

Environmental Profile

This LCA is calculated according to: ISO 14044, ISO 14040 and EN 15804

Ecochain v3.5.80



Product: 3043793 - PP Drainage Branch BR 92x92
 Unit: 1 piece
 Manufacturer: Wavin - PL -Buk - Extra products

LCA standard: EN15804+A2 (2019)
 Standard database: Worldwide - Ecoinvent v 3.6 Cut-Off
 Externally verified: Yes
 Issue date: 08-06-2023
 End of validity: 08-06-2028
 Verifier: Martijn van Hövell - SGS Search



This LCA was evaluated according to EN15804+A2. It was concluded that the LCA complies with this standard

The LCA background information and project dossier have been registered in the online Ecochain application in the account Wavin - PL -Buk - Extra products (2020). (☑ = module declared, MND = module not declared).

A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
☑	☑	☑	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	☑	☑	☑	☑

Product stage

A1 Raw material supply A2 Transport A3 Manufacturing

Construction process stage

A4 Transport gate to site
 A5 Assembly / Construction installation process

Use stage

B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment
 B6 Operational energy use B7 Operational water use

End-of-Life stage

C1 De-construction demolition C2 Transport C3 Waste processing
 C4 Disposal

Benefits and loads beyond the system boundaries

D Reuse- Recovery- Recycling- potential

Environmental impacts and parameters

GWP-total = EF EN15804+A2 Climate Change [kg CO2 eq]; **GWP-f** = EF Climate change - Fossil [kg CO2 eq]; **GWP-b** = EF EN15804+A2 Climate Change - Biogenic [kg CO2 eq]; **GWP-luluc** = EF EN15804+A2 Climate Change - Land use and LU change [kg CO2 eq]; **ODP** = EF Ozone depletion [kg CFC11 eq]; **AP** = EF Acidification [mol H+ eq]; **EP-fw** = EF Eutrophication, freshwater [kg P eq]; **EP-m** = EF Eutrophication, marine [kg N eq]; **EP-T** = EF Eutrophication, terrestrial [mol N eq]; **POCP** = EF Photochemical ozone formation [kg NMVOC eq]; **ADP-mm** = EF Resource use, minerals and metals [kg Sb eq]; **ADP-f** = EF Resource use, fossils [MJ]; **WDP** = EF Water use [m3 depriv.]; **PM** = EF Particulate matter [disease inc.]; **IR** = EF Ionising radiation [kBq U-235 eq]; **ETP-fw** = EF Ecotoxicity, freshwater [CTUe]; **HTP-c** = EF Human toxicity, cancer [CTUh]; **HTP-nc** = EF Human toxicity, non-cancer [CTUh]; **SQP** = EF Land use [Pt]; **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]; **MER** = Materials for energy recovery [kg]; **EE** = Exported energy [MJ]; **EET** = Exported energy thermic [MJ]; **EEE** = Exported energy electric [MJ]

