

Environmental Profile

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

Ecochain v3.5.80



Product: 3003172 - Wadal PVC Branch 88° GY 90 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					Use stage							End-of-Life stage				
A1 Raw material supply A2 Transport A3 Manufacturing					B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment B6 Operational energy use B7 Operational water use							C1 De-construction demolition C2 Transport C3 Waste processing C4 Disposal				
Construction process stage												Benefits and loads beyond the system boundaries				
A4 Transport gate to site A5 Assembly / Construction installation process												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

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	8.72E-1	1.28E-2	1.45E-4	8.85E-1	1.16E-2	5.39E-1	3.70E-3	-5.15E-1	9.25E-1
GWP-f	kg CO2 eq	1.03E+0	1.28E-2	1.46E-4	1.04E+0	1.16E-2	3.53E-1	3.69E-3	-5.56E-1	8.53E-1
GWP-b	kg CO2 eq	-1.56E-1	7.76E-6	-1.54E-6	-1.56E-1	7.06E-6	1.86E-1	4.67E-6	4.14E-2	7.12E-2
GWP-luluc	kg CO2 eq	1.17E-3	4.52E-6	1.49E-7	1.17E-3	4.12E-6	1.47E-4	9.71E-8	-7.14E-4	6.12E-4
ODP	kg CFC11 eq	5.09E-7	2.94E-9	8.26E-12	5.12E-7	2.68E-9	4.10E-8	1.38E-10	-2.58E-7	2.98E-7
AP	mol H+ eq	4.93E-3	7.28E-5	1.47E-6	5.00E-3	6.63E-5	7.01E-4	3.35E-6	-2.25E-3	3.52E-3
EP-fw	kg P eq	4.79E-5	1.05E-7	8.24E-9	4.80E-5	9.57E-8	4.94E-6	4.39E-9	-2.33E-5	2.97E-5
EP-m	kg N eq	8.89E-4	2.60E-5	1.55E-7	9.15E-4	2.37E-5	1.73E-4	2.08E-6	-4.17E-4	6.97E-4
EP-T	mol N eq	9.65E-3	2.87E-4	1.85E-6	9.93E-3	2.61E-4	1.91E-3	1.34E-5	-4.53E-3	7.59E-3
POCP	kg NMVOC eq	3.16E-3	8.20E-5	6.28E-7	3.24E-3	7.47E-5	5.70E-4	4.60E-6	-1.52E-3	2.37E-3
ADP-mm	kg Sb eq	8.93E-4	3.31E-7	1.97E-8	8.94E-4	3.01E-7	2.76E-6	3.36E-9	-1.09E-5	8.86E-4
ADP-f	MJ	2.48E+1	1.96E-1	1.36E-3	2.50E+1	1.79E-1	1.88E+0	1.01E-2	-1.31E+1	1.39E+1
WDP	m3 depriv.	1.55E+0	6.02E-4	5.22E-5	1.55E+0	5.48E-4	7.41E-2	6.60E-5	-7.89E-1	8.41E-1
PM	disease inc.	3.60E-8	1.15E-9	9.08E-12	3.72E-8	1.05E-9	8.66E-9	6.93E-11	-1.91E-8	2.78E-8
IR	kBq U-235 eq	5.53E-2	8.57E-4	1.02E-6	5.62E-2	7.80E-4	6.68E-3	4.62E-5	-2.70E-2	3.66E-2
ETP-fw	CTUe	3.05E+1	1.59E-1	1.21E-2	3.07E+1	1.45E-1	1.45E+1	1.60E-1	-1.09E+1	3.46E+1
HTP-c	CTUh	9.20E-10	5.67E-12	6.17E-13	9.26E-10	5.16E-12	2.14E-10	2.79E-13	-3.50E-10	7.95E-10
HTP-nc	CTUh	2.78E-8	1.90E-10	1.57E-11	2.80E-8	1.73E-10	5.07E-9	3.07E-11	-1.05E-8	2.27E-8
SQP	Pt	1.92E+1	1.68E-1	2.24E-3	1.93E+1	1.53E-1	1.15E+0	2.58E-2	-2.10E+1	-3.43E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	6.18E+0	2.81E-3	2.40E-2	6.21E+0	2.56E-3	1.35E-1	3.75E-4	-3.73E+0	2.62E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	6.18E+0	2.81E-3	2.40E-2	6.21E+0	2.56E-3	1.35E-1	3.75E-4	-3.73E+0	2.62E+0
PENRE	MJ	2.66E+1	2.08E-1	1.44E-3	2.68E+1	1.90E-1	2.00E+0	1.07E-2	-1.41E+1	1.49E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	2.66E+1	2.08E-1	1.44E-3	2.68E+1	1.90E-1	2.00E+0	1.07E-2	-1.41E+1	1.49E+1
PET	MJ	3.28E+1	2.11E-1	2.55E-2	3.30E+1	1.92E-1	2.14E+0	1.11E-2	-1.78E+1	1.75E+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	1.80E-2	2.22E-5	1.46E-6	1.80E-2	2.02E-5	2.04E-3	1.23E-5	-9.37E-3	1.07E-2

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	1.30E-4	5.02E-7	2.73E-13	1.31E-4	4.57E-7	3.09E-6	1.23E-8	-1.18E-5	1.23E-4
NHWD	kg	1.09E-1	1.22E-2	1.05E-6	1.22E-1	1.11E-2	6.94E-2	4.42E-2	-4.83E-2	1.98E-1
RWD	kg	4.89E-5	1.33E-6	1.10E-13	5.02E-5	1.21E-6	7.18E-6	6.54E-8	-2.44E-5	3.43E-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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