+0	7.86 E+1	0.00	5.46 E-2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-6.59 E+1	-7.32 E+0	0.00
PERT	MJ	1.34 E+2	2.08 E-1	1.79 E+1	1.52 E+2	2.83 E-2	1.54 E+0	0.00	0.00	0.00	0.00	0.00	0.00	1.09 E-2	2.81 E-1	6.07 E-3	-2.67 E+1
PENRE	MJ	9.53 E+1	1.43 E+1	9.35 E+0	1.19 E+2	2.10 E+0	1.72 E+0	0.00	0.00	0.00	0.00	0.00	0.00	8.03 E-1	1.70 E+1	1.77 E+0	-4.93 E+1
PENRM	MJ	1.73 E+1	0.00	-1.57 E+0	1.57 E+1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-1.42 E+1	-1.57 E+0	0.00
PENRT	MJ	1.13 E+2	1.43 E+1	7.77 E+0	1.35 E+2	2.10 E+0	1.72 E+0	0.00	0.00	0.00	0.00	0.00	0.00	8.03 E-1	2.88 E+0	1.97 E-1	-4.93 E+1
SM	MJ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RSF	MJ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NRSF	MJ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FW	m3	1.51 E-1	1.58 E-3	1.89 E-2	1.72 E-1	2.23 E-4	1.84 E-3	0.00	0.00	0.00	0.00	0.00	0.00	8.56 E-5	3.01 E-3	1.85 E-4	-1.13 E-2

PERE = Use of renewable energy excluding renewable primary energy resources

PERM = Use of renewable energy resources used as raw materials

PERT = Total use of renewable primary energy resources

PENRE = Use of non-renewable primary energy resources excluding non-renewable 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 materials

RSF = Use of renewable secondary fuels

NRSF = Use of non renewable secondary fuels

FW = Use of net fresh water

### OUTPUT FLOWS AND WASTE CATEGORIES per functional unit or declared unit (A1 / A2)

	UNIT	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	C1	C2	C3	C4	D
HWD	kg	1.16 E-3	3.27 E-5	1.99 E-5	1.21 E-3	5.05 E-6	1.31 E-5	0.00	0.00	0.00	0.00	0.00	0.00	1.93 E-6	3.46 E-6	2.59 E-7	-2.27 E-5
NHWD	kg	1.31 E+0	7.74 E-1	2.76 E-1	2.36 E+0	1.22 E-1	4.39 E-2	0.00	0.00	0.00	0.00	0.00	0.00	4.69 E-2	3.08 E-2	6.54 E-1	-9.55 E-2
RWD	kg	2.30 E-4	9.15 E-5	3.94 E-5	3.61 E-4	1.34 E-5	5.69 E-6	0.00	0.00	0.00	0.00	0.00	0.00	5.14 E-6	9.89 E-6	1.05 E-6	-6.98 E-5
CRU	kg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MFR	kg	0.00	0.00	0.00	0.00	0.00	4.93 E-2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.93 E+0	0.00	0.00
MER	kg	0.00	0.00	9.56 E+0	9.56 E+0	0.00	6.55 E-3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.16 E-1	0.00	0.00
EEE	MJ	0.00	0.00	8.31 E+0	8.31 E+0	0.00	1.80 E-2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.60 E+0	0.00	0.00
ETE	MJ	0.00	0.00	4.74 E-1	4.74 E-1	0.00	3.09 E-2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.76 E+0	0.00	0.00

HWD = Hazardous Waste Disposed

RWD = Radioactive Waste Disposed

MFR = Materials for recycling

EEE = Exported Electrical Energy

NHWD = Non Hazardous Waste Disposed

CRU = Components for reuse

MER = Materials for energy recovery

ETE = Exported Thermal Energy



## CALCULATION RULES

All relevant and known processes and materials have been included. The following processes have been excluded from the system boundary:

- Maintenance and operation of support equipment except those included in Ecoinvent background processes;
- Capital goods and infrastructure (except those included in Ecoinvent background processes).

There is no reason to believe that relevant in- or outputs are excluded from this study.

Data collection and quality Data is retrieved from process descriptions and a Bill of Materials (BoM) supplied by Dekker Zevenhuizen. There are no inconsistencies found in the data and there is no reason to believe that data is incomplete or not reliable.

Data about the production of the HDF and the composition of the additives are supplied by the manufacturer. Communication with suppliers went via Dekker Zevenhuizen.

## SCENARIOS AND ADDITIONAL TECHNICAL INFORMATION

### *A1. Raw materials supply*

This module considers the extraction and processing of all raw materials and energy which occur upstream to the Greengridz manufacturing process, as well as waste processing of production waste up to the end-of-waste state.

### *A2. Transport of raw materials to manufacturer*

This includes the transport distance of the raw materials to the manufacturing facility via road, boat and/or train.

### *A3. Manufacturing*

This module covers the manufacturing process of Greengridz and includes all processes linked to production such as storing, cutting, packing and internal transportation. Use of electricity and fuels production are considered as well as direct emissions from production process.

Packaging-related flows in the production process are included in the manufacturing module.

The manufacturing process takes place at one production site. For the manufacturing of the HDF as used to produce Greengridz, a third party verified LCA according to the EN15804 was available and used for this EPD. For the remaining upstream (raw material processes) and downstream processes (waste processing) generic data is used because no specific data could be obtained.

### *A4. Transport to customers/ building site*

Products are transported to costumers with a small truck. Since customers are located throughout the country (the Netherlands) an average distance of 150 km is assumed.

### *A5. Construction and installation process*

This module includes the production and packaging waste as well as the transport and processing of waste up to the end-of-waste state.

The installation of Greengridz requires only (electric) hand tools and impact as a result of this process is considered negligible.

### *B1-7. Use phase*

The product as assessed in this EPD does not require maintenance during the use phase.

*C1. De-construction demolition*

In the de-installation process of Greengridz only (electric) hand tools are used and impact as a result of this is considered negligible.

*C2. Transport to waste treatment*

This module includes transport to the recycling facility. Considering the product is applied in buildings throughout the country, average transport distances of 50, 100 and 150 km are used for recycling, incineration and landfill respectively.

*C3. Waste processing*

In the end-of-life phase the product can be recycled, incinerated or is sent to landfill. Dekker Zevenhuizen works on a collection system for HDF. This HDF is then used to produce activated carbon. The following end-of-life scenario is assumed: 80% is recycling and 20% incineration.

*C4. Disposal*

All materials reach the end-of-waste status after treatment in C3, no processes are declared in this phase.

*D. Benefits and loads beyond the system boundaries*

Avoided production of material due to recycling as well as avoided electricity and heat production from incineration are included in this module.

In the end-of-life scenario for this product 80% of the material will be recycled. The activated carbon that is output of the recycling process, replaces activated carbon as produced via the conventional process.

For the material that is incinerated the average efficiency of waste incineration plants in the Netherlands is used i.e. 18% electricity and 31% heat. For the avoided energy consumption energy from biomass and fossil resources are distinguished.





### DECLARATION OF SVHC

None of the substances contained in the product are listed in the “Candidate List of Substances of Very High Concern for authorisation”, or they do not exceed the threshold with the European Chemicals Agency.

### REFERENCES

[1] EN 15804:2012+A1:2014 Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products.

[2] ISO, 2006. “Environmental management. Life cycle assessment - Principles and framework”. ISO 14040:2006.

[3] ISO, 2006. “Environmental management. Life cycle assessment – Requirements and Guidelines”. ISO 14044:2006.

[4] ISO, 2000. “Environmental labels and declarations – Type III environmental declarations”, ISO/TR 14025:2000.

### REMARKS

None