Environmental Profile

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

Ecochain v3.5.80

Product:	3003180 - Wadal PVC Branch 88° GY 110x75 S/S/S
Unit:	1 piece
Manufacturer:	Wavin - PL -Buk - Extra products

With Wadal you opt for a tensile-resistant system whose connections cannot slide apart. There is a solution for every indoor drainage situation, thanks to the very extensive range of PVC adhesive fittings and pipes. KOMO certified.

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]

Statement of Confidentiality

Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	9.79E-1	1.59E-2	1.45E-4	9.95E-1	1.33E-2	6.69E-1	4.21E-3	-5.78E-1	1.10E+0
GWP-f	kg CO2 eq	1.20E+0	1.59E-2	1.46E-4	1.21E+0	1.33E-2	4.01E-1	4.21E-3	-6.52E-1	9.82E-1
GWP-b	kg CO2 eq	-2.21E-1	9.63E-6	-1.54E-6	-2.21E-1	8.05E-6	2.67E-1	5.32E-6	7.50E-2	1.22E-1
GWP-luluc	kg CO2 eq	1.50E-3	5.61E-6	1.49E-7	1.51E-3	4.69E-6	1.69E-4	1.11E-7	-1.03E-3	6.55E-4
ODP	kg CFC11 eq	5.86E-7	3.65E-9	8.26E-12	5.89E-7	3.06E-9	4.72E-8	1.57E-10	-2.96E-7	3.44E-7
AP	mol H+ eq	5.76E-3	9.03E-5	1.47E-6	5.85E-3	7.55E-5	8.15E-4	3.82E-6	-2.73E-3	4.01E-3
EP-fw	kg P eq	5.63E-5	1.30E-7	8.24E-9	5.65E-5	1.09E-7	5.67E-6	5.00E-9	-2.92E-5	3.30E-5
EP-m	kg N eq	1.07E-3	3.23E-5	1.55E-7	1.10E-3	2.70E-5	2.03E-4	2.37E-6	-5.16E-4	8.15E-4
EP-T	mol N eq	1.15E-2	3.56E-4	1.85E-6	1.18E-2	2.98E-4	2.24E-3	1.52E-5	-5.63E-3	8.76E-3
POCP	kg NMVOC eq	3.72E-3	1.02E-4	6.28E-7	3.82E-3	8.52E-5	6.68E-4	5.24E-6	-1.86E-3	2.72E-3
ADP-mm	kg Sb eq	9.93E-4	4.10E-7	1.97E-8	9.93E-4	3.43E-7	3.21E-6	3.83E-9	-1.27E-5	9.84E-4
ADP-f	MJ	2.86E+1	2.43E-1	1.36E-3	2.89E+1	2.04E-1	2.18E+0	1.15E-2	-1.52E+1	1.60E+1
WDP	m3 depriv.	1.78E+0	7.47E-4	5.22E-5	1.78E+0	6.25E-4	8.48E-2	7.44E-5	-9.41E-1	9.26E-1
PM	disease inc.	4.38E-8	1.43E-9	9.08E-12	4.52E-8	1.20E-9	1.01E-8	7.90E-11	-2.52E-8	3.14E-8
IR	kBq U-235 eq	6.44E-2	1.06E-3	1.02E-6	6.55E-2	8.90E-4	7.75E-3	5.27E-5	-3.28E-2	4.14E-2
ETP-fw	CTUe	3.81E+1	1.98E-1	1.21E-2	3.83E+1	1.65E-1	1.67E+1	1.83E-1	-1.48E+1	4.05E+1
HTP-c	CTUh	1.07E-9	7.03E-12	6.17E-13	1.08E-9	5.88E-12	2.47E-10	3.17E-13	-4.30E-10	9.01E-10
HTP-nc	CTUh	3.19E-8	2.36E-10	1.57E-11	3.22E-8	1.97E-10	5.83E-9	3.51E-11	-1.27E-8	2.56E-8
SQP	Pt	2.65E+1	2.08E-1	2.24E-3	2.67E+1	1.74E-1	1.33E+0	2.94E-2	-3.20E+1	-3.72E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	7.74E+0	3.49E-3	2.40E-2	7.77E+0	2.92E-3	1.56E-1	4.28E-4	-5.61E+0	2.31E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	7.74E+0	3.49E-3	2.40E-2	7.77E+0	2.92E-3	1.56E-1	4.28E-4	-5.61E+0	2.31E+0
PENRE	MJ	3.07E+1	2.58E-1	1.44E-3	3.10E+1	2.16E-1	2.31E+0	1.22E-2	-1.64E+1	1.71E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.07E+1	2.58E-1	1.44E-3	3.10E+1	2.16E-1	2.31E+0	1.22E-2	-1.64E+1	1.71E+1
PET	MJ	3.85E+1	2.62E-1	2.55E-2	3.88E+1	2.19E-1	2.47E+0	1.26E-2	-2.20E+1	1.94E+1
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	2.08E-2	2.75E-5	1.46E-6	2.08E-2	2.30E-5	2.34E-3	1.41E-5	-1.18E-2	1.15E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.46E-4	6.23E-7	2.73E-13	1.47E-4	5.21E-7	3.60E-6	1.40E-8	-1.39E-5	1.37E-4
NHWD	kg	1.30E-1	1.51E-2	1.05E-6	1.45E-1	1.26E-2	8.02E-2	5.04E-2	-5.89E-2	2.29E-1
RWD	kg	5.73E-5	1.66E-6	1.10E-13	5.89E-5	1.38E-6	8.38E-6	7.46E-8	-2.97E-5	3.90E-5
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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