

Environmental Profile

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

Ecochain v3.5.80



Product: 3003117 - Wadal PVC Bend 88° GY 90 S/SP
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	6.49E-1	1.02E-2	1.45E-4	6.60E-1	8.74E-3	4.13E-1	2.78E-3	-3.83E-1	7.01E-1
GWP-f	kg CO2 eq	7.74E-1	1.01E-2	1.46E-4	7.84E-1	8.73E-3	2.63E-1	2.78E-3	-4.19E-1	6.39E-1
GWP-b	kg CO2 eq	-1.25E-1	6.16E-6	-1.54E-6	-1.25E-1	5.30E-6	1.50E-1	3.50E-6	3.69E-2	6.20E-2
GWP-luluc	kg CO2 eq	9.09E-4	3.59E-6	1.49E-7	9.13E-4	3.09E-6	1.11E-4	7.30E-8	-5.80E-4	4.46E-4
ODP	kg CFC11 eq	3.83E-7	2.34E-9	8.26E-12	3.85E-7	2.01E-9	3.08E-8	1.03E-10	-1.94E-7	2.25E-7
AP	mol H+ eq	3.71E-3	5.78E-5	1.47E-6	3.77E-3	4.98E-5	5.29E-4	2.52E-6	-1.72E-3	2.63E-3
EP-fw	kg P eq	3.61E-5	8.35E-8	8.24E-9	3.62E-5	7.19E-8	3.72E-6	3.30E-9	-1.80E-5	2.20E-5
EP-m	kg N eq	6.75E-4	2.07E-5	1.55E-7	6.96E-4	1.78E-5	1.31E-4	1.56E-6	-3.21E-4	5.25E-4
EP-T	mol N eq	7.31E-3	2.28E-4	1.85E-6	7.54E-3	1.96E-4	1.44E-3	1.00E-5	-3.49E-3	5.70E-3
POCP	kg NMVOC eq	2.38E-3	6.51E-5	6.28E-7	2.45E-3	5.61E-5	4.31E-4	3.46E-6	-1.17E-3	1.77E-3
ADP-mm	kg Sb eq	6.46E-4	2.62E-7	1.97E-8	6.46E-4	2.26E-7	2.08E-6	2.53E-9	-8.21E-6	6.40E-4
ADP-f	MJ	1.86E+1	1.56E-1	1.36E-3	1.87E+1	1.34E-1	1.42E+0	7.56E-3	-9.87E+0	1.04E+1
WDP	m3 depriv.	1.17E+0	4.78E-4	5.22E-5	1.17E+0	4.11E-4	5.56E-2	4.97E-5	-6.01E-1	6.22E-1
PM	disease inc.	2.75E-8	9.16E-10	9.08E-12	2.85E-8	7.89E-10	6.55E-9	5.20E-11	-1.51E-8	2.08E-8
IR	kBq U-235 eq	4.17E-2	6.81E-4	1.02E-6	4.23E-2	5.86E-4	5.04E-3	3.47E-5	-2.07E-2	2.73E-2
ETP-fw	CTUe	2.34E+1	1.26E-1	1.21E-2	2.35E+1	1.09E-1	1.09E+1	1.20E-1	-8.69E+0	2.60E+1
HTP-c	CTUh	6.89E-10	4.50E-12	6.17E-13	6.94E-10	3.87E-12	1.61E-10	2.09E-13	-2.69E-10	5.91E-10
HTP-nc	CTUh	2.07E-8	1.51E-10	1.57E-11	2.09E-8	1.30E-10	3.82E-9	2.31E-11	-8.03E-9	1.68E-8
SQP	Pt	1.53E+1	1.33E-1	2.24E-3	1.54E+1	1.15E-1	8.67E-1	1.94E-2	-1.74E+1	-9.75E-1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.71E+0	2.23E-3	2.40E-2	4.73E+0	1.92E-3	1.02E-1	2.82E-4	-3.08E+0	1.76E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.71E+0	2.23E-3	2.40E-2	4.73E+0	1.92E-3	1.02E-1	2.82E-4	-3.08E+0	1.76E+0
PENRE	MJ	1.99E+1	1.65E-1	1.44E-3	2.01E+1	1.42E-1	1.51E+0	8.02E-3	-1.06E+1	1.11E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.99E+1	1.65E-1	1.44E-3	2.01E+1	1.42E-1	1.51E+0	8.02E-3	-1.06E+1	1.11E+1
PET	MJ	2.47E+1	1.68E-1	2.55E-2	2.48E+1	1.44E-1	1.61E+0	8.30E-3	-1.37E+1	1.29E+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	1.35E-2	1.76E-5	1.46E-6	1.35E-2	1.52E-5	1.53E-3	9.26E-6	-7.26E-3	7.84E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	9.49E-5	3.98E-7	2.73E-13	9.53E-5	3.43E-7	2.34E-6	9.21E-9	-8.90E-6	8.90E-5
NHWD	kg	8.31E-2	9.65E-3	1.05E-6	9.28E-2	8.31E-3	5.22E-2	3.32E-2	-3.70E-2	1.49E-1
RWD	kg	3.69E-5	1.06E-6	1.10E-13	3.80E-5	9.12E-7	5.43E-6	4.91E-8	-1.87E-5	2.57E-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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