Environmental Product Declaration

According to ISO 14025 and EN 15804+A2

Product Declaration
Govaplast® Brown

Declared Unit
1 kg

Declared by:
Govaerts Recycling N.V. / Govaplast

Owner of declaration
Govaerts Recycling N.V. / Govaplast

Verifier:
EcoChain Technologies B.V.

LCA study by:
EcoReview B.V.

Calculation Number:
2024.002.

Issue Date:
08/01/2024

Expiry Date:
08/01/2029

General information

Owner of Declaration

Name	Govaerts Recycling N.V. / Govaplast
Street	Kolmenstraat 1324
Postal Code	B-3570
City	Alken
Contact	Jurgen Groot Landeweer

Declaration for

Calculation Number	2024.002.
Issue Date	08/01/2024
Expiry Date	08/01/2029
Product	Govaplast® Brown
Declared Unit	1 kg semi-finished product.
Reference Service Life	Not applicable.
Scalable product	Not applicable.
Product Description	Plastic semi-finished product in the colour scheme brown, produced at the production site in Alken, Belgium.

Declaration Information

This Self-Declared Environmental Product Declaration is in accordance with ISO 14025:2006 and EN 15804+A2. This certificate is based on an LCA-dossier developed according to ISO14025:2006, ISO14040 and EN15804+A2 and the NMD Assessment Method 1.1. EPD of construction products may not be comparable if they do not comply with EN15804+A2 and the NMD Assessment Method 1.1. Substances of Very High Concern (SVHC) that are listed on the 'Candidate List of Substances of Very High Concern for authorization' are declared when contents exceed the limits for registration with ECHA

This LCA study was conducted by: Ruben van Gaalen, EcoReview B.V.

Proof of Verification

Verifier	External
Name	Lex Roes, EcoChain Technologies B.V.
Statement	Verification of the claim and data was carried out independently according to EN15804+A2 + NMD Assessment Method 1.1
Signature:	

LCA Information

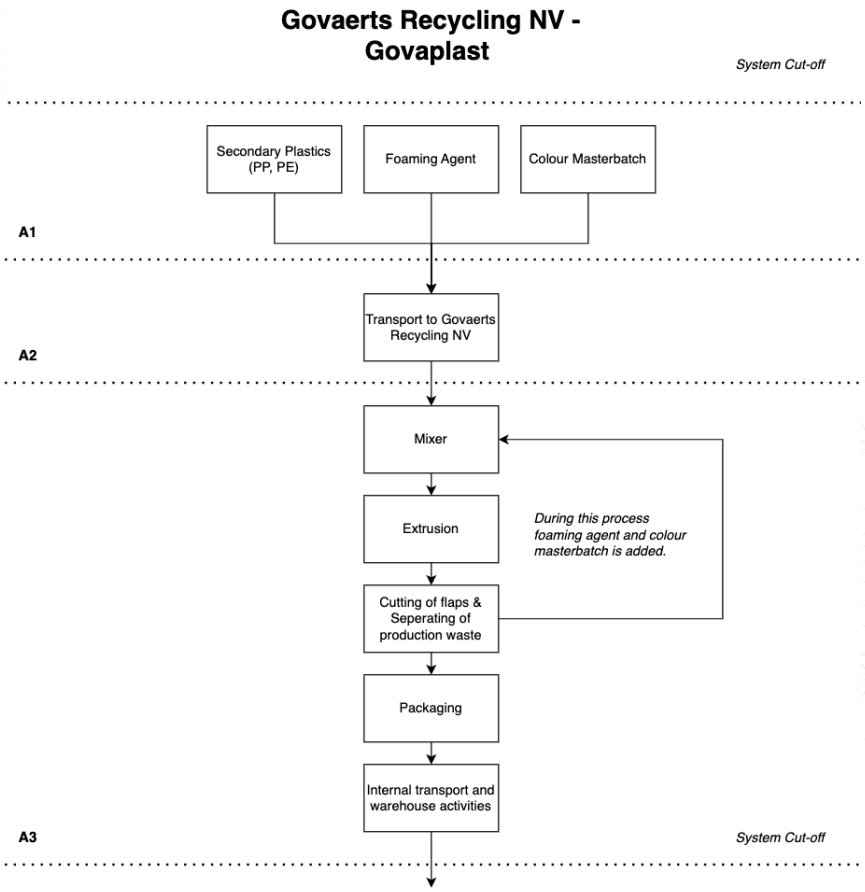
LCA standard	ISO 14040:2006
Product Category Rules (PCR)	EN 15804+A2/NMD Assessment Method 1.1
Additional PCR	Not applicable
Standard database	Ecoinvent 3.6 + NMD 3.7
LCA Software	SimaPro 9.5.0.0
Year of data collection	2022

