Environmental Profile

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

Ecochain v3.5.80

Product:	3003183 - Wadal PVC Branch 45° GY 125x40 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	8.85E-1	1.47E-2	1.45E-4	9.00E-1	1.20E-2	6.41E-1	3.80E-3	-5.26E-1	1.03E+0
GWP-f	kg CO2 eq	1.11E+0	1.47E-2	1.46E-4	1.12E+0	1.19E-2	3.73E-1	3.80E-3	-6.01E-1	9.09E-1
GWP-b	kg CO2 eq	-2.22E-1	8.93E-6	-1.54E-6	-2.22E-1	7.25E-6	2.67E-1	4.79E-6	7.54E-2	1.21E-1
GWP-luluc	kg CO2 eq	1.43E-3	5.21E-6	1.49E-7	1.43E-3	4.23E-6	1.52E-4	9.99E-8	-9.92E-4	5.98E-4
ODP	kg CFC11 eq	5.28E-7	3.39E-9	8.26E-12	5.32E-7	2.75E-9	4.26E-8	1.41E-10	-2.68E-7	3.09E-7
AP	mol H+ eq	5.34E-3	8.38E-5	1.47E-6	5.42E-3	6.81E-5	7.40E-4	3.44E-6	-2.52E-3	3.71E-3
EP-fw	kg P eq	5.20E-5	1.21E-7	8.24E-9	5.21E-5	9.83E-8	5.11E-6	4.52E-9	-2.72E-5	3.02E-5
EP-m	kg N eq	9.96E-4	3.00E-5	1.55E-7	1.03E-3	2.43E-5	1.85E-4	2.13E-6	-4.80E-4	7.57E-4
EP-T	mol N eq	1.07E-2	3.30E-4	1.85E-6	1.11E-2	2.68E-4	2.04E-3	1.37E-5	-5.25E-3	8.14E-3
POCP	kg NMVOC eq	3.47E-3	9.45E-5	6.28E-7	3.57E-3	7.67E-5	6.09E-4	4.73E-6	-1.73E-3	2.52E-3
ADP-mm	kg Sb eq	9.43E-4	3.81E-7	1.97E-8	9.43E-4	3.09E-7	2.91E-6	3.46E-9	-1.15E-5	9.35E-4
ADP-f	MJ	2.63E+1	2.26E-1	1.36E-3	2.65E+1	1.83E-1	1.97E+0	1.03E-2	-1.40E+1	1.47E+1
WDP	m3 depriv.	1.62E+0	6.93E-4	5.22E-5	1.62E+0	5.63E-4	7.63E-2	6.82E-5	-8.60E-1	8.34E-1
PM	disease inc.	4.12E-8	1.33E-9	9.08E-12	4.26E-8	1.08E-9	9.18E-9	7.12E-11	-2.39E-8	2.90E-8
IR	kBq U-235 eq	5.91E-2	9.87E-4	1.02E-6	6.01E-2	8.02E-4	7.02E-3	4.75E-5	-3.02E-2	3.77E-2
ETP-fw	CTUe	3.60E+1	1.83E-1	1.21E-2	3.62E+1	1.49E-1	1.50E+1	1.65E-1	-1.40E+1	3.75E+1
HTP-c	CTUh	9.97E-10	6.53E-12	6.17E-13	1.00E-9	5.30E-12	2.26E-10	2.86E-13	-4.01E-10	8.35E-10
HTP-nc	CTUh	2.94E-8	2.19E-10	1.57E-11	2.97E-8	1.78E-10	5.27E-9	3.16E-11	-1.16E-8	2.35E-8
SQP	Pt	2.62E+1	1.93E-1	2.24E-3	2.64E+1	1.57E-1	1.20E+0	2.65E-2	-3.18E+1	-4.01E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	7.41E+0	3.24E-3	2.40E-2	7.44E+0	2.63E-3	1.40E-1	3.85E-4	-5.55E+0	2.03E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	7.41E+0	3.24E-3	2.40E-2	7.44E+0	2.63E-3	1.40E-1	3.85E-4	-5.55E+0	2.03E+0
PENRE	MJ	2.82E+1	2.40E-1	1.44E-3	2.85E+1	1.95E-1	2.09E+0	1.10E-2	-1.50E+1	1.57E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.82E+1	2.40E-1	1.44E-3	2.85E+1	1.95E-1	2.09E+0	1.10E-2	-1.50E+1	1.57E+1
PET	MJ	3.56E+1	2.43E-1	2.55E-2	3.59E+1	1.97E-1	2.23E+0	1.14E-2	-2.06E+1	1.78E+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	1.91E-2	2.56E-5	1.46E-6	1.92E-2	2.08E-5	2.11E-3	1.27E-5	-1.09E-2	1.04E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.38E-4	5.77E-7	2.73E-13	1.39E-4	4.69E-7	3.27E-6	1.26E-8	-1.29E-5	1.30E-4
NHWD	kg	1.22E-1	1.40E-2	1.05E-6	1.36E-1	1.14E-2	7.32E-2	4.54E-2	-5.46E-2	2.11E-1
RWD	kg	5.26E-5	1.54E-6	1.10E-13	5.41E-5	1.25E-6	7.61E-6	6.72E-8	-2.75E-5	3.56E-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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