

Environmental Profile

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

Ecochain v3.5.80



Product: 3003133 - Wadal PVC Bend 88° 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	6.23E-1	1.01E-2	1.45E-4	6.33E-1	8.40E-3	4.04E-1	2.67E-3	-3.68E-1	6.80E-1
GWP-f	kg CO2 eq	7.48E-1	1.01E-2	1.46E-4	7.58E-1	8.39E-3	2.53E-1	2.67E-3	-4.05E-1	6.17E-1
GWP-b	kg CO2 eq	-1.25E-1	6.11E-6	-1.54E-6	-1.25E-1	5.10E-6	1.50E-1	3.36E-6	3.70E-2	6.18E-2
GWP-luluc	kg CO2 eq	8.89E-4	3.56E-6	1.49E-7	8.93E-4	2.97E-6	1.06E-4	7.03E-8	-5.71E-4	4.32E-4
ODP	kg CFC11 eq	3.68E-7	2.32E-9	8.26E-12	3.70E-7	1.93E-9	2.96E-8	9.94E-11	-1.86E-7	2.15E-7
AP	mol H+ eq	3.60E-3	5.73E-5	1.47E-6	3.66E-3	4.78E-5	5.09E-4	2.42E-6	-1.67E-3	2.55E-3
EP-fw	kg P eq	3.50E-5	8.28E-8	8.24E-9	3.51E-5	6.91E-8	3.57E-6	3.18E-9	-1.75E-5	2.12E-5
EP-m	kg N eq	6.56E-4	2.05E-5	1.55E-7	6.77E-4	1.71E-5	1.26E-4	1.50E-6	-3.12E-4	5.10E-4
EP-T	mol N eq	7.11E-3	2.26E-4	1.85E-6	7.34E-3	1.89E-4	1.39E-3	9.65E-6	-3.39E-3	5.54E-3
POCP	kg NMVOC eq	2.31E-3	6.46E-5	6.28E-7	2.38E-3	5.39E-5	4.15E-4	3.32E-6	-1.13E-3	1.72E-3
ADP-mm	kg Sb eq	6.45E-4	2.60E-7	1.97E-8	6.46E-4	2.17E-7	2.00E-6	2.43E-9	-7.91E-6	6.40E-4
ADP-f	MJ	1.79E+1	1.54E-1	1.36E-3	1.81E+1	1.29E-1	1.36E+0	7.26E-3	-9.51E+0	1.01E+1
WDP	m3 depriv.	1.12E+0	4.74E-4	5.22E-5	1.12E+0	3.95E-4	5.34E-2	4.84E-5	-5.80E-1	5.96E-1
PM	disease inc.	2.68E-8	9.08E-10	9.08E-12	2.77E-8	7.58E-10	6.30E-9	5.00E-11	-1.47E-8	2.01E-8
IR	kBq U-235 eq	4.02E-2	6.75E-4	1.02E-6	4.09E-2	5.63E-4	4.85E-3	3.34E-5	-2.00E-2	2.63E-2
ETP-fw	CTUe	2.30E+1	1.25E-1	1.21E-2	2.31E+1	1.05E-1	1.05E+1	1.15E-1	-8.49E+0	2.53E+1
HTP-c	CTUh	6.74E-10	4.46E-12	6.17E-13	6.80E-10	3.72E-12	1.56E-10	2.02E-13	-2.61E-10	5.78E-10
HTP-nc	CTUh	2.02E-8	1.49E-10	1.57E-11	2.04E-8	1.25E-10	3.67E-9	2.21E-11	-7.76E-9	1.64E-8
SQP	Pt	1.52E+1	1.32E-1	2.24E-3	1.53E+1	1.10E-1	8.34E-1	1.86E-2	-1.74E+1	-1.05E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	4.72E+0	2.22E-3	2.40E-2	4.75E+0	1.85E-3	9.78E-2	2.70E-4	-3.06E+0	1.79E+0
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	4.72E+0	2.22E-3	2.40E-2	4.75E+0	1.85E-3	9.78E-2	2.70E-4	-3.06E+0	1.79E+0
PENRE	MJ	1.92E+1	1.64E-1	1.44E-3	1.94E+1	1.37E-1	1.45E+0	7.71E-3	-1.02E+1	1.07E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.92E+1	1.64E-1	1.44E-3	1.94E+1	1.37E-1	1.45E+0	7.71E-3	-1.02E+1	1.07E+1
PET	MJ	2.39E+1	1.66E-1	2.55E-2	2.41E+1	1.39E-1	1.55E+0	7.98E-3	-1.33E+1	1.25E+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	1.31E-2	1.75E-5	1.46E-6	1.31E-2	1.46E-5	1.47E-3	8.89E-6	-7.04E-3	7.53E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	9.43E-5	3.95E-7	2.73E-13	9.47E-5	3.29E-7	2.25E-6	8.86E-9	-8.61E-6	8.87E-5
NHWD	kg	8.08E-2	9.57E-3	1.05E-6	9.04E-2	7.99E-3	5.03E-2	3.19E-2	-3.59E-2	1.45E-1
RWD	kg	3.56E-5	1.05E-6	1.10E-13	3.67E-5	8.76E-7	5.23E-6	4.72E-8	-1.81E-5	2.47E-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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