Scope of Declaration

Production stage	A1	X	Raw Material supply
	A2	X	Transport
	A3	X	Manufacturing
Construction stage	A4	MND	Transport
	A4	MND	Installation
Use stage	B1	MND	Use
	B2	MND	Maintenance
	B3	MND	Repair
	B4	MND	Replacement
	B5	MND	Refurbishment
	B6	MND	Operational Energy Use
	B7	MND	Operational Water Use
End-of-life stage	C1	MND	Deconstruction
	C2	MND	Transport
	C3	MND	Waste Processing
	C4	MND	Disposal
Benefits and loads beyond the system boundaries	D	MND	Reuse, Recycle, Recycling potential

X = Module Declared
MND = Module Not Declared

Process Diagram



Detailed Product Description

General Product Information

Govaplast semi-finished products are mainly produced from secondary plastics (PE, PP) which are purchased from various plastic suppliers and recyclers. In addition, additives are added to obtain the correct color. The Govaplast plastic semi-finished products can be developed in the form of beams, poles, planks or plates. Govaplast semi-finished products are produced in black, brown and sand beige colorways. This document refers to the **brown** colorway.

Govaplast Product Example.

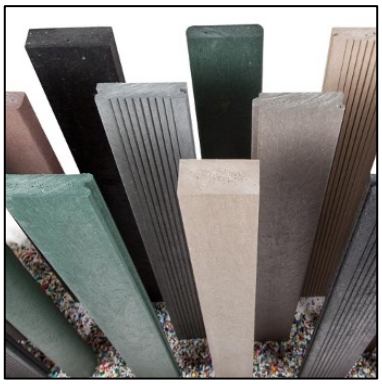


Figure: Representation of Govaplast semi-finished products.

Results

Set 1	Unit	A1	A2	A3	A1-A3
ECI	euro	€ 0,01	€ 0,00	€ 0,02	€ 0,03
ECI	euro	8,55E-03	2,50E-03	1,63E-02	2,73E-02
Core Impact Indicators					
ADPE	kg Sb eq	3,59E-06	5,29E-07	7,98E-06	1,21E-05
ADPF	kg Sb eq	4,48E-04	1,52E-04	3,64E-04	9,63E-04
GWP	kg CO2 eq	5,73E-02	2,07E-02	6,14E-02	1,39E-01
ODP	kg CFC-11 eq	4,26E-09	3,68E-09	5,03E-09	1,30E-08
POCP	kg C2H4	3,75E-05	1,25E-05	6,79E-05	1,18E-04
AP	kg SO2 eq	2,65E-04	9,11E-05	5,21E-04	8,77E-04
EP	kg PO4--- eq	4,85E-05	1,79E-05	1,02E-04	1,68E-04
Toxicity Indicators for Dutch Market					
HTP	kg 1,4-DB eq	2,35E-02	8,72E-03	1,06E-01	1,39E-01
FAETP	kg 1,4-DB eq	3,11E-02	2,55E-04	1,32E-03	3,27E-02
MAETP	kg 1,4-DB eq	1,82E+00	9,16E-01	2,89E+00	5,62E+00
TETP	kg 1,4-DB eq	1,35E-02	3,08E-05	1,55E-03	1,51E-02

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; **HTP** = Human toxicity potential; **FAETP** = Freshwater aquatic ecotoxicity potential; **MAETP** = Marine aquatic ecotoxicity potential; **TETP** = Terrestrial ecotoxicity potential ; **ECI** = Environmental Costs Indicator; **ADPF** = Abiotic depletion potential for fossil resources

