Environmental Profile

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

Ecochain v3.5.80

Product:	3003162 - Wadal PVC Branch 88° GY 50 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	2.37E-1	3.52E-3	1.45E-4	2.41E-1	2.97E-3	1.34E-1	9.50E-4	-1.34E-1	2.46E-1
GWP-f	kg CO2 eq	2.68E-1	3.52E-3	1.46E-4	2.72E-1	2.97E-3	9.60E-2	9.49E-4	-1.44E-1	2.27E-1
GWP-b	kg CO2 eq	-3.08E-2	2.13E-6	-1.54E-6	-3.08E-2	1.80E-6	3.84E-2	1.19E-6	1.10E-2	1.86E-2
GWP-luluc	kg CO2 eq	3.04E-4	1.24E-6	1.49E-7	3.05E-4	1.05E-6	3.74E-5	2.52E-8	-1.81E-4	1.63E-4
ODP	kg CFC11 eq	1.29E-7	8.10E-10	8.26E-12	1.29E-7	6.85E-10	1.04E-8	3.52E-11	-6.60E-8	7.45E-8
AP	mol H+ eq	1.29E-3	2.00E-5	1.47E-6	1.31E-3	1.69E-5	1.79E-4	8.59E-7	-5.71E-4	9.40E-4
EP-fw	kg P eq	1.24E-5	2.89E-8	8.24E-9	1.25E-5	2.44E-8	1.25E-6	1.14E-9	-5.93E-6	7.81E-6
EP-m	kg N eq	2.32E-4	7.17E-6	1.55E-7	2.40E-4	6.05E-6	4.43E-5	5.28E-7	-1.06E-4	1.85E-4
EP-T	mol N eq	2.53E-3	7.90E-5	1.85E-6	2.61E-3	6.67E-5	4.88E-4	3.42E-6	-1.15E-3	2.02E-3
POCP	kg NMVOC eq	8.27E-4	2.26E-5	6.28E-7	8.50E-4	1.91E-5	1.46E-4	1.18E-6	-3.84E-4	6.32E-4
ADP-mm	kg Sb eq	2.48E-4	9.10E-8	1.97E-8	2.48E-4	7.68E-8	7.01E-7	8.65E-10	-2.76E-6	2.46E-4
ADP-f	MJ	6.45E+0	5.40E-2	1.36E-3	6.50E+0	4.56E-2	4.79E-1	2.57E-3	-3.39E+0	3.64E+0
WDP	m3 depriv.	3.99E-1	1.66E-4	5.22E-5	3.99E-1	1.40E-4	1.87E-2	1.83E-5	-2.02E-1	2.16E-1
PM	disease inc.	9.37E-9	3.17E-10	9.08E-12	9.70E-9	2.68E-10	2.21E-9	1.77E-11	-4.77E-9	7.42E-9
IR	kBq U-235 eq	1.42E-2	2.36E-4	1.02E-6	1.45E-2	1.99E-4	1.70E-3	1.18E-5	-6.89E-3	9.50E-3
ETP-fw	CTUe	8.09E+0	4.38E-2	1.21E-2	8.14E+0	3.70E-2	3.67E+0	4.04E-2	-2.80E+0	9.09E+0
HTP-c	CTUh	2.37E-10	1.56E-12	6.17E-13	2.39E-10	1.32E-12	5.59E-11	7.22E-14	-8.65E-11	2.10E-10
HTP-nc	CTUh	7.22E-9	5.22E-11	1.57E-11	7.29E-9	4.41E-11	1.29E-9	7.77E-12	-2.67E-9	5.96E-9
SQP	Pt	4.17E+0	4.62E-2	2.24E-3	4.22E+0	3.90E-2	2.94E-1	6.58E-3	-4.79E+0	-2.30E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.45E+0	7.74E-4	2.40E-2	1.48E+0	6.54E-4	3.44E-2	9.52E-5	-8.69E-1	6.42E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.45E+0	7.74E-4	2.40E-2	1.48E+0	6.54E-4	3.44E-2	9.52E-5	-8.69E-1	6.42E-1
PENRE	MJ	6.91E+0	5.73E-2	1.44E-3	6.97E+0	4.84E-2	5.10E-1	2.73E-3	-3.65E+0	3.88E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	6.91E+0	5.73E-2	1.44E-3	6.97E+0	4.84E-2	5.10E-1	2.73E-3	-3.65E+0	3.88E+0
PET	MJ	8.37E+0	5.81E-2	2.55E-2	8.45E+0	4.91E-2	5.44E-1	2.83E-3	-4.52E+0	4.53E+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	4.73E-3	6.11E-6	1.46E-6	4.73E-3	5.16E-6	5.16E-4	3.15E-6	-2.40E-3	2.86E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.57E-5	1.38E-7	2.73E-13	3.58E-5	1.17E-7	7.90E-7	3.15E-9	-3.03E-6	3.37E-5
NHWD	kg	2.83E-2	3.35E-3	1.05E-6	3.17E-2	2.83E-3	1.80E-2	1.13E-2	-1.20E-2	5.17E-2
RWD	kg	1.25E-5	3.67E-7	1.10E-13	1.29E-5	3.10E-7	1.83E-6	1.67E-8	-6.21E-6	8.86E-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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