Environmental Profile

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

Ecochain v3.5.80

Product:	3003185 - Wadal PVC Branch 45° GY 125x50 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	9.90E-1	1.60E-2	1.45E-4	1.01E+0	1.31E-2	6.83E-1	4.16E-3	-5.83E-1	1.12E+0
GWP-f	kg CO2 eq	1.21E+0	1.59E-2	1.46E-4	1.23E+0	1.31E-2	4.15E-1	4.16E-3	-6.57E-1	1.00E+0
GWP-b	kg CO2 eq	-2.21E-1	9.68E-6	-1.54E-6	-2.21E-1	7.96E-6	2.67E-1	5.26E-6	7.50E-2	1.21E-1
GWP-luluc	kg CO2 eq	1.51E-3	5.64E-6	1.49E-7	1.52E-3	4.64E-6	1.67E-4	1.09E-7	-1.02E-3	6.66E-4
ODP	kg CFC11 eq	5.80E-7	3.67E-9	8.26E-12	5.83E-7	3.02E-9	4.67E-8	1.55E-10	-2.94E-7	3.39E-7
AP	mol H+ eq	5.82E-3	9.08E-5	1.47E-6	5.91E-3	7.46E-5	8.09E-4	3.78E-6	-2.72E-3	4.08E-3
EP-fw	kg P eq	5.66E-5	1.31E-7	8.24E-9	5.67E-5	1.08E-7	5.61E-6	4.94E-9	-2.90E-5	3.34E-5
EP-m	kg N eq	1.08E-3	3.25E-5	1.55E-7	1.11E-3	2.67E-5	2.02E-4	2.34E-6	-5.14E-4	8.26E-4
EP-T	mol N eq	1.16E-2	3.58E-4	1.85E-6	1.20E-2	2.94E-4	2.23E-3	1.51E-5	-5.61E-3	8.90E-3
POCP	kg NMVOC eq	3.78E-3	1.02E-4	6.28E-7	3.88E-3	8.41E-5	6.64E-4	5.18E-6	-1.86E-3	2.78E-3
ADP-mm	kg Sb eq	9.94E-4	4.12E-7	1.97E-8	9.94E-4	3.39E-7	3.18E-6	3.79E-9	-1.25E-5	9.85E-4
ADP-f	MJ	2.89E+1	2.45E-1	1.36E-3	2.92E+1	2.01E-1	2.15E+0	1.13E-2	-1.53E+1	1.63E+1
WDP	m3 depriv.	1.78E+0	7.51E-4	5.22E-5	1.78E+0	6.17E-4	8.38E-2	7.37E-5	-9.32E-1	9.30E-1
PM	disease inc.	4.44E-8	1.44E-9	9.08E-12	4.58E-8	1.18E-9	1.00E-8	7.81E-11	-2.51E-8	3.20E-8
IR	kBq U-235 eq	6.44E-2	1.07E-3	1.02E-6	6.55E-2	8.79E-4	7.68E-3	5.21E-5	-3.26E-2	4.15E-2
ETP-fw	CTUe	3.82E+1	1.99E-1	1.21E-2	3.84E+1	1.63E-1	1.65E+1	1.81E-1	-1.47E+1	4.06E+1
HTP-c	CTUh	1.07E-9	7.07E-12	6.17E-13	1.08E-9	5.81E-12	2.47E-10	3.13E-13	-4.28E-10	9.07E-10
HTP-nc	CTUh	3.19E-8	2.37E-10	1.57E-11	3.22E-8	1.95E-10	5.78E-9	3.47E-11	-1.25E-8	2.56E-8
SQP	Pt	2.66E+1	2.09E-1	2.24E-3	2.68E+1	1.72E-1	1.32E+0	2.90E-2	-3.20E+1	-3.62E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	7.80E+0	3.51E-3	2.40E-2	7.83E+0	2.89E-3	1.54E-1	4.23E-4	-5.61E+0	2.38E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	7.80E+0	3.51E-3	2.40E-2	7.83E+0	2.89E-3	1.54E-1	4.23E-4	-5.61E+0	2.38E+0
PENRE	MJ	3.10E+1	2.60E-1	1.44E-3	3.13E+1	2.14E-1	2.29E+0	1.20E-2	-1.64E+1	1.74E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	3.10E+1	2.60E-1	1.44E-3	3.13E+1	2.14E-1	2.29E+0	1.20E-2	-1.64E+1	1.74E+1
PET	MJ	3.88E+1	2.63E-1	2.55E-2	3.91E+1	2.16E-1	2.45E+0	1.25E-2	-2.21E+1	1.98E+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	2.10E-2	2.77E-5	1.46E-6	2.10E-2	2.28E-5	2.31E-3	1.39E-5	-1.17E-2	1.17E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.46E-4	6.26E-7	2.73E-13	1.47E-4	5.14E-7	3.57E-6	1.38E-8	-1.40E-5	1.37E-4
NHWD	kg	1.32E-1	1.52E-2	1.05E-6	1.47E-1	1.25E-2	8.03E-2	4.98E-2	-5.85E-2	2.31E-1
RWD	kg	5.72E-5	1.66E-6	1.10E-13	5.89E-5	1.37E-6	8.30E-6	7.37E-8	-2.96E-5	3.91E-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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