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	1.93E-1	1.00E-3	1.45E-4	1.94E-1	4.03E-3	4.06E-1	1.90E-3	-2.15E-1	3.90E-1
GWP-f	kg CO2 eq	4.39E-1	1.00E-3	1.46E-4	4.40E-1	4.03E-3	1.36E-1	1.90E-3	-2.56E-1	3.26E-1
GWP-b	kg CO2 eq	-2.46E-1	6.08E-7	-1.54E-6	-2.46E-1	2.45E-6	2.70E-1	1.65E-6	4.11E-2	6.44E-2
GWP-luluc	kg CO2 eq	6.03E-4	3.54E-7	1.49E-7	6.04E-4	1.43E-6	2.49E-5	3.24E-8	-4.79E-4	1.51E-4
ODP	kg CFC11 eq	1.97E-8	2.31E-10	8.26E-12	2.00E-8	9.28E-10	4.01E-9	4.76E-11	-1.63E-8	8.69E-9
AP	mol H+ eq	1.81E-3	5.70E-6	1.47E-6	1.82E-3	2.29E-5	1.63E-4	1.14E-6	-9.88E-4	1.02E-3
EP-fw	kg P eq	1.15E-5	8.24E-9	8.24E-9	1.16E-5	3.31E-8	7.39E-7	1.48E-9	-7.86E-6	4.47E-6
EP-m	kg N eq	3.73E-4	2.04E-6	1.55E-7	3.76E-4	8.21E-6	5.06E-5	7.39E-7	-2.09E-4	2.26E-4
EP-T	mol N eq	4.03E-3	2.25E-5	1.85E-6	4.05E-3	9.05E-5	5.57E-4	4.61E-6	-2.39E-3	2.32E-3
POCP	kg NMVOC eq	1.56E-3	6.43E-6	6.28E-7	1.57E-3	2.59E-5	1.72E-4	1.73E-6	-9.01E-4	8.69E-4
ADP-mm	kg Sb eq	6.53E-6	2.59E-8	1.97E-8	6.57E-6	1.04E-7	6.40E-7	1.15E-9	-2.16E-6	5.16E-6
ADP-f	MJ	1.31E+1	1.54E-2	1.36E-3	1.31E+1	6.18E-2	4.66E-1	3.48E-3	-7.03E+0	6.59E+0
WDP	m3 depriv.	2.63E-1	4.71E-5	5.22E-5	2.63E-1	1.90E-4	8.25E-3	1.78E-5	-1.81E-1	9.04E-2
PM	disease inc.	2.07E-8	9.03E-11	9.08E-12	2.08E-8	3.64E-10	2.59E-9	2.39E-11	-1.35E-8	1.03E-8
IR	kBq U-235 eq	1.07E-2	6.71E-5	1.02E-6	1.08E-2	2.70E-4	1.51E-3	1.61E-5	-7.29E-3	5.31E-3
ETP-fw	CTUe	9.68E+0	1.25E-2	1.21E-2	9.71E+0	5.02E-2	5.66E-1	2.91E-3	-5.41E+0	4.91E+0
HTP-c	CTUh	2.99E-10	4.44E-13	6.17E-13	3.01E-10	1.79E-12	6.64E-11	8.52E-14	-1.48E-10	2.20E-10
HTP-nc	CTUh	5.08E-9	1.49E-11	1.57E-11	5.11E-9	5.98E-11	7.93E-10	1.87E-12	-1.91E-9	4.05E-9
SQP	Pt	2.31E+1	1.31E-2	2.24E-3	2.32E+1	5.29E-2	3.62E-1	8.92E-3	-2.59E+1	-2.27E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.42E+0	2.20E-4	2.40E-2	4.45E+0	8.87E-4	2.17E-2	1.34E-4	-4.19E+0	2.75E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.42E+0	2.20E-4	2.40E-2	4.45E+0	8.87E-4	2.17E-2	1.34E-4	-4.19E+0	2.75E-1
PENRE	MJ	1.40E+1	1.63E-2	1.44E-3	1.40E+1	6.56E-2	4.96E-1	3.69E-3	-7.56E+0	7.05E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.40E+1	1.63E-2	1.44E-3	1.40E+1	6.56E-2	4.96E-1	3.69E-3	-7.56E+0	7.05E+0
PET	MJ	1.84E+1	1.65E-2	2.55E-2	1.85E+1	6.65E-2	5.18E-1	3.82E-3	-1.18E+1	7.32E+0
SM	kg	0	0	0	0	0	0	0	0	0
RSF	MJ	0	0	0	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0	0	0	0
FW	m3	4.74E-3	1.74E-6	1.46E-6	4.75E-3	7.00E-6	2.58E-4	4.29E-6	-3.60E-3	1.41E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	4.75E-6	3.93E-8	2.73E-13	4.79E-6	1.58E-7	8.30E-7	4.19E-9	-3.91E-6	1.88E-6
NHWD	kg	3.71E-2	9.52E-4	1.05E-6	3.81E-2	3.83E-3	2.33E-2	1.53E-2	-1.88E-2	6.18E-2
RWD	kg	1.06E-5	1.04E-7	1.10E-13	1.07E-5	4.20E-7	1.97E-6	2.27E-8	-7.23E-6	5.84E-6
CRU	kg	0	0	0	0	0	0	0	0	0
MFR	kg	0	0	0	0	0	0	0	0	0
MER	kg	0	0	0	0	0	0	0	0	0
EE	MJ	0	0	0	0	0	0	0	0	0
EET	MJ	0	0	0	0	0	0	0	0	0
EEE	MJ	0	0	0	0	0	0	0	0	0



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