Set 2	Unit	A1	A2	A3	A1-A3
GWP-Total	kg CO2 eq	5,30E-02	2,09E-02	3,35E-02	1,07E-01
GWP-f	kg CO2 eq	5,56E-02	2,09E-02	5,64E-02	1,33E-01
GWP-b	kg CO2 eq	-6,13E-03	9,64E-06	-2,29E-02	-2,90E-02
GWP-luluc	kg CO2 eq	3,61E-03	7,65E-06	3,28E-02	3,65E-02
ODP	kg CFC11 eq	4,47E-09	4,61E-09	5,30E-09	1,44E-08
AP	mol H+ eq	3,29E-04	1,21E-04	7,73E-04	1,22E-03
EP-fw	kg P eq	2,08E-06	2,11E-07	3,11E-06	5,41E-06
EP-m	kg N eq	7,56E-05	4,27E-05	1,09E-04	2,27E-04
EP-t	mol N eq	6,60E-04	4,71E-04	2,67E-03	3,80E-03
POCP	kg NMVOC eq	1,79E-04	1,34E-04	3,61E-04	6,74E-04
ADP-mm	kg Sb eq	3,59E-06	5,29E-07	7,98E-06	1,21E-05
ADP-f	MJ	8,93E-01	3,15E-01	6,82E-01	1,89E+00
WDP	m3 depriv.	4,20E-02	1,13E-03	3,56E-01	3,99E-01
PM	disease inc.	2,73E-09	1,88E-09	7,98E-09	1,26E-08
IR	kBq U-235 eq	1,96E-03	1,32E-03	1,93E-03	5,21E-03
ETP-fw	CTUe	1,37E+00	2,81E-01	3,33E+00	4,98E+00
HTP-c	CTUh	3,90E-11	9,12E-12	1,82E-10	2,30E-10
HTP-nc	CTUh	1,09E-09	3,07E-10	3,25E-09	4,64E-09
SQP	Pt	4,94E-01	2,73E-01	1,29E+01	1,37E+01

GWP-total = Climate change; **GWP-f** = Climate change - Fossil; **GWP-b** = Climate change - Biogenic; **GWP-luluc** = Climate change - Land use and LU change; **ODP** = Ozone depletion; **AP** = Acidification; **EP-fw** = Eutrophication, freshwater; **EP-m** = Eutrophication, marine; **EP-T** = Eutrophication, terrestrial; **POCP** = Photochemical ozone formation; **ADP-mm** = Resource use, minerals and metals; **ADP-f** = Resource use, fossils; **WDP** = Water use; **PM** = Particulate matter; **IR** = Ionising radiation; ETP-fw = Ecotoxicity, freshwater; **HTP-c** = Human toxicity, cancer; **HTP-nc** = Human toxicity, non-cancer; **SQP** = Land use;

Parameter	Unit	A1	A2	A3	A1-A3
Resource Use					
PERE	MJ	0,00E+00	0,00E+00	2,92E+00	2,92E+00
PERM	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	1,05E-01	3,94E-03	3,62E+00	3,73E+00
PENRE	MJ	0,00E+00	0,00E+00	3,30E-01	3,30E-01
PENRM	MJ	3,57E+01	0,00E+00	0,00E+00	3,57E+01
PENRT	MJ	3,67E+01	3,35E-01	7,27E-01	3,78E+01
PET	MJ	3,68E+01	3,38E-01	4,35E+00	4,15E+01
SM	kg	9,73E-01	0,00E+00	4,76E-04	9,73E-01
RSF	MJ	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
FW	m3	1,21E-03	3,84E-05	8,50E-03	9,75E-03
Waste Categories					
HWD	kg	7,82E-07	7,98E-07	1,26E-05	1,42E-05
NHWD	kg	6,93E-03	2,00E-02	2,43E-02	5,12E-02
RWD	kg	1,82E-06	2,07E-06	2,08E-06	5,97E-06
Output Flows					
CRU	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	kg	0,00E+00	0,00E+00	1,64E-03	1,64E-03
MER	MJ	0,00E+00	0,00E+00	1,02E-04	1,02E-04
EE	MJ	0,00E+00	0,00E+00	4,39E-03	4,39E-03

PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials [MJ]; **PERM** = Use of renewable primary energy resources used as raw materials [MJ]; **PERT** = Total use of renewable primary energy resources [MJ]; **PENRE** = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials [MJ]; **PENRM** = Use of non-renewable primary energy resources used as raw materials [MJ]; **PENRT** = Total use of non-renewable primary energy resources [MJ]; **PET** = Total Energy [MJ]; **SM** = Use of secondary material [kg]; **RSF** = Use of renewable secondary fuels [MJ]; **NRSF** = Use of non-renewable secondary fuels [MJ]; **FW** = Use of net fresh water [m3]; **HWD** = Hazardous waste disposed [kg]; **NHWD** = Non-hazardous waste disposed [kg]; **RWD** = Radioactive waste disposed [kg]; **CRU** = Components for re-use [kg]; **MFR** = Materials for recycling [kg]; **EIA** = Materials for energy recovery [kg]; **EE** = Exported energy [MJ]

References

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ISO 14040: Environmental management - Life cycle assessment – Principles and Framework', International Organization for Standardization, ISO14040:2006.

ISO 14044: Environmental management - Life cycle assessment - Requirements and guidelines', International Organization for Standardization, ISO14044:2006.

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