

Environmental Profile

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

Ecochain v3.5.80



Product: 3003132 - Wadal PVC Bend 45° GY 90 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	5.63E-1	7.98E-3	1.45E-4	5.71E-1	7.37E-3	3.40E-1	2.34E-3	-3.23E-1	5.98E-1
GWP-f	kg CO2 eq	6.56E-1	7.97E-3	1.46E-4	6.64E-1	7.37E-3	2.25E-1	2.34E-3	-3.55E-1	5.43E-1
GWP-b	kg CO2 eq	-9.32E-2	4.84E-6	-1.54E-6	-9.32E-2	4.47E-6	1.15E-1	2.96E-6	3.28E-2	5.47E-2
GWP-luluc	kg CO2 eq	7.72E-4	2.82E-6	1.49E-7	7.75E-4	2.61E-6	9.36E-5	6.14E-8	-4.96E-4	3.76E-4
ODP	kg CFC11 eq	3.24E-7	1.84E-9	8.26E-12	3.25E-7	1.70E-9	2.61E-8	8.72E-11	-1.64E-7	1.90E-7
AP	mol H+ eq	3.14E-3	4.54E-5	1.47E-6	3.19E-3	4.20E-5	4.47E-4	2.12E-6	-1.45E-3	2.23E-3
EP-fw	kg P eq	3.06E-5	6.56E-8	8.24E-9	3.07E-5	6.06E-8	3.14E-6	2.78E-9	-1.53E-5	1.86E-5
EP-m	kg N eq	5.72E-4	1.62E-5	1.55E-7	5.88E-4	1.50E-5	1.11E-4	1.32E-6	-2.70E-4	4.45E-4
EP-T	mol N eq	6.18E-3	1.79E-4	1.85E-6	6.36E-3	1.65E-4	1.22E-3	8.47E-6	-2.94E-3	4.82E-3
POCP	kg NMVOC eq	2.01E-3	5.12E-5	6.28E-7	2.07E-3	4.73E-5	3.65E-4	2.91E-6	-9.80E-4	1.50E-3
ADP-mm	kg Sb eq	5.46E-4	2.06E-7	1.97E-8	5.47E-4	1.91E-7	1.76E-6	2.13E-9	-6.91E-6	5.42E-4
ADP-f	MJ	1.58E+1	1.22E-1	1.36E-3	1.59E+1	1.13E-1	1.20E+0	6.37E-3	-8.34E+0	8.88E+0
WDP	m3 depriv.	9.87E-1	3.76E-4	5.22E-5	9.87E-1	3.47E-4	4.70E-2	4.15E-5	-5.09E-1	5.26E-1
PM	disease inc.	2.32E-8	7.20E-10	9.08E-12	2.39E-8	6.65E-10	5.54E-9	4.39E-11	-1.27E-8	1.75E-8
IR	kBq U-235 eq	3.52E-2	5.35E-4	1.02E-6	3.58E-2	4.94E-4	4.26E-3	2.93E-5	-1.75E-2	2.31E-2
ETP-fw	CTUe	1.99E+1	9.94E-2	1.21E-2	2.01E+1	9.18E-2	9.23E+0	1.02E-1	-7.41E+0	2.21E+1
HTP-c	CTUh	5.78E-10	3.54E-12	6.17E-13	5.82E-10	3.27E-12	1.36E-10	1.76E-13	-2.23E-10	4.98E-10
HTP-nc	CTUh	1.75E-8	1.18E-10	1.57E-11	1.76E-8	1.09E-10	3.23E-9	1.95E-11	-6.77E-9	1.42E-8
SQP	Pt	1.19E+1	1.05E-1	2.24E-3	1.20E+1	9.67E-2	7.32E-1	1.63E-2	-1.41E+1	-1.22E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	3.85E+0	1.76E-3	2.40E-2	3.88E+0	1.62E-3	8.61E-2	2.38E-4	-2.52E+0	1.45E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	3.85E+0	1.76E-3	2.40E-2	3.88E+0	1.62E-3	8.61E-2	2.38E-4	-2.52E+0	1.45E+0
PENRE	MJ	1.69E+1	1.30E-1	1.44E-3	1.71E+1	1.20E-1	1.27E+0	6.76E-3	-8.98E+0	9.48E+0
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.69E+1	1.30E-1	1.44E-3	1.71E+1	1.20E-1	1.27E+0	6.76E-3	-8.98E+0	9.48E+0
PET	MJ	2.08E+1	1.32E-1	2.55E-2	2.09E+1	1.22E-1	1.36E+0	7.00E-3	-1.15E+1	1.09E+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	1.15E-2	1.38E-5	1.46E-6	1.15E-2	1.28E-5	1.29E-3	7.81E-6	-6.17E-3	6.62E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	8.02E-5	3.13E-7	2.73E-13	8.05E-5	2.89E-7	1.98E-6	7.76E-9	-7.50E-6	7.53E-5
NHWD	kg	7.00E-2	7.58E-3	1.05E-6	7.76E-2	7.01E-3	4.42E-2	2.80E-2	-3.09E-2	1.26E-1
RWD	kg	3.12E-5	8.32E-7	1.10E-13	3.20E-5	7.69E-7	4.59E-6	4.14E-8	-1.58E-5	2.16E